



PROCEEDINGS

Revitalization Of Vocational In Free
Trade Era (ICERVED) 2016

Friday , 29 January 2016
Politeknik Negeri Medan
Indonesia

Business Administration Department
Politeknik Negeri Medan, Indonesia

ISBN 978-602-73886-0-4

PROCEEDINGS

INTERNATIONAL CONFERENCE REVITALIZATION OF VOCATIONAL EDUCATION IN
FREE TRADE ERA (ICERVED) 2016

PROCEEDINGS

**International Conference
Revitalization of Vocational Education in Free Trade Era
(ICERVED 2016)**

EDITORS:

- 1. Dr. Benny B. Nasution**
- 2. Dr. Suriyadi**
- 3. Agus E. Rangkuti**

**BUSINESS ADMINISTRATION DEPARTMENT
POLITEKNIK NEGERI MEDAN**

PROCEEDINGS
International Conference
Revitalization of Vocational Education in Free Trade Era
(ICERVED 2016)

EDITORS : 1. Dr. Benny B. Nasution
2. Dr. Suriyadi
3. Agus E. Rangkuti

ISBN : 978-602-73886-0-4

COVER LAYOUT : Erwinsyah Simanungkalit

PUBLISHED BY : JURUSAN ADMINISTRASI NIAGA
POLITEKNIK NEGERI MEDA

ADDRESS : JL. ALMAMATER NO. 1. KOMPLEK USU
GD. S. LT. 2.
JURUSAN ADMINISTRASI NIAGA
POLITEKNIK NEGERI MEDAN
MOBILE : +62 811 649 259
WEB: <http://www.polmed.ac.id/admniaga/>
Email: agusrangkuti@polmed.ac.id

FIRST PUBLISHED JANUARY 2016

PREFACE

I say thank you to Allah swt for His beneficence and mercy as the international seminar in vocational education has been implemented successfully. The topic of the proceeding seminar is *Revitalization of Vocassional Education in Free Trade Area 2016* has brought many writers discuss their papers on the topic above.

This international seminar is held by Department of Business Administration, State Politechnic of Medan (Politeknik Negeri Medan). The seminar discuss many topics deal with vocational education. I believe that the presenters as well as the participants of the seminar will get advantages of this great events. Various information for more than six papers from Malaysia, French, New Zealand, Poland, and Indonesia presented in the seminar prove that this seminar is important and valuable to be implemented.

This event will never be able to be implemented if it is not carried out by the good team. In this opportunity I say thank you and highest appreciation to Director of State Politechnic of Medan and all of his staff and administrators, the writers, the committee of this seminar who have participated in this seminar.

I hope what we get from this international seminar will enhance our knowledge of vocational education presented by many writers. It also hopes that this event will not stop but it will be continued in the future.

Medan, 29 January 2016
Head of Business Administration,

Nursiah Fitri, S.E.,M.Si.

CONTENTS

Preface		i
Contents		ii
1 M. Syahrudin	Repositioning Politeknik Negeri Medan In Free Trade Era, A Comparative Study	1
2 Ramli	Pemberdayaan Angkatan Kerja Lulusan Perguruan Tinggi Dalam Menghadapi Masyarakat Ekonomi Asean	6
3 Jonner Napitupulu	Revitalization Of Vocational Education In Free Trade Area	13
4 Sri Farley	Technical And Vocational Education And Training (Tvet) – A Route To Employment, Poverty Alleviation And Income Equality	15
5 Alias Mat Saad	Excellence Through Collaboration In Tvet: Indonesia And Malaysia Experience	26
6 Thomas Cremet	New Zealand Tourism, A Working Holiday Experience	30
7 Nurul Ihsaniah Binti Omar, Azura Binti Ahmad	Online Final Year Project Title Booking'(E-Fyp)	33
8 Ilham Hidayah Napitupulu, Sri Mahyuni	Accounting Vocational Readiness To Face Asean Economic Community (AEC)	46
9 Cut Nizma, Dina Arfianti Siregar	Analysis Effect Of Product Attributes On The Decision To Purchase Bumiputera Insurance Kisaran Branch	50
10 Lutfiyah Hidayati	The Implementation Of Mentoring Learning Model In Education Of Pre-Service Vocational Teacher	55
11 Noor Afizah Binti Atan, Fatimah Binti Hussein	Faktor Yang Mempengaruhi Gaya Pembelian Barangan Berjenama Pasaraya Giant	60
12 Nurfadillah Ahmad Mahmmud , Haryanti Bt Abdullah, Siti Mahanum Bt Shaik Ismail	Students' Acceptance Towards Using Mobile Application	64
13 Erica Novianti Lukas	The Role Of Tvet In Asean Economic Community	71
14 Suria Binti Md. Yusof, Maziharita Binti Mohamood, Rahida Binti Ramli	Budaya Keusahawanan Digital Dalam Kalangan Pelajar Institusi Pengajian Tinggi	75
15 Hazariah Binti Karsahid, Lilis Seri Yana Sirun, Noor Suriani Binti Nazruddin	Dimensi Pembelajaran Pelajar Pengajian Tinggi	81
16 Irwan Musrizah Harahap	An Analysis On The Influence Of Giving Credit On Ukm Return In Medan	87

PROCEEDINGS
INTERNATIONAL CONFERENCE REVITALIZATION OF VOCATIONAL EDUCATION IN
FREE TRADE ERA (ICERVED) 2016

33	Angelia Maharani Purba, Heru Pranoto	Combined Simulation And Minimum System As Teaching Aid In Microcontroller For Vocational Education	181
34	Budi Indra Syahdewa	Contribution Of A Course For English Competency	185
35	Zulkifli Lubis	The Importance Of Personal Self-Improvement For Professional Institution Graduate In The Free Trade Era	188
36	Zahara, Zalida Afni	The Application Of Small Group Discussion Method In Accounting System Subject (Study At Accounting Department Of Padang State Polytechnic)	194
37	Prety Diawati	The Entrepreneurship Education Role In Entrepreneur Forming (Study Of Politeknik Pos Indonesia Student)	199
38	Nurhening Yuniarti	Essential Skills For Vocational Education: In 21St Century	204
39	Mohd Sri Saribun, Isham Shah Hassan	Teknologi Mobil Dalam Pembelajaran Modul Seni Reka Di Politeknik Port Dickson	208
40	Isham Shah Hassan, Mohd Kharir Mohd Ibrahim	Integrating Flipped Classroom At Port Dickson Polytechnic	211
41	Isham Shah Bin Hassan, Charim Ibrahim	Integrating Facebook In Learning Process At Port Dickson Polytechnic	214
42	Sheyla Silvia	Analisis Frekuensi Tuturan Deklaratif Bahasa Cina Mandarin Oleh Pembelajar Bahasa Cina Mandarin Di Salah Satu Universitas Di Kota Medan	217
43	Sheyra Silvia Siregar	Metode Pengajaran Empat Nada Oleh Pembelajar Pemula Bahasa Mandarin Sebagai Stretotipe Pengajaran Bahasa Asing	229
44	Netty, Alemina, Iriance, Yusuf L. Henuk	Benefits Of Graduates' Holding Professional Certification In Entering The Era Of Asean Economic Community After 2015	235
45	M. Syahrudin, Yusuf L. Henuk	Development Of Higher Education Policies In 10 Asean Member Countries In Entering The Era Of Asean Economic Community Implementation After 2015	243
46	Mukhidin, Aliangga	Development Materials And Electrical Measurement'S Book For Vocational School (Smk) Koba Bangka Belitung Students	251
47	Isham Shah Hassan, Mohd Nor Mazalan Ismail, Wan Mohd Hujjatullah Wan Ghazali	The Symbolic Representation Of Negeri Sembilan	255
48	Yeni Absah,	Analisis Persepsi Kualitas Produk Dan Labelisasi Halal Pada Olahan Makanan Ukm Di Fakultas Ekonomi Dan Bisnis Universitas Sumatera Utara	259
49	Dwi Rahdiyanta	Development Model Of Practice Learning Based Collaborative Skills In Higher Vocational Education	263
50	Noor Suriani Binti Nazruddin, Hazariah Binti Karsahid, Lilis Seri Yana Sirun	Students' Readiness Towards Online Learning	274
51	Lilis Seri Yana Sirun , Noor Suriani Nazruddin, Hazariah	Kecenderungan Kerjaya Sebagai Usahawan Dalam Kalangan Pelajar	281

	Md Auzair,		
69	Marniati	The Influence Of Work Practice Experience At School Production Unit, Entrepreneurial Learning Achievement, And Woman Wear Sewing Competence On The Readiness For Industrial Work Practice Among Students In Boutique Program At Vocational High Schoolsthrough Out Gerbangkertasusila, East Java	433
70	Gouri Ponnusamy	Teaching And Learning Experiences In Vocational Education - A Look At The Development Of The English Language Teaching And Learning In Malaysian Polytechnics	445
71	Rahmanta	Analisis Indeks Pembangunan Manusia Dan Ekspor Terhadap Pertumbuhan Ekonomi Di Provinsi Sumatera Utara	451
72	Leman Sembiring	Pengaruh Kemampuan Berbahasa Inggris Dalam Menghadapi Masyarakat Ekonomi Asean (Mea)	457
73	Rosita Ginting	Sastra Dan Psikologi	461
74	Shinta Wahyu Hati, Ely Kartikaningdyah	Entrepreneurship Potential For Small And Medium Micro Enterprises In Batam	465
75	Muh Zuardi	Kualitas Jasa Kependidikan Dan Pengaruhnya Terhadap Kepuasan Mahasiswa Perguruan Tinggi Swasta Di Kota Kisaran Kabupaten Kisaran	471
76	Harris Nasution	Effectiveness Of Incentive Travel Program More Meaningful, Motivational And Memorable	481
77	Ratna Dewi	Models Of English Project Work To Revitalize Mind Set In Vocational Education	488
78	Abd. Rahman, Ansharuddin, Zumhari	Pengajaran Dan Pembelajaran Menggunakan Multi Media “ Teaching And Learning By Multi Media “	493
79	Edy Sahputra Sitepu	Analisis Potensi Dan Pengembangan Ekonomi Kreatif Di Kota Medan	497
80	Dwi Rahdiyanta	The Implementation Of The Learning Model Project-Work Based On The Character In The Practical Lessons As Part Of The Effort To Raise The Quality Of Vocational Education	502
81	Ika Mary Pasaribu	Praktek Usaha Bisnis Kecil Sebagai Model Pembelajaran Mata Kuliah Pengantar Bisnis Pada Pembelajaran Pendidikan Vokasional (Politeknik Negeri Medan)	512
82	Rina Walmiaty Ma'di	Pengaruh Kecerdasan Emosional Terhadap Tingkat Pemahaman Akuntansi, Kepercayaan Diri Sebagai Variabel Pemoderasi	517
83	Desri Wiana	Metode Pembelajaran Komunikatif Pada Matakuliah Bahasa Indonesia Bagi Mahasiswa Pendidikan Vokasi (Politeknik)	532
84	Anggiat Parlindungan Simbolon	Revitalisasi Pendidikan Vokasi Menghadapi Pasar Bebas	537

DEVELOPMENT MODEL OF PRACTICE LEARNING BASED COLLABORATIVE SKILLS IN HIGHER VOCATIONAL EDUCATION

DWI RAHDIYANTA

Yogyakarta State University

E Mail: dwi_rahdi@yahoo.com /Hp. 0818273996

ABSTRACT

The purpose of this research is to improve the general quality of vocational education graduates at the higher education. In more detail the purpose of the study in the 2nd year is as follows: 1) to determine differences in attitudes and behavior between the experimental class (which implements a development model of practice learning based collaborative skills) with the control class (which does not apply development model of practice learning based collaborative skills), and 2) to determine differences in student achievement between the experimental class and the control class. Globally, this study conducted with the approach of Research and Development for two years. While the research methods used in the 2nd year of this (implementation activities) using quasi-experimental approach. Collecting data using observation sheets, documentation, evaluation of learning outcomes and interviews. In this study the data were analyzed by means of qualitative and quantitative, then presented descriptively. The results of the research that has been conducted is: 1) there is a difference between the attitudes and behavior of students with practice applying the development model of practice learning based collaborative skills, compared with classes that do not implement development model of practice learning based collaborative skills ($t = 7.211$, $p = 0.000$); 2) there is a difference between the achievement of students by implementing development model of practice learning based collaborative skills, compared with classes that do not implement development model of practice learning based collaborative skills ($t = 10.573$, $p = 0.000$).

Keywords: Development model of practice learning, collaborative skills, higher vocational education.

INTRODUCTION

Vocational education as part of the national education system plays a strategic role for the actualization of skilled labor and are ready to work. From various studies that the opportunity to have a high and sustainable economic growth of a country will be the greater if supported by human resources that have: (1) knowledge and basic skills to adapt to the demands and dynamics of the ongoing development; (2) levels of education that the higher; (3) the skill of expertise background in science and technology; and (4) the ability to produce good products from the quality and price, able to compete with other products in the global market.

Based on data from the National Statistics Agency (BPS) 2011, there are 82,1 million Indonesian workers charged groups unskill workers (workers who do not have the skill or competency in kind). The group un skill workers the majority are graduates of public schools. Whereas groups thereon filled skill workers (workers with the skills or competencies in) of 20.4 million people. As well as the composition of the top is the expert workers (expert) with 4.8 million people. See this condition of Indonesia will be difficult to compete with other countries in the era of globalisation and the tight competition now this time or in the future.

Based on the fact will be the responsibility of the education world especially vocational education to produce competent graduates. Therefore the competencies that will be developed through the learning process must be referring to the competencies needed by industry world. One of the courses in universities that is very important and strategic to the formation of the competencies is practical courses. Therefore seen is very important to always improve the quality of teaching practice. Based on presurvey which has been implemented in the manufacturing industry, obtained the information that the process of making a product unit requires collaboration (cooperation) from skills (collaborative skills). Without the cooperation and the end result of the product that is expected could not be achieved. One of the efforts to instil the attitudes and behavior of learners related to the competencies required by the world the industry is to develop the model of teaching practice through collaborative skills approach.

The problems that will be discussed are: 1) whether there are differences in the attitudes and behavior between students who were taught using the model of teaching practice based on collaborative skills with students who are not taught with the model of teaching practice based on collaborative skill, 2) whether there is a difference between student learning achievements of students taught using the model of teaching practice based on collaborative skills with students who are not taught with the model of teaching practice based on collaborative skill, and 3) whether the students who taught with the model of teaching practice based on collaborative skills have the readiness to work in the manufacturing industry which is better.

New Paradigm of learning as a product innovation should be more provides the process to restore the fact learners to conscience as a man who has all the potential to experience becoming process in developing the fullest man. Therefore, any facilities provided to facilitate learners and anyone that the facilitators will accompany learners learn, should be departed from and oriented on what is the purpose of learning learners. The purpose of the original learning appears from motivations (intrinsic motivation). The learning paradigm that are able to touch the hearts of learners to raise intrinsic motivation should be the first focus in developing learning facilities. The learning paradigm will raise positive attitude toward learning so that learners are ready to do though think, taste, and sport in live learning events.

Marzano et al (1993), formulating learning dimension to five levels; (1) the attitude and perception that positively to learn, (2) acquisition and integration of new knowledge, (3) expansion and enhancements to the knowledge, (4) use of knowledge significantly, and (5) getting think effective and productive. The five dimensions of learning will be internalised by learners when they are able to do by think, taste, and sport in learning which are all derived from motivations that most in. The Basis of quantum teaching (Bobbi de Porter et al., 2001; Bobbi de Porter, 2000) stated "bring their world to our world and mention our world to their world", may need to be translated by the teachers in developing learning facilities that are able to touch the hearts of learners to be more responsible for the school. The competence of responsibility is one of the competencies of potential attitude in building the competencies echelons, like creative thinking of productive, decision-making, troubleshooting, learn how to learn, collaboration, management and/or restraint. The responsibility is one of the competencies of potential attitude in building the competencies other things like creative thinking of productive,

decision-making, troubleshooting, learn how to learn, collaboration, management and restraint. The competencies are absolutely needed by learners to be able to become a man that is an adaptable, flexible, and versatile in all aspects of life that always changed. Competency-based learning is learning which is done with the orientation of the achievement of the competencies learners. So that the estuary of the end result of learning is increasing the competence of learners can be measured in the pattern the attitude, knowledge and skills (Sidik Purnomo, [Http://kidispur.blogspot.com/ 2009/01/principles of learning-based-. html](http://kidispur.blogspot.com/2009/01/principles-of-learning-based-.html)).

The concept of competency based learning requires formulated him clearly the competencies that must be owned or displayed learners after attending the learning activities. With the benchmark in the achievement of the competencies in the learning activities learners will escape from studying material that does not need the material that does not support the achievement of mastery of a competency.

The achievement of each competency is closely related to the learning system. Thus the components of the minimum competency-based learning is:

- a. The election and the formulation of the right competence.
- b. indicator specifications to determine the assessment of competency achievement.
- c. the development of functional delivery system and relevant with the competencies and evaluation system.

Related to the aspects of learning, Depdiknas (2002) stated that the competency-based learning has five characteristics as follows: (1) stressed on its achievements competencies learners individually as well classical, (2) results-oriented learning and diversity, (3) Delivering in learning using the approach and methods that vary, (4) learning resources not only lecturers but also other learning resources that meet the elements of the educational, and (5) The Assessment emphasized on the process and the results of learning in the effort of tenure or the achievement of the competencies.

More information according to the National Agency of Professional Certification (BNSP), which in this case the metal Professional Certification Institution and Machinery Indonesia (LSPLMI), stated that there are 4 (four) dimensions competencies which must be noted: (1) Task Skill is the ability to carry out the main task of a job, (2) Task Management is the ability to manage the type of tasks to support a work (3) Contingency Management Skill is the ability to respond and manage events that irregular or problems from a job, and (4) Job/Rolls Environment Management Skill is the ability to adjust with the responsibility of the work environment. In detail the title of the unit of competency on the certification scheme especially for machinery operators lathe and milling conventional based on the Standard Operation Procedure (SOP) competency assessment machining BNSP field can be seen in the following table.

Table 1.
Operator certification scheme for conventional lathe and milling complex.

No.	Unit Number	Title of Unit Competency	Weight
1	LOG.OO01.002.01	implementing the principles of salvation and work accidents in the work environment	0
2	LOG.OO01.003.01	applying quality procedures	0
3	LOG.OO02.005.01	measured using the measuring cup	2
4	LOG.OO02.012.01	Perform mathematical calculations	2
5	LOG.OO09.002.00	Read the image of the technique	2
6	LOG.OO07.006.00	do the work with the lathe machine	4
7	LOG.OO07.007.00	do the work with the milling machine	4
8	LOG.OO18.001.01	using the vessels hand	2
9	LOG.OO12.003.01	measure with precision mechanical measure	2
10	LOG.OO07.020.00	Using the complex lathe machine	4
11	LOG.OO07.011.00	Using the complex milling machine	4

The competency based learning characteristics are demanding that the lecturer to always innovate and improvise in determining the method and the appropriate learning strategies. In the process of learning that many obstacles, is required to lecturer search and find new approaches that effective and efficient. But at this time the teachers and lecturers is still considered less possesses provisions journalists teamt, inetodik knowledge, materials and creativity in learning (Dedi Supriyadi, 2001). In such a condition then learning model selection must be adjusted with the ability of lecturers and not weigh on the work of lecturers.

Ted Panitz (1996), explained that collaborative learning is a personal philosophy, not merely teaching techniques in the classroom. According to him, collaboration is the philosophy of the interaction and lifestyle that makes the cooperation as a structure of the interaction is designed in such a way to make it easier for collective effort to achieve a common goal. Thus, collaborative learning can be defined as a learning philosophy that make it easier for learners to work together to build each other, learn and change together and forward together again. This is the philosophy of the global world needs today.

Collaborative learning facilitate learners to learn and work with each other to donate thought and responsible for the achievement of the results of learning in groups and individuals. Different from the conventional learning, main pressure collaborative learning or cooperative learning is "learning together".

The structure of the purpose of collaborative characterized by the number of mutual dependence that is so great between learners in groups. In collaborative learning, learners said "we the United States well the United States you", and learners will achieve the goal only if the other learners in the same group can achieve their goals with (Arends, 1998; Heinich et al., 2002; Slavin, 1995; Qin & Johnson, 1995). Collaborative learning can provide the opportunity to go to on the success of the teaching practices. As the technology for learning (technology for instruction), collaborative learning involves active participation learners and minimize the differences between the individual. Colaborative learning has increased the momentum of formal and informal education from two power that meet, namely: (1) The realization of the practice that live outside the classroom requires collaborative activities in the life of the real world; (2) grow awareness interact socially in an effort to introduce learning means.

According to Johnson (1995), at least there are five basic elements in order to make a group of cooperative learning occurs/ collaborative, namely:

a. Mutual dependence positive.

In this learning each learners must feel that it is dependent upon a positive and tied with fellow members of the group with responsibilities: (1) control teaching materials; and (2) ensures that all members of the group also prevail against it. They feel will not succeed when other learners also not success.

b. Direct interaction between learners.

The best learning results can be obtained with the existence of verbal communication between learners are supported by mutual dependence positive. Learners must face each other and help one another in the achievement of learning objectives.

c. The responsibility of the individual.

In order to make a group of learners can contribute, support and help one another, each learners are required to be master the material that made the subject. Thus each member of the group responsible to learn the subject and is responsible for the results of group learning.

d. Collaborate skills.

Social skills learners is very important in learning. Learners are required have collaborated so that the skills of the group created a dynamic interaction to learn from each other and teach as part of a collaborative learning process.

e. The effectiveness of the process of the group.

Learners process the effectiveness of school groups with how to explain which actions can contribute learning and which are not and make decisions of the actions that can be continued or that need to be changed.

The skills according to the dictionary "bahasa Indonesia" was interpreted as a skill or certain capabilities that is owned by a man. In the field of machining techniques, skill is the skill or ability that is needed to do the types of machining work. The skills are the skills of creating various objects work in the form of machine components using the machines vessels, including how operation and setup of the machine.

So collaborative skill can be interpreted as a combination of various ability or skills. This can be explained that the product collaborative skill is product that is produced from some kind of work with different skills. The implication in the teaching practice is manifested in learning materials. In practical lessons machining, learners given job sheet to exercise an object of work with the engine vessels. To apply the practical lessons based on collaborative skill, learning materials in the form of job sheet must be developed in order to meet the criteria of collaborative skills. This means that job that will be given to the students is the job that is composed of many components. This means that in the process of learning the practice, students were divided into several groups, where each member has the task of working on a component and then can be paired in one group become one unit working objects. Thus the learners will be more motivated in teaching and really in attempting to master the competencies maximum, due to the success of the group is the success of each individual so that they feel will not succeed when other learners also not success.

RESEARCH METHOD

This research uses approach Development Research. In the first phase of the research done in exploration activities, which consists of a preliminary study, the formulation of the conceptual model, validation and revision and testing model. While research on the second stage is done implementation activities and dissemination.

The activities of the implementation of the model of learning materials (conceptually) is done by using the design of the experiment facades or Quasi Experimental Design two groups with pre-test and post-test. (Borg & Gall, 1998:536, and Fraenkel & Wallen, 1993:128). Purpose of the use of this design to test the effectiveness of the model and validate the conceptual model that has been produced by empirically. Testing the effectiveness of the model is done for the conceptual model developed so that can be a model empiric or worthy misapplication.

Because the implementation process is done on the practical lessons, so that the design of the research that is used is the design of the posttest-only control design. This adjusted with characteristic of practical lessons where to student achievement assessment seen from working objects practical results, so it is not required pretest.

Now the design of the research can be seen in the picture below:

R X O2

R O4

Picture 1. Posttest-Only Control Design

Description :

R = control classes and class test taken random

O2 = posttest trial class

O4 = posttest grade control

The location for this research is at the Department of Education Mechanical Engineering Faculty of Engineering, Yogyakarta State University, and manufacturing industry machining field in Yogyakarta.

The methods and techniques of data collection on research is: (1) observation sheet, (2) documentation, (3) interview to dig a good response from the students and university lecturers, and (4) assessment sheet work objects in the self-assessment.

The research result data analyzed with quantitative and qualitative way. To test the effectiveness of the model developed compared with the old model, analyzed using methods t-test.

THE RESEARCH RESULTS AND DISCUSSION

1. The results of

This research carried out on the complex machining process courses taught on the 4 st semester students majoring in Education Mechanical Engineering Faculty of Engineering, Yogyakarta State University (FT-UNY). The process of research carried out during the eight meeting. The meeting one to with the three used for the explanation and the preparation of the learning activities while the fourth meeting until the eighth is at the core of research activities, so that every meeting observed the development of student activities related to the implementation of aspects of the characters and related to learning achievement or ability students on complex machining process courses. In accordance with the characteristics of courses practice, then the character aspect is applied honest, discipline, diligent, carefully, independently, hard work and concerned. While the aspects of student learning achievements are reflected in the workmanship job sheet on complex machining process courses have been assigned.

The Data result of observation of the behavior or student activities related to the implementation of aspects of the attitude of the class experiments can be seen in the table 2, and the data result of observation of the attitude or student activity on the control classes can be seen in table 3 below.

Table 2. Student activities class experiment

The aspect of student behavior/attitude	The number of students at the meeting to						Average	Percentage
	3	4	5	6	7	8		
Honest	8	12	12	14	16	16	13.0	0.81
Discipline	13	15	15	15	16	16	15.0	0.94
Diligent	7	11	12	12	14	16	12.0	0.75
Carefully	7	11	12	11	14	15	11.7	0.73
Independently	6	12	13	14	14	16	12.5	0.78
Hard Work	5	10	12	15	14	14	11.7	0.73
Concerned	12	13	14	15	14	15	13.8	0.86
Average							12.81	0.80

Table 3. Student activities class control

The aspect of student behavior/attitude	The number of students at the meeting to						Average	Percentage
	3	4	5	6	7	8		
Honest	5	6	9	9	12	12	8.8	0.74
Discipline	7	10	9	12	10	12	10.0	0.83
Diligent	4	5	6	6	8	10	6.5	0.54
Carefully	5	6	6	4	7	9	6.2	0.51
Independent	5	6	5	7	7	9	6.5	0.54
Hard Work	6	5	7	5	5	7	5.8	0.49
Concerned	4	6	6	8	11	12	7.8	0.65
Average							7.38	0.62

Now data about student learning achievements taken from the assessment of work objects practical results as much as three (3) job practice. The full data can be seen in the table below.

Table 4. The experiment class student learning achievements

Student	Job practice			The average
	I	II	III	
1	75	78	82	78.33
2	78	78	75	77.00
3	77	73	78	76.00
4	75	77	82	78.00
5	78	76	77	77.00
6	80	75	78	77.67
7	82	68	76	75.33
8	77	80	80	79.00
9	78	80	78	78.67
10	80	77	82	79.67
11	76	76	80	77.33
12	75	78	80	77.67
13	73	68	78	73.00
14	65	70	77	70.67
15	65	70	75	70.00
16	72	68	75	71.67
value of average Total achievement				76.06

while student learning achievements to control classes can be seen in table 5 below.

Table 5. The control class student learning achievements

Student	Job practice			The average
	I	II	III	
1	65	66	70	67.00
2	60	65	65	63.33
3	70	68	68	68.67
4	72	70	70	70.67
5	68	70	66	68.00
6	72	60	60	64.00
7	68	62	65	65.00
8	70	65	62	65.33
9	70	60	66	67.33
10	65	65	72	67.33
11	60	72	68	66.67
12	70	66	60	65.33
13	65	70	65	66.67
14	60	65	65	63.33
15	60	65	65	63.33
16	72	70	70	70.67
12	72	60	60	64.00
Value of average Total achievement				66.33

The next stage of the test done analysis requirements in accordance with the type of analysis that will be used to know the difference between good attitude/Activity As well as student learning achievements between the classes of the experiment and control classes. Now the test is analysis requirements and homogeneity and normality tests.

To test the distribution of data normal or not used the method the value of the ratio of skewness and kurtosis ratio. The data can be said normal distribution if the value of the ratio of skewness and kurtosis ratio value is located in the range -2. until with 2 (Muhammad Nisfiannoor, 2009). From the test results normality obtained the conclusion

that the distribution of good data for the control class or experiment is normal distribution. In this case to the class data of the experiment, the value of the ratio of skewness variables (-1.748) and kurtosis ratio (-0.288), and to control classes shows the value of the ratio of skewness variables (0.821) and kurtosis ratio (-0.370).

To test its homogeneity of data research results with levene statistics retrieved on 0.189 significance Based on Mean greater 0.05. So also the test result data student learning activities with the levene statistic obtained the significance of 0.189 on Based on mean that greater 0.05. Thus the research data was homogeneous. Based on the results of the analysis of the requirements of the test, then the test can be performed with different test parametris. The technique used is a different test with test – t.

Students learning achievements

Based on the research results obtained average value of experimental class learning achievements is 76.06. While the value of the average classroom learning achievements control is 66.33. Based on the test results vary, known value of t-count = 10.573 with p= 0.000. Thus it was proven that there is a significant distinction between student learning achievements class experiment with the class control. In this case the class learning achievements experiment is better than the control classes.

Student learning activities

From the results of research on student learning activities, obtained that 80 % from grade student active experiments, while for grade control only 62 % of students who are active. Based on the test results vary, known value of t-count = 7.211 with p = 0.000. Thus it was proven that there is a distinction between students learning activities class experiment with control classes. In this class students learning activities of the experiment better than the student learning activities in the class control.

2. Discussion

Based on the results of the implementation of which has been completed, quantitatively proved that by implementing this learning model, able to integrate aspects of the attitude or behavior (characters) so that formed characters learners which is reflected from the activity or the behavior of learners during the learning process. Based on the results of these observations during the implementation process, seen that the stages of learning practices based on collaborative learning model the skills that effective in raising awareness of the learners phase is the exploration of the aspects of the work attitude. In this phase learners are required to convey their opinions related to the aspects of the work attitude is supposed to be owned by a person especially in implementing the process of practical lessons. The purpose of the implementation of this phase is when a person has consciousness is theoretically related to the aspects of the characters (which is seen from the discussion process of delivery of opinion by learners related to the aspects of the characters), then logically someone is surely will carry out aspects of the character especially in the process of learning the practice.

It is evident from the result of observation of the activity of learners during the learning process in progress, learners capable of or actively convey their opinions during the process of exploration of the aspects of the attitude, turns out during the learning process in progress, learners are diligently implement aspects of attitudes related to work with good character. So the stage of exploration aspects of this character is effective in integrating aspects of the characters in the learning process.

The next stages in the learning-based collaborative skill practice is discussion in the drafting Work Preparation Sheet. In this stage the learners are required to be able to collaborate and appreciate the friends in his group or friends in other groups. So with the passing of these stages are capable of getting learners to have brave character aspect holds, appreciate the opinion of others, and cooperation.

Other steps in the context of the integration process aspects of the characters is on when the evaluation process work objects practical results. Before assessed by teachers working objects practical results first done the self-assessment by learners. In the process the learners must perform the measurement independently the objects they work each and then the results of assessment populated in the sheet has been provided. Data from the evaluation independently by learners is then done cross check by the teacher. From this activity can be seen the level of honesty learners especially in implementing the self-assessment.

Based on the results of the implementation of which has been carried out, then globally can be known that there are differences in the aspect of the characters learners between the class experiment with control classes. This is shown from the difference of activity learners during the learning process took place. In the class experiment is much more active or better when compared with the class control.

Based on the results of research related to the students learning achievements and the results of these observations on learning activities in relation to the straight path with learners learning achievements. Based on the data obtained, on the class experiment where the level of their activity is better then school achievement achievements also far higher compared with control classes. Some facts on the top according to the research done by Marvin Berkowitz (2000) from the University of Missouri-St. Louis, shows the existence of improvement motivation learners in achieving their academic achievement in schools that implement character education.

After the implementation process done, then according to the research stages, then carried out the process of dissemination. This process is conducted with the purpose to introduce the model that has been developed and has proven effectiveness empirically. Dissemination activities carried out by inviting some of the related party to perform an in-depth discussion, from elements of the lecturers, teachers and from manufacturing industry party. The results from the dissemination activities in this research is as follows:

- a. Participants Discussion (FGD) can accept and understand the model of teaching practice based on collaborative skill, as an alternative learning model in order to establish the attitude or behavior (characters) learners.
- b. Need to be made so easy applicative guide its application in learning, especially practical lessons.
- c. Need to be made to posted the implementation of when will be applied in the other practices courses.
- d. The determination of aspects of the attitude of the students behavior/will be integrated, adjusted with the characters in the work of the courses that will use this learning model.

Based practice collaborative learning model skill, is development of CBT learning model where in the learning process as well as integrate the aspects of the attitude or behavior. This model more devoted to practical lessons, where in this learning room competency aspects or practice the skills of learners. Aspects of the attitude/behavior integrated course can be adjusted with the characters in the work of courses that will be applied.

CONCLUSION AND SUGGESTION

1. The conclusion

Based on the results of research can be summarized as follows:

- a. There is a difference in the attitude (activity/behavior) learning between students who are taught by applying the model of teaching practice based on collaborative skills, compared with the class that does not apply the model of teaching practice based on collaborative skills ($t = 7.211$; $p = 0.000$). Student activity after applied the model of teaching practice based on collaborative skills have increased by 50%.

- b. There is a difference between student learning achievements by applying practices based on collaborative skill , compared with the class that does not apply the model of teaching practice based on collaborative skills ($t=10.573$; $p= 0.000$). In this case the average student learning achievements which taught by applying the model of teaching practice based on collaborative skills is higher compared to the student learning achievements which taught not to use the model of teaching practice based on collaborative skills ($X\text{-experiment} = 76.06 > X\text{-control} = 66.33$).

2. Suggestions

Based on the conclusion that has been formulated, there are several things that can be used as suggestions, namely:

- The learning model that has been developed has been proven to increase work attitude, especially in the teaching practice machining process that it needs to be tested have tried to courses other practices..
- The implementation of the model of teaching practice based on collaborative skills more of this portion of the emphasis on the activities of learners during the learning process takes place, so that the role of the lecturer/teachers should focus more in the process of mentoring and assistance to learners.

REFERENCES

- Arends, R. I. (1998). *Learning to teach*. Singapore: McGraw-Hill book Company.
- Bobbi de Porter, Mark Reardon, dan Sarah Singer-Nourie. (2001). *Quantum Teaching*. Bandung: Kaifa.
- Bobbi de Porter, dan Mike Hernacki. (2000). *Quantum Learning*. Bandung: Kaifa.
- Borg, W.R., & Gall, M. D. (1998). *Educational Research, an intro-duction*. New York: Longman.
- Dedi Supriyadi dkk (2001). *Reformasi Pendidikan Dalam Konteks Otonomi Daerah.*, Yogyakarta: Adicita Karya Nusa.
- Depdiknas (2003). *Konsep Pendidikan Berorientasi Kecakapan Hidup (Life skill) Melalui Pendekatan Pendidikan Berbasis Kelas (Broad Base Education-BBE)*. Jakarta: Depdiknas.
- Calhoun, C.C. and Finch,C.R. (1976).*Vocational educational: Concepts and operation*, Belmont: Wadsworth Publishing Company.
- Finch, C.R. and Crunkilton, J.R. (1979). *Curriculum development in vocational education*, Boston: Allyn and Bacon Inc.
- Heinich, R., Molenda, M., Russell, J. D., & Smaldino, S. E. (2002). *Instructional media and technology for learning, 7th edition*. New Jersey: Prentice Hall, Inc.
<http://nces.ed.gov/pubs92/92669.pdf>. diakses pada tanggal 3 Mei 2012
- Marzano, R. J. (1993). How classroom teachers approach the teaching of thinking. Dalam Donmoyer, R., & Merryfield, M. M (Eds.): *Theory into practice: Teaching for higher order thinking*. 32(3). 154-160.
- Mauliy Halwat dan Qanitah Masykuroh. (2006). *Peningkatan Kemandirian dan Kemampuan Peserta didik dalam Mata Kuliah Essay Writing dengan Menggunakan Metode Pembelajaran Kolaboratif (Collabo-rative Learning)*. Hasil Penelitian: Universitas Muhammadiyah Surakarta.
- Paryanto dan Edy Purnomo. (2007). *Peningkatan Kualitas Pembelajaran Praktik Pemesinan dengan Menerapkan Model Pemelajaran integratif Learning*. Laporan Penelitian: Lemlit UNY.
- Sahat Saragih (2002) Pendekatan Coo-perative Learning Dalam Pembe-lajaran dengan Menggunakan Peta Konsep. *Jurnal Kependidikan Nomor 1, TAhun XXXII, Mei 2002*