The International Journal of Social Sciences and Humanities Invention 5(08): 4912-4917, 2018

DOI: 10.18535/ijsshi/v5i8.01 ICV 2015: 45.28

ISSN: 2349-2031 © 2018, THEIJSSHI

Research Article

Impact of Material Training, Instructor, Facilities, Infrastructure in Implementation of Internship Program with Participants of Courses and Job Training (Study Program Implementation Internship in Central Java)

¹Jakino, ²Wirawan, ³Edy Supriyadi

¹LKP penyelenggara Program Magang di Jawa Tengah ^{2,3}Sekolah Pascasarjana Universitas Pancasila

ABSTRACT: The purpose of this research is to know the training materials, instructur/educator, facilities and infrastructure, in the implementation of the apprenticeship program of course students and training on the word of work (study implementation of internship program in central java). The methods used in this research is a method of quantitative deskriptif. Design research is depicted in the form of graphs or flow correlation studies. The population in this study are all the employees leaner apprenticeship progrem in 2016 and 2017 in central jawa of 750 people. The sampling technique used is a non probability sampling with a sampling of saturated, so the whole population was made a sample in this study. The method of collection through, the question form, interviews, observations,tests, documentation and so on. This research analyzed quantitatively through multivariate, methods of engineering Structural Equation Models (SEM) use the program smart pls 2. The results showed that the variable training materials positive effect knowledge and skills of apprentices and the wordl of work Variable characteristics knowledge and skills positive effect skills enhancement. Variable characteristics of training materials no effect to the world of work. Variable instructor/educator has no effect the world and of work but has a positive relationship direction. Variable facilities and infrastructure positive effect the internship program.

Key words: internship program, training matrials, instructur/educator, facilities and infrastructure, student apprentices, work (working, self-employed, plasma work)

Introduction

Training and internship is a term that has a certain connotation depending on one's experience and background. Definition of training according to Robinson is teaching or giving experience to someone to develop the behavior (knowledge, skills, attitude) in order to achieve something desired. In the dictionary of Education, training is defined as a specific teaching whose purpose has been clearly defined and demonstrable, which requires the participants and an assessment of the improvement of the performance of learners (Marzuki, 2010: 174-175). In Good's opinion, training is also defined as knowledge. This last definition when associated with andragogy, training is generally addressed to adults, is appropriate because andragogy is the art / science of helping others in learning (Brundage). This is a broad and flexible concept of training because it involves all kinds of training activities such as coaching, on the job training, internships and job rotation (Marzuki, 2010: 175).

Nawawi (1997) states that training is essentially a process of providing assistance to prospective workers to master special skills or help to correct their shortcomings in carrying out the work. The focus of its activities is to improve work ability in meeting the needs of today's most effective way of working.

 Student apprenticeship courses and training are government programs to improve the competence of citizens through learning by doing in DUDI in Accordance with competency standards that have been adapted to work needs.

- 2. Entrepreneurs apprenticeship programs are community members who have not worked yet but have basic skills relevant to skills that will be traded in DUDI, already working but not yet have a certificate of competence, have been working / certified but still want to improve competence.
- 3. LKP / Other non-formal education units that have job orders, or DUDI interen institutions are institutions interested in accessing apprenticeship courses for trainees and courses that meet the requirements of apprenticeship for learner and training course participants
- 4. Business and industrial world (DUDI) is a company engaged in the field of goods / services that are willing to be used as an apprentice in accordance with the needs of labor and development of business partners. (Ditbinsuslat: Juknis Internship Program: 2016)

This understanding indicates that to improve the capability of human resources can be realized through training or apprenticeship with quality standard of training materials, structures / educators, facilities and infrastructure are met.

Referring to the background of the problem, the issues raised here are:

1. Does the training material have a significant positive effect on the students of the internship program, the kind of sewing skills of garment, hotel and office administration in Central

Jakino et al / Impact of Material Training, Instructor, Facilities, Infrastructure In Implementation of Internship Program With Participants of Courses and Job Training (Study Program Implementation Internship in Central Java)

Java?

- 2. Is the instructor / educator having a significant positive effect on the students apprenticeship type of garment sewing skills, hotels, and office administration in Central Java?
- 3. Are the facilities and infrastructure have a significant positive effect on the students of internship program of the kind of sewing garment, hotel and office administration in Central Java?
- 4. Do graduates of apprenticeship type skills tailoring garment, hotel and office administration can fill vacancies in DUDI especially in Central Java area?
- 5. Whether graduates of apprenticeship type of skill program sewing garment, hotel and office administration in Central Java can work independently
- 6. Do graduates of apprenticeship type of sewing garment, hospitality and office administration in Central Java can work as false workers / working partners?

In line with the formulation of research problems that have been set, the purpose of this study are as follows:

- 1. To know the significant positive effect of training materials on students apprenticeship type of sewing garment, hospitality, and office administration in Central Java?
- 2. To find out the positive significant effect of instructor / educator to the students of the internship program, kind of sewing garment, hospitality, and office administration in Central Java?
- 3. To know the significant positive effect of facilities and infrastructure on students apprenticeship type of sewing garment, hospitality, and office administration in Central Java?
- 4. To know the number of graduates of apprenticeship program type of sewing garment, hospitality and office administration that can fill the job vacancy in DUDI especially in Central Java area?
- 5. To know the number of graduates of internship program type of garment sewing skills, hotel

Literature Review

Internship Program

According to Marzuki, 2010: 174-175. Training / apprentice is a term that has a certain connotation depending on one's experience and background. Definition of training according to Robinson is teaching or giving experience to someone to develop the behavior (knowledge, skills, attitude) in order to achieve something desired. In the dictionary of Education, training is defined as a specific teaching whose purpose has been clearly defined and demonstrable, which requires the participant and the assessment of the improvement of the learner's performance.

Training materials

According Widodo and Jasmadi in Lestari, 2013: 1. Training materials are a set of learning tools or tools that contain learning materials, methods, limitations, and how to evaluate systematically and attractively designed in order to achieve the expected goal of achieving competence or subcompetence in

all its complexities.

In accordance with the writing of the module issued by the Directorate General of Vocational Directorate General of Primary and Secondary Education of the Ministry of National Education of 2003, teaching materials have several characteristics, namely self instructional, self-contained, stand alone, adaptive and user friendly (Widodo and Jasmadi in Lestari, 2013: 2).

Instructor

Instructor and education personnel Educators and education personnel are two "professions" that are closely related to the world of education, even though the scope of the two is different. This can be seen from the understanding of both listed in Article 1 of Law no. 20 of 2003 on Education System. The law states that educational personnel are members of society who are devoted and appointed to support the implementation of education. While educators are people who work as teachers, lecturers, counselors, pamong learn, widyaiswara, tutors, instructors, facilitators, and other designations in accordance with the specificity, and participate in conducting education.

Facilities and infrastructure

Educational tools are all tools, materials, and furniture that are directly used in the educational process at the place of learning. Meanwhile, the educational infrastructure is all basic equipments that indirectly support the implementation of the implementation of the educational process at the place of learning (Juknis Internship Program Directorate of Inquisition Courses and Training 2016)

Work

According to a large Indonesian dictionary (2005, p. 554) "work is defined as activities to do something done or done and something done for a living, livelihood". Thayeb Manribu (1998, page 27) "work is defined as a group of activities, duties or obligations that are equal and paid, requiring the same attributes within a particular organization".

According to Dr. Wirawan, MSL, Sp.A (2015), Employment relationship is a relationship between two or more parties that regulates rights and obligations between employers and workers who work for employers. Employment relationships may occur between two employers and workers but may involve third parties in which the Worker subcontracts what is done to a third party such as outsourcing to a third party or involving the consultant. The working relationship occurs because the written contract of work in the contract or written contract of employment.

Research Methods

Population and Sample

The population in this study are all graduates of students of internship program in the field of Hospitality, Garment Sewing, and Office Administration in 2016 -2017 in Central Java of 350 people. While the sample used is with saturated

Jakino et al / Impact of Material Training, Instructor, Facilities, Infrastructure In Implementation of Internship Program With Participants of Courses and Job Training (Study Program Implementation Internship in Central Java)

sampling, so the entire population used as sample in this study. The saturated sampling method was chosen because the number of population in the study area is Central Java with population and sample 350 people, concentrated on the graduates of the 2016 apprenticeship program at 8 LKP in partnership with 9 DUDI in garment, hotel and office administration. So the number of samples in this study as many as 350 respondents.

Method of collecting data

Data collection techniques are the means by which to collect the data shown through their use of questionnaires, interviews, observations, documentation and so on. In this research the data collection technique used is questionnaire, observation and interview, literature study and literature study.

Operational Research Variables

Endogenous variables are work and internship with working symbol, Internship (intensive). While the exogenous variable consists of materials (materials), instructors (instructor) and facilities (equipment)

Statistical Method

This research was analyzed quantitatively through multivariate method of Structural Equation Model (SEM) technique using Partial Least Square (PLS) to test the six hypotheses proposed in this research. Each hypothesis will be analyzed using SmartPLS 2.0 software to test the relationship between variables.

Results Discussion Analysis

Hypothesis testing

The significance of estimated parameters provides useful information on the relationship between research variables. The basis used in testing the hypothesis is the value contained in the output of result for inner weight. The table provides estimation output for structural model testing.

Tabel 1.: Result For Inner Weights

Relationship Between Varibles	Original Sample (O)	Sample Mean (M)	T Statistics (O/STERR)	Interpretation
INSTRUKTUR -> MAGANG	-0.667294	-0.219713	0.716075	Not. Sig.
MAGANG -> BEKERJA	0.921124	0.902109	13.394700	Sig.
MATERI -> MAGANG	0.934379	0.672066	2.092487	Sig.
SARANA -> MAGANG	0.557208	0.382214	0.783772	Not. Sig

Effect of Instructor (insruktur) on internship(magang)

The instructor has no significant effect on the apprenticeship. The test result on the parameter coefficient between the motivation to the performance shows no positive relationship with the t-statistic value of 0.71605 and significant at $\alpha = 0.05$. The t-statistic value is above the critical value 1.96. this is

because the learned is adult learners, ready to work then in the study everything can be done alone then the guidance of others or so-called educators / trainers only provide direction and little example they already understand does not need continuous mentoring throughout the day then the role of coach / educators are very lightweight this is where the uniqueness of internship programs being pursued already have the basic skills to be learned then by giving explanations and examples little they understand what to do.

Effect Infrastructure Facility to Internships

The Infrastructure have no major effect on the internship. The test result on the parameter coefficient between the means to the apprentice and the t-statistic value of 0.783772 lies in the critical value 1.96. this happens because the apprentices are participants who are productive or working age even they already have basic skills then learn with existing facilities and infrastructure they already know what to do, but it is different with the results of our interviews, there are some who argue that it would be nice if the means of infrastructure in the implementation of apprentices program more complete comfortable and worthy of use or new output so much easier in learning. But there are still many organizers of apprenticeship programs that use the simple infrastructure facilities graduates can work all either work as an employee, independent or working as a plasma, here means that both using the means of complete or simple infrastructure both passion received in the world of work.

The effect of training materials on internship

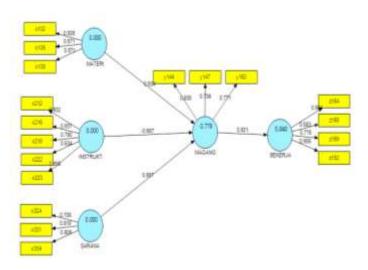
The Training material has a positive and significant effect on the internship. The test results on the parameter coefficient between the material to the apprentices showed a positive relationship with the value of t-statistics of 2.092487 and significant at $\alpha=0.05.$ The t-statistic value is above the critical value 1.96. the explanation is that learners of this apprentice program adults, productive age then tend to learn by reading books, learning from online media rather than learning with educators / instructors, because learning in class time is limited, if learning with material can be done anywhere anytime they want to learn then the training materials have a big effect in the internship program to master a certain competency mostly done own study because there is no limitation study time.

The Effect of internship on work

The internship has a positive and significant effect on the work. The test result on the parameter coefficient between apprentice to work showed a positive correlation with t-statistic value of 13.394 and significant at $\alpha = 0.05$. The t-statistic value is above the critical value 1.96.

Measurement of Path Coefficient

Jakino et al / Impact of Material Training, Instructor, Facilities, Infrastructure In Implementation of Internship Program With Participants of Courses and Job Training (Study Program Implementation Internship in Central Java)



Tabel 2. Direct Effect between variables

Relation between Variables	Direct Effect
Instructor VS Internship	-0.6673
Material VS Internship	0.9211
Infrastructure VS Internship	0.5573
Internship VS Work	0.9343

he direct influence of factors affecting the apprenticeship is the material and means of each of 0.9211 and 0.9343, while the magnitude of the direct influence of the apprentice variables on the work of 0.5573.

Discussion

Based on the results of PLS analysis, then in this section will discuss the results of calculations that have been done. This study aims to determine the effect of instructors, facilities and materials on apprenticeship. And the influence of internship and work.

There is no effect of Instructor / educator with Internships Statistically there is no significant influence between the structure and the apprenticeship with the level of error at the level of: 0.10 this happens because the instructor only provides training materials and gives examples of practice to apprentice participants, the absorption of knowledge submitted by the instructor / educator depends on the intelligence of apprentices, if the participant whose level of intelligence is adequate will easily absorb what is conveyed by the instructor / instructor, and if the apprentice of the intelligence level is less then the apprentice less master also what is delivered by the instructor / educator. However, in the implementation of the program is required in the technical guidance of the internship program of the instructor / educator in the internship program must have the ability academically and technically able to practice what is learned, and also required to have the competence certificate in the field that is taught. In the field, there are several courses and training institutes

(LKP) of the internship program implementing the less educated instructor / instructor in the field of skills taught, this is due to the remote LKP location and the minimal human resources instructors / educators who are competent to be involved in the implementation of the program, thus recruiting the structures / educator sober, so if the apprentice does not have his own intelligence then he will not be accepted in DUDI, or can work but not according to the results of apprenticeship study, or can work independently not from the results of the internship.

There is no effect of infrastructure by apprenticeship Statistically there is no direct influence between the infrastructure and the apprentice with the level of error at level: 0.10, this happens because there are some implementers of apprenticeship program with insufficient facilities and infrastructures but graduates of apprentices can be accepted in DUDI, some even work independently, and work as a plasma to be a DUDI work partner at the internship, depending on the level of intelligence of the apprentices. However, in general, the infrastructure facilities of one of the supporting internship programs that must be provided by the apprentice apprentices, the comparison of the facilities provided by the organizers of the apprentices program is at least one to two, meaning that one practice tool can be utilized by two apprentices in turn, one means the means of a means of supporting the practice is for one apprentice participant.

There is the effect of training materials with apprenticeship Statistically there is the effect of training materials on apprenticeship at level 0.05, this is because the training materials one of the main tools in the internship program, which is as an apprenticeship manual related to the work tool, how to work tools or production equipment, training materials in detail explain the standard procedure operation (SOP) in working in companies that produce products or services. However, there are some LKP organizers of apprenticeship training materials submitted less appropriate with the work tools at the internship so parapets learn internships of practice tools from scratch again, this resulted in the apprenticeship schedule to add days, by increasing the time automatically apprentices resulting in increased costs incurred, such as the cost of the structure, trasport participants and other costs arising. Should be in the technical guidance of the apprenticeship program, it is explained that the training material is prepared by the educator of the internship program course with the partners, namely DUDI place of apprenticeship, so that the material used is appropriate and appropriate by the DUDI who will receive the graduates of the internship program, or at least learners can learn by themselves from the training materials and can apply the knowledge already learned in the internship program. Training materials play an important role for apprentices because of the very limited learning hours, so for the understanding of the participants can learn by themselves by reading the provided training materials.

There is the effect of apprenticeship by working

There is an effect of apprenticeship on work at level 0,05 meaning that graduates of student apprentice program average

Jakino et al / Impact of Material Training, Instructor, Facilities, Infrastructure In Implementation of Internship Program With Participants of Courses and Job Training (Study Program Implementation Internship in Central Java)

can work in business world and industry on result of learning apprenticeship program assist in job execution, most of graduate apprenticeship program means graduate apprenticeship program mostly work in mag place

Conclusions and Recommendations

Conclusion

Based on the results of research and discussion, it can be drawn some conclusions as follows:

- 1. Training materials have a significant influence on the internship programs in the field of skills, especially Garment, Hospitality, and Office Administration. This is because learners of the apprenticeship program are adults, productive age, so in learning most independently do not need to be guided by the structure / educator continuously by explaining the material and practice once they have been able to learn their own tempo.
- 2. Instructors / educators have a significant influence on the internship program. This can happen because students of apprenticeship program from the selection process are selected by the applicant candidates who already have basic competency, working age, productive, and have big interest, hence the role of educator / organizer does not continuously accompany tend to mostly self study with other participants .
- 3. Facilities and infrastructure have a significant influence on the internship program. because the implementation of the apprenticeship program is only about three months and the participants are adults and ready to work then the available infrastructure facilities can utilize well. However, from the results of several interviews that it is better if the infrastructure is complete and not outdated.
- 4. Internships have significant influence on work. This happens because the learning result of the internship program is very supportive in the work.
- 5. Evaluation evaluation of the implementation of internship program in 2016 and 2017 all alumni can work all as employees, self-employed or plasma work

Recommendation

Based on the results of this study, there are several suggestions for organizing the apprenticeship program of trainees and courses:

- 1. Need to improve the quality of apprenticeship training materials
- 2. Choosing competent instructors in their field, diligent, and responsible
- 3. Improvement of the infrastructure used for apprenticeship program
- 4. LKP observes alumni of internship graduates for their work
- 5. As input for the Directorate of Course Development and Training apprenticeship program is still feasible to be continued and developed and the addition of the apprentices quota by considering choosing the kinds of skills that are synchronized with the world of work.

References

- [1] Widodo dan Jasmadi dalam Lestari, 2013:1.
 Pengembangan Bahan Ajar Berbasis Kompetensi Sesuai dengan Kurikulum Tingkat Satuan Pendidikan. Padang:
 Akademia Permata
- [2] Ruhimat, Toto. Dkk, 2011. Kurikulum Pembelajaran. Jakarta. PT Raja Grafindo Persada
- [3] Etin Solihatin. Rahajo 2007. Cooperative Learning Analisis. Model Pembelajaran Ilmu Pengetahuan Sosial. Jakarta: PT. Bumi Aksara.
- [4] Punaji. Setyosari. 2010 Metode Penelitian Pendidikan dan Pengembangan. Jakara: Kencana Prenada Media Goup.
- [5] Muhammad Yauni. 2013. Prinsip-prinsip Desain Pembelajaran. Jakarta: Kencana Prenada Media Group.
- [6] Anthony, T dan Tri Hastuti. 2003. Manajemen Sumber Daya Manusia. Penerbit Universitas Indonesia Press. Jakarta.
- [7] Dessler, Gary. 2000. Manajemen Sumber Daya Manusia. Terjemahan Benyamin Molan. Edisi Ketujuh. Jakarta: Prehallindo.
- [8] Hamilton, M. 2011. The extensive training and professional development continue to to correct skill deficiencies. Southern Illinois University at Carbondale. Online Journal of Workforce Education and Development Volume III, Issue 3 – Spring
- [9] Lorin W. Anderson & David R Krathwohl, A Taxonomy for Learning, Teacher, and Assessing A Revision of Bloom's Taxonomy of Educational Objectives (New York, Addison Wesley Longman,Inc,2001),hlm.5
- [10] Guido Bertucci. 2005. Human Resources for Effectivitive Public Administration in a Globalized Word. Department of Economic and Social Affairs. United Nations, New York, NY 10017, USA.
- [11] Marzuki, Saleh. H.M. (2010). Pendidikan Nonformal. Dimensi dalam Keaksaraan Fungsional, Pelatihan, dan Andragogi. Bandung: Penerbit Rosda.
- [12] Handoko. T. Hani. 2003. Manajemen Sumber Daya Manusia. Edisi Pertama, Cetakan Kelima. Yogyakarta : BPFE.
- [13] Hardjana. 2001. Prestasi Kerja. Edisi Baru. Cetakan Kedua. Penerbit. Rineka Cipta. Jakarta
- [14] Hasibuan Malayu S.P (2010) Manajemen Sumber Daya Manusia, Jakarta PT. Bumi Aksana
- [15] Peraturan Direktur Jenderal Pendidikan Anak Usia Dini dan Pendidikan Masyarakat Kementerian Pendidikan dan Kebudayaan Nomor 43 tahun 2016 tentang petunjuk tenis Bantuan Program Magang Peserta Didik Kursusdan Pelatihan tahun 2016
- [16] Marzuki, Saleh. H.M. (2010). Pendidikan Nonformal. Dimensi dalam Keaksaraan Fungsional, Pelatihan, dan Andragogi. Bandung: Penerbit Rosda.
- [17] Sudjana, D. (2004). Management of Education Program (for Non-formal Education and Human Resource Development . Bandung: Falah Production
- [18] Ruky, Ahmad S, 2003. Sumber Daya Manusia Berkualitas (Mengubah Visi Menjadi

Jakino et al / Impact of Material Training, Instructor, Facilities, Infrastructure In Implementation of Internship Program With Participants of Courses and Job Training (Study Program Implementation Internship in Central Java)

- [19] Realitas), Penerbit PT. Gramedia Pustaka Umum, Jakarta.
- [20] Santoso, Singgih. 2001. SPSS Versi 10.0 Mengubah Data Statistik Secara Profesional. PT
- [21] Elex Media Computindo. Jakarta
- [22] Sarwono, Jonathan. 2002. Perbedaan Dasar Antara Pendekatan Kualitatif dan Kuantitatif. Lembaga Penelitian dan Pengabdian Masyarakat Universitas Indonesia. Jakarta.
- [23] Siagian, Sondang, P. 2002. Manajemen Sumber Daya Manusia. Cetakan Ketujuh. Bumi Aksara, Jakarta.
- [24] Singarimbun dan Sofian Effendi, 2004, Metode Penelitian Survei, Penerbit LP3ES, Indonesia
- [25] Siswanto, Bedjo. 2001. Manajemen Tenaga Kerja. Edisi Revisi. Cetakan Kedua. Balai Pustaka, Jakarta.
- [26] Simamora, Henry. 1995. Manajemen Sumber Daya Manusia. STIE YKPN. Yogyakarta.
- [27] Suprianto, J. 2001. Pengukuran Tingkat Kepuasan Kerja. Edisi Revisi. Cetakan Ketiga. Rineka Cipta. Jakarta.
- [28] Sugiyono. 2010. Metode Penelitian Administrasi. Jakarta. Penerbit, CV Alva Beta.
- [29] Arikunto, Suharsimi. 2008. Prosedur Penelitian Suatu Pendekatan Praktik. Edisi Revisi II. Ghalia Indonesia, Jakarta.
- [30] Caiden and Becker G. 1999. *Human Resource Development*. Chicago: University of Chicago Press.
- [31] Endang, Sumarsih. 2006. Pengaruh Pelatihan Terhadap Prestasi Kerja Karyawan studi pada
- a. karyawan bagian produksi PG. Kebun Agung Malang. Skripsi, FE.Universitas
- b. Brawijaya Malang.
- [32] Hamalik, Oemar. 2001. Proses Belajar Mengajar. Bandung: Bumi Aksara.
- [33] Hariandja, Marihot T.E, 2002. Manajemen Sumber Daya Manusia. Jakarta: Grasindo.
- [34] Hasibuan, M.S.P., 2000, Manajemen sumber daya manusia, Penerbit :Bumi aksara, Jakarta
- [35] Handoko, T.hani.1995. Manajemen personalia dan sumber daya manusia. Yogyakarta :BPFE
- [36] Hansman, Catherine A. (2001) Context-Based Adult Learning: Adult learning takes place in context where tools and the context intersect with interaction among people.New Directions for Adult and Continuing Education, No. 89, Spring 2001 © Jossey-Bass, A Publishing Unit of John Wiley & Sons, Inc.
- [37] Hargiyarto, Putut. 2007. Strategi Pembelajaran pada Kegiatan Magang di Industri Kerajinan Logam di Kotagede. Laporan Penelitian Mandiri UNY.
- [38] Johan Wahyudi. 2010. Minat Baca Masyarakat Indonesia. Solo: Tiga Serangkai Pustaka Mandiri http://indonesiaku.com[I:boekoe] 4 nov.2012 Jam: 10.30 WIB
- [39] Moh. Uzer Usman, Menjadi Guru Profesional, (Bandung: PT Remaja Rosdakarya, 2006), Cet. 19, hlm. 14-15 21

- [40] Kamil. (2002). *Teaching and Learning Strategies*. Jakarta: Gramedia
- [41] Lorin W. Anderson & David R Krathwohl, A Taxonomy for Learning, Teacher, and Assessing A Revision of Bloom's Taxonomy of Educational Objectives (New York, Addison Wesley Longman, Inc., 2001), hlm.5
- [42] Nugroho s (2008). Pengembangan media pembelajaran interaktif mata diklat dasar listrik dan eletronika di smk. Yogyakarta : jurusan teknik elektro FT UNY
- [43] Oemar Hamalik. 2003. Perencanaan Pengajaran Berdasarkan Pendekatan System Jakarta: Bumi Aksara.
- [44] Waras.2003., Pembelajaaran Berbasis Proyek: suatu Pendekatan Inovatif Pendidikan Teknologi dan Kejuruang . Yogyakarta Seminar Nasional Teknologi Pembelajaran.
- [45] Paul Suparno, Filsafat Konstruktivisme dalam pendidikan (Yogyakarta:Kanisius, 1997), hlm. 15 Fosnot, Catherine Twomey (ed), Constructivism:theory, Perspective dan Practice (New York & London: Teacher College Press, Columbia University,1996),hlm. Ix.
- [46] Sudarwan Danim, Agenda Pembaharuan Sistem Pendidikan, (Yogjakarta: Pustaka Pelajar, 2003), Cet. 1, hlm. 53 2
- [47] Suma'mur. (2006), Higiene Perusahaan dan Kesehatan Kerja. Jakarta: PT. Gunung Agung
- [48] Tarwaka, Sholichul, Lilik Sudiajeng, 2004. Ergonomi Untuk Keselamatan, Kesehatan Kerja dan Produktivitas. Surakarta: UNIBA PRESS
- [49] Uzer usman,Lilis Setiawati. 1993., *Upaya Optimalisasi Kegiatan Belajar Mengajar* Bandung :Remaja Rosdakarya.
- [50] Yusufhadi Miarso 1999. The Development of Learning Organization: The Role of Open and Distance Learning, Makalah Seminar disampaikan pada the fifth Sumposium on open and distrance Learning, Surabaya.
- [51] Yusufhadi Miarso. 2004. *Menyemai Benih Teknologi Pendidikan*. Jakarta:Prenada media.