

## INTEGRATION OF E-LEARNING MODEL IN BEHAVIORISTIK BASED LEARNING ENVIRONMENT FOR MANAGING THE LEARNING PROCESS

**Mochammad Rifai, Sudrajat, Slamet Hariyadi**

Universitas Negeri Surabaya

Email: rifai.moch@yahoo.co.id

### ABSTRACT

*The purpose of this study is to develop an integration model of e-learning to support behavioristic teaching methods. This study applied descriptive qualitative approach and using secondary data in the form of relevance theories and previous empirical study. Through integrating the e-learning, the weaknesses of the behavioristic methods can be solved and will also develop an integrated learning method which is able to facilitate the application and maximization of behavioristic methods with the support of electronic technology.*

**Keywords:** behavioristic method, e-learning, integration

### A. PRELIMINARY

The successful of learning sometimes have a fundamental constraint on teaching methods that are applied, which causes the need for selection of teaching methods appropriate to the characteristics of students and the material taught (Sibarani, 2006). If there is a discrepancy on teaching methods, then it is necessary to do the selection and application of other methods are deemed more appropriate, or developing the current teaching methods through the integration of learning approaches that support the learning method that is being used.

One type of teaching method that is considered to have a weakness to be applied is the behavioristic method. This method was pioneered by Skinner (1904-1990), which is oriented on providing instruction and results. The concept has received many criticism from education experts for not paying the achievement of learning outcomes, and identified the learning process as the process of working of a machine (Hall et al, 2015). The weakness of the behavioristic method may cause the completion of learning activities and generate less profound understanding of the students on the material being taught.

Although it has a fundamental weakness, but the behavioristic method still possible to be applied because it also has the advantage, among others proven effective to modify behavior of learning and it applied a simple teaching methods (Hall et al, 2015). Therefore, it would require the development of behavioristic methods by integrating learning models that

are able to overcome the weaknesses of the method, as well as encouraging the maximization of application of the behavioristic method.

One of learning model that allows it to be integrated into behavioristic method is e-learning, that is learning model that utilizes the use of electronic technology to support the process of delivering information to improve teaching (Pellet, 2014: 26). E-learning has four characteristics that are able to overcome the weaknesses in the behavioristic methods. Based on the explanation, the purpose of this study is to develop an integration model of e-learning to support behavioristic teaching methods.

## **B. METHOD**

This research applying qualitative descriptive approach, which is the research conducted by extracting information through a series of in-depth data search process, grouping and interpretation of qualitative data (Creswell, 2010:4-5). The data used in this research is secondary data in the form of theories and empirical studies that relevance to the focus of this study.

## **RESULTS AND DISCUSSION**

### **A. Education**

Humans throughout his life carrying out education, therefore, both are two things that can not be separated. The main purpose of education is to foster human being in all aspects of humanity, consisting of spiritual dimension (theological), morality, sociality, emotionality, rationality, intellectual, aesthetic, and physical. Education is a cultural process or activities that become one of the most important elements for sustainability and the balance of human civilization. Education not only leads man on the degree of humanity that is noble, but also as a means to identify themselves and the environment (Suardi, 2015:4).

Education is seen as a means to solve the problems of humanity, wherever human existence only through the ages have always come back to education to seek and find answers to the problems that it faces. Education is essentially a conscious and deliberate effort to create an atmosphere of learning and the learning process so that learners are actively developing the potential for him to have the spiritual power of religion, self-control, personality, intelligence, character, and skills needed him the community, state and

nation. Education became one of the most important planned efforts in order to realize a civilized society, morality, personality, as well as having welfare (Tito, 2013).

Education is an improvement and reinforcement process of all abilities and human potential as well as a human endeavor to develop his personality in accordance with the values and culture that exist in society (Roqib, 2009:15). Along with the development of civilization, education is required to meet the needs of human life, so that education should be able to bring significant changes in various aspects as basic as a philosophy, a paradigm system, and curriculum. Education carried to achieve goals for progress, change and social change and community stability (Suardi, 2015:4).

The purpose of education is to instill values and certain norms as established in educational philosophy, which values or norms upheld by an educational institution (Roqib, 2009:17). Specifically, Koesoema (2007:64) mention three educational purposes as follows:

1. Directive and orientasional purpose as the achievement of an educational institution.
2. Motivational purpose for all parties involved in the educational process.
3. Evaluation purpose to determine the performance and effectiveness of the education practices.

## **B. E-learning**

E-learning is a form of development of Internet technology that increasingly integrated in many activities of daily life. Generally, e-learning was defined as a learning process facilitated by electronic technology. It can be defined also by another perspective, that is when a person is learning with the help of information technology, it can be said that the person is using e-learning. E-learning can also be defined as the delivery of information as solution for improving and developing knowledge and performance (Pelet, 2014:26). More specifically, E-learning is defined as the use of internet technology to enhance, enable, and extending performance and knowledge (Allen, 2009:94).

There are three main criteria of e-learning, consisting of (Pelet, 2014:26):

1. E-learning is networked, characterized by capability of instant updating, distribution, retrieval, sharing of instruction and information, and retrieval.

2. E-learning is delivered to the end user through computer with internet connection.

3. E-learning is focused on a broad learning process and orientation.

E-learning can be referred to as a process of learning, which in general have parts of the process as follows(Rice & Gregor, 2016:2):

1. Creation and delivery of learning objects across a network.
2. Creation and delivery of learning experiences through networking.
3. Improvement of teaching using technology.
4. The use of technology to be able to act as the depositary and learning data publishers.

E-learning is a learning that emphasizes the maximum utilization of the internet technology, with the following characteristics (Pelet, 2014:26):

1. Learning using information and communication technologies.
2. Use the network, which in this case primarily the Internet and world wide web.
3. The submission of information quickly and at any time.
4. Exchange of information through an electronic device for the purpose of learning.

Based on the definition of e-learning, it can be known the logical coverage of e-learning as follows(Pelet, 2014:26):

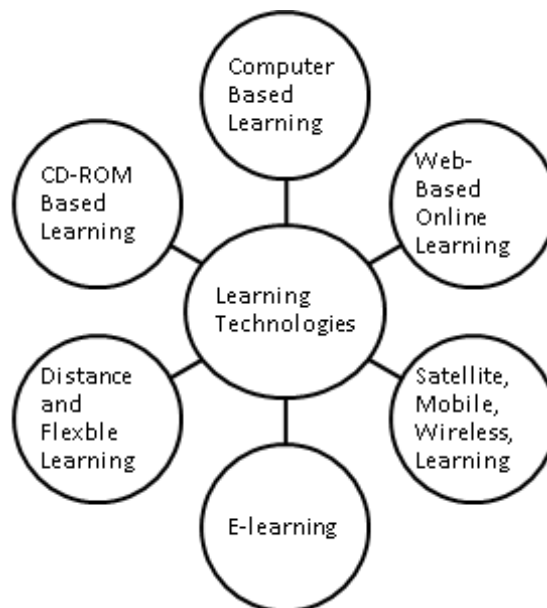
1. E-learning covers all types of learning using digital technology assistance.
2. The information delivery system in e-learning refers to the dynamic development of information technology and social.
3. The e-learning can be implemented in a variety of models, either online or offline, in the form of a series of processes or simply a learning event, taken alone or with the instructor, synchronized or not synchronized.

Referring to the three logical thinking about e-learning above, it can be formulated broad definition of the e-learning as follows(Pelet, 2014:26):

1. E-learning can be defined as learning which involves the acquisition and transmission of knowledge uses electronic tools.

2. E-learning is a learning approach that facilitates interaction between teachers and learners in the exchange of information through information and communication technologies.

E-learning can be viewed as a learning that is flexible, both flexible related places and times, as well as the technology used. Flexible related time means e-learning can be done at any time or whenever needed. Flexible related places means that that the learning process that can be done even though the parties involved in these activities is not located in one place. Flexible related technology used, where e-learning can be done using a variety of information and communication technology appropriate to the needs. E-learning model related to the technology and the inherent characteristics can be seen in the following picture (Pelet, 2014:27):



Picture 1. Learning Technologies Modes and Relationship  
Source: Pelet (2014:27)

Through a variety of models and connectivity of e-learning at the top, then the use of e-learning can improve the effectiveness of learning activities in four ways(Morrison, 2003:9):

1. Speed of delivery: the use of e-learning allows the transmission of knowledge is done as quickly as possible beyond the speed of other knowledge transmission channels.
2. The efficiency of delivery: the use of e-learning allows learning to be conducted immediately after the transmission of knowledge.
3. Continuous delivery: e-learning can be used at any time and anywhere, thereby providing the availability of knowledge to be delivered.

4. Dynamic delivery: the changing needs of education can be facilitated by e-learning that has responsive to changes characteristic.

As a learning method that utilizes information technology, e-learning has elements that combined to facilitate easy access and understanding for the parties involved in the learning process of the content of e-learning. Elements of the e-learning include (Morrison, 2003:10):

1. Logon process
2. Re-registration process
3. Personal profile
4. Competency and skill assessments
5. Course catalogues
6. Course enrollment processes
7. Pre-defined learning
8. Personal learning path
9. Online courses-custom built or bought off-the-shelf, usually containing some

combination of these elements:

- a. Pre-assessments
- b. Text
- c. Graphics, photographs
- d. Streaming animations, audio, video
- e. Simulations
- f. Interactive exercises
- g. Online and downloadable tools
- h. Quizzes
- i. Bookmarks
- j. Online notepads
- k. Post-assessment
- l. Feedback forms
10. Downloadable courses or course elements
11. Electronic performance support systems
  12. Moderated message boards
  13. Peer-to-peer message boards
  14. Peer-to-peer instant messaging

15. Virtual classroom
16. Online monitoring
17. Other collaborative applications
18. Web casts
19. Links to public or subscription web sites
20. Access to proprietary or third-party knowledge management databases
  21. Online help files
  22. Online help desks
  23. Telephone help desks

E-learning content generally consists of three dimensions, namely(Morrison, 2003:11):

1. Subject matter-the content of content
2. Focus-an indicator of the breadth of the learner base
3. Intention-how the learning is intended to affect learners

### **C. Behavioristik Teaching Method**

Behavioral theory in the teaching process is the first modern educational theory(Hall, Hindmarch, Hoy, & Machin, 2015), pioneered by experts named B.F. Skinner (1904-1990), which emphasizes the concept that learning is a function of the change in behavior that can be observed clearly. This theory is based on the logic that the change in behavior is the result of a person's response upon receipt of stimulus coming from the environment.The behavioral changes can occur naturally when the stimulus received is undefined or out naturally from the environment without any particular arrangement. Conversely, when there is a certain purpose wanted to achieve, then there must be made a specific setting to the stimulus. For example, a teacher wants to make his students understand a particular subject.To achive that goal, the teacher gives an award to anyone among his students were able to explain to teachers about the content of the subject. This makes the students trying hard to learn and establish learning behavior on those specified subjects. Based on those example, it is clear that the response can be either a natural thing and it can also be something that is processed through the settings given stimulus(Beatty, 2010:94).

Another fundamental thing in behavioristic theory developed by Skinner is related to the position and situation of the parties learned that should be made comfortable and confident to be able to produce a maximum and best response in learning activities. Skinner explained that positive reinforcement, such as rewards and recognition capabilities, are things that enable creation of a positive state of the learners, on the contrary, penalties or other negative things that are given only reduces response that can be generated (Beatty, 2010:94). It means, behavioristic method is generally associated with giving particular stimulus to create response and result, while maintain positive environment and confidence on the learners.

Behavioristic method is the classical method of learning with a core approach to their order or instruction and discipline, with teacher as the cause and learning activities as the effect. Orientation of behavioristic method only considers the effort and results, regardless on exploring the ideas and creations of learners in learning a matter of knowledge. A summary of the advantages and disadvantages of methods behavioristic can be seen in the following table (Hallet.al., 2015):

Table 1. Strength and Weaknesses of Behaviourism Method

o	Strengths	Weaknesses
	Behavioristic method is scientific, clinical, and “teacher proof”. Teaching the right stuff and will get the correct results. Based on observable outcomes. Easier to quantify and collect data and information when conducting research. A simple effective teaching and learning.	Behavioristic is cold, calculating and distant. One dimensional approach to understanding human behaviour. Do not account for free will or internal influences such as moods, thoughts and feeling.
	Behavioristic method is working if implemented in teaching. Effective therapeutic such as intensive behavioural intervention, behaviour analysis, token economics and discrete-trial training are all rooted in behaviourism. Often useful in changing maladaptive or harmful behaviour in both children and adults.	Behavioristic method is doesnot work for all. Do not account for other types of learning, especially learning that occurs without the use of reinforcement and punishment.



Source: Hallet.al. (2015)

Real practice of behaviorism theory in teaching in the classroom can be classified into two types of methods, ie programmed instruction and mastery learning(Beatty, 2010:95).

#### 1. Programmed Instruction

This method is also commonly referred to as programmed learning, which states that teaching can provide maximum results if done by providing information in a series of gradual process, where each stage there should get the appropriate response. If a stage has responded appropriately, then continue on to the next stage which also begins with presentation of information with a higher difficulty level to be studied. The process takes place in a sustainable manner in order to reach the desired learning objectives. The features of programmed instruction that are commonly used are multiple-choice questions, constructed response answers, and hotlinks. Disadvantage of this method is that it is just a one direction learning process from the teacher to learners. However, this method is very easy and effective to be applied if there is the use of technologies that support educational processes.

#### 2. Mastery Learning

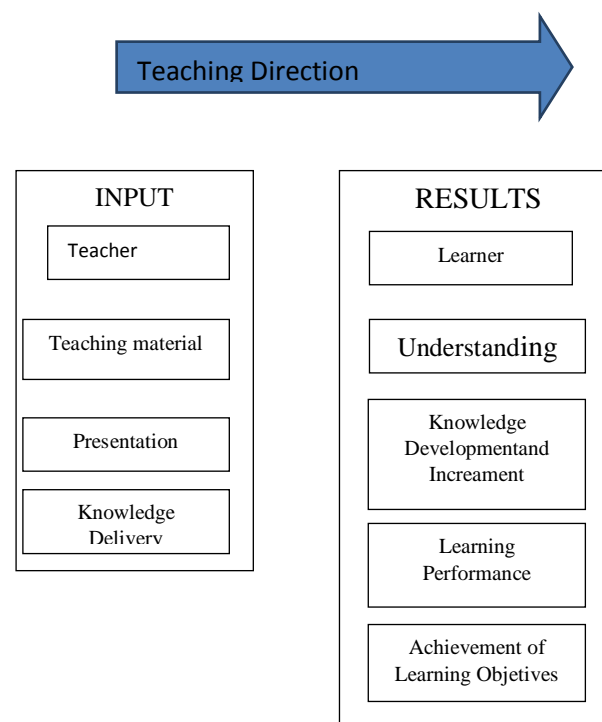
This method complements the programmed instruction method by providing an alternative approaches and materials to overcome the failure of achieving the goal of learning a subject. Those alternative approaches are in form of instructions that can direct a learner to better understand the material presented, and can think of an answer or find the core material to be understood. The given instructions are intended to encourage learners to think and create an understanding that comes from within. Therefore, this method requires the existence of a highly motivated self-learners. Without high motivation, then learners will only feel the process is too long and can bring laziness. If learners have high motivation, then this method will be able to form a depth of understanding related to an object of the study.

### **D. Integrating E-learning in Behavioristik Teaching Method**

Behavioristic method is a teaching method that applies the principles of Skinner's educational behaviorism theory. Although it has been widely criticized and considered to have weaknesses, but in reality sometimes still applied in teaching practices. One of the most fundamental weakness of the behavioristic method is on the assumption of the concept that considers learning process is equal to the working mechanism of a machine. This method override human factors inherent to the learners, so that the primary orientation is emphasized in the learning process only on the provision of material through teaching as a stimulus to get

the results in the form of learners knowledge development and understanding of the teaching materials (Sanyata, 2012). In other words, if the teacher's role has been implemented, which includes the presentation of material and delivery of content, the students should be able to receive and understand the material very well.

Another weaknes of behavioristic method that also needs to be understood is the neglect on the phases of interaction and reciprocity relationship between the teacher and student (Sanyata, 2012). This method is more concerned with the results or achievements obtained by the learners regardless of process and efforts must be made to achieve these results, which ultimately led to their vulnerable shallowness on understanding the learning subject (Hall et al, 2015). Illustration of behavioristic method can be seen in the figure below:



Picture 2. Behavioristic Method

Source: Adapted from Hallet.al. (2015), Hallet.al. (2015); Beatty(2010)

In practice, the behavioristic method can be implemented using two approaches, namely programmed instruction and mastery learning (Beatty, 2010: 95), which has remained basically follow the major principles related to teaching that focuses on instruction and results (Hall et al, 2015). Based on this, a width gap that can be seen clearly on the application of behavioristic methods is on monitoring the learning process, that comprise of the student activities undertaken in an effort to learn and understand a knowledge that is

conveyed in the teaching process. Behavioristic method considers that the thoughts and perceptions of each student is the same as a machine, which should give good results if it had been given an input (knowledge) through the teaching process (Beatty, 2010: 94). Deficiencies in the escort of the learning process can be covered through the integration of e-learning in facilitating interaction and exploration of the learners who are engaged in behavioristic learning environment.

According to Allen (2009:94), e-learning is defined as the use of internet technology to enhance, enable, and extending performance and knowledge. Similiar definition stated by Pelet(2014:26), that e-learning is defined as the delivery of information as solution for improving and developing knowledge and performance. E-learning is considered

E - learning is considered be able to complement and support the teaching behavioristik methode that e - learning advocates have four characteristics, Learning using information and communication technologies, Use the network, which in this case primarily the Internet and world wide web, The submission of information quickly and at any time, Exchange of information through an electronic device for the purpose of learning(Pelet, 2014:26).

1. Learning using information and communication technologies.

Beatty (2010: 95) stated that the application of behavioristic theory into teaching practice requires high motivation of students to understand the teaching materials that are delivered by the teachers through the extra effort and sourced from self-willingness. In the actual learning process, learning motivation is an important factor which can fluctuate, which in turn have an impact on fluctuations of the performance of students. Therefore, the integration of e-learning in behavioristic teaching methods can become a development for the process that has a special attraction for students. The displays and design of the medium used in e-learning can be a source of motivation for students to try harder to understand the study material.

2. Use the network, which in this case primarily the Internet and world wide web.

Behavioristik method known as a method of teaching with the interaction that goes in the one direction in terms of performance or results of teaching. That is, this method assumes that the input always produces equivalent results. It makes students are not able to explore freely because of the limitations of the processes and interactions. Through the integration of

e-learning in behavioristic method, the students will have extensive resources that allow students to freely seek and explore the many sources of knowledge to supplement the information to make it easier to understand the teaching materials that are delivered.

3. The submission of information quickly and at any time.

The aim of behavioristic method is to achieve the learning goals through simple teaching methods, which requires students to be able to understand and explore all the material in a short time with very minimal tolerance. Behavioristic method emphasizes that when a matter has been presented, it must be ensured learners can understand quickly, ignoring the diversity of characteristics among students in terms of different speed of understanding. By integrating e-learning that has the characteristics of fast and precise in presenting information, students can quickly find the information necessary to facilitate an understanding of the teaching materials.

4. Exchange of information through an electronic device for the purpose of learning.

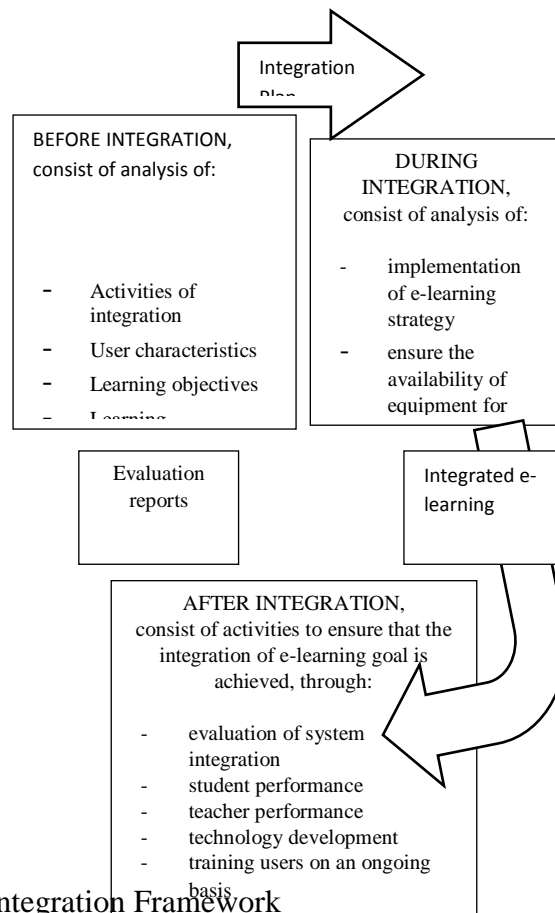
Behavioristic method is a results-oriented method that ignoring the process of achieving the results. Based on these principles, the monitoring of the learning process of the students is not the focus and attention of the method. Therefore, through the integration of e-learning in behavioristic methods, students can easily work together to be able to understand an object lesson together. This can be done because of the characteristics of e-learning which allows the exchange of information or discussion between students through electronic devices with ease.

Integration of e-learning in support of behavioristic teaching methods can be done based on the characteristics of e-learning model in addressing the weaknesses of the teaching method. In actual practice, Kituyi & Tusubira (2013) developed three stages of integration, namely the stage before integration, during integration, and after integration.

1. Before Integration, consisting of analysis activities of integration, user characteristics, learning objectives, learning environment, and learning methods.

2. During Integration, consists of analysis of the implementation of e-learning strategy, and ensure the availability of equipment for implementing e-learning.

After Integration, consists of activities to ensure that the integration of e-learning goal is achieved, which includes the evaluation of system integration, student performance, teacher performance, technology development, and training users on an ongoing basis.



Picture 3. E-Learning Integration Framework

Source: Adapted from Kituyi & Tusubira(2013)

### C. CONCLUSSION AND SUGGESTION

Behavioristic methods emphasis on instruction and results, therefore, it has a fundamental weakness in terms of managing the learning process. The weakness can be overcome by integrating e-learning model in behavioristic teaching methods. Through the characteristics of e-learning, the weaknesses of the behavioristic methods can be solved, and will also develop an integrated learning method which is able to facilitate the application of behavioristic methods with the support of electronic technology

### DAFTAR PUSTAKA

- Allen, M. W. (2009). *Michael Allen'S 2009 E-Learning Annual*. California: Pfeiffer.
- Beatty, K. (2010). *Teaching And Researching: Computer-Assisted Language Learning*. New York: Routledge.

- Creswell, J. W. (2010). *Research Design: Pendekatan Kualitatif, Kuantitatif, Dan Mixed*. Yogyakarta: Pustaka Pelajar.
- Hall, F., Hindmarch, D., Hoy, D., & Machin, L. (2015). *Supporting Primary Teaching And Learning*. Northwich: Critical Publishing.
- Kituyi, G., & Tusubira, I. (2013). A Framework For The Integration Of E-Learning In Higher Education Institutions In Developing Countries. *International Journal Of Education And Development Using Information And Communication Technology*, vol. 9, issue 2, 19-36.
- Koesoema, D. 2007. *Pendidikan Karakter: Strategi Mendidik Anak di Zaman Global*. Jakarta: Gramedia Widayarsana Indonesia.
- Morrison, D. (2003). *E-Learning Strategies: How To Get Implementation And Delivery Right First Time*. England: John Wiley & Sons Ltd.
- Pelet, J.-E. (2014). *E-Learning 2.0 Technology And Web Applications In Higher Education*. Hershey: IGI Global.
- Rice, S., & Gregor, M. N. (2016). *E-Learning And Academic Library: Essay On Innovativeness*. North Carolina: McFarland and Company, Inc.
- Roqib, Moh. 2009. *Ilmu Pendidikan Islam: Pengembangan Pendidikan Integratif di Sekolah, Keluarga, dan Masyarakat*. Yogyakarta: LKiS.
- Sanyata, S. (2012). Teori Dan Aplikasi Pendekatan Behavioristik Dalam Konseling. *Jurnal Paradigma*, No. 14, Th. VII, Juli, 1-11\.
- Sibarani, B. (2006). Metode Pengajaran Bahasa Berbasis Kompetensi. *Jurnal Ilmiah Linguistik Dan Sastra*, Vol. 2, No. 1, Mei, 48-58.
- Suardi, Moh. 2015a. *Ideologi Politik Pendidikan Kontemporer*. Yogyakarta: DeePublish.
- Tito. 2013. Pengaruh Karakteristik Sekolah, Kompetensi Keahlian, Citra SMK dan Kelas Sosial Orang Tua Dalam keputusan Peserta Didik Memilih Sekolah Menengah Kejuruan (SMK) Di kota Palangka Raya. *JSM (Jurnal Sains Manajemen)*.ISSN: 2302-141 *Program Magister Sains Manajemen UNPAR V olume I, Nomor 1, April 2013*.