INTERNATIONAL CONFERENCE

ENGINEERING & TECHNOLOGY DEVELOPMENT

UBL ICETD

2013

The Second International Conference on
Engineering and Technology Development

2nd ICETD 2013

27, 28, 29 August 2013, Bandar Lampung, Indonesia

PROCEEDINGS

UBL

In Cooperations With :

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Hosted by :
Faculty of Engineering and Faculty of Computer Science,
Bandar Lampung University (UBL), Indonesia

2ⁿᵈICETD 2013

The Second International Conference On Engineering And Technology Development

28 -30 January 2013
Bandar Lampung University (UBL)
Lampung, Indonesia

PROCEEDINGS

Organized by:

PREFACE

The Activities of the International Conference is in line and very appropriate with the vision and mission of Bandar Lampung University (UBL) to promote training and education as well as research in these areas.

On behalf of the Second International Conference on Engineering and Technology Development (2nd ICETD 2013) organizing committee, we are very pleased with the very good response especially from the keynote speaker and from the participans. It is noteworthy to point out that about 80 technical papers were received for this conference.

The participants of the conference come from many well known universities, among others : University Kebangsaan Malaysia – Malaysia, APTIKOM – Indonesia, Institut Teknologi sepuluh November – Indonesia, Surya Institute – Indonesia, International Islamic University – Malaysia, STMIK Mitra Lampung – lampung, Bandung Institut of Technology – Bandung, Lecture of The Malahayati University, B2TP – BPPT Researcher – lampung, Starch Technology Center – Lampung, Universitas Islam Indonesia – Indonesia, Politeknik Negeri Malang – Malang,University of Kitakyushu – Japan, Gadjah Mada University – Indonesia, Universitas Malahayati – Lampung, Lampung University – lampung, Starch Technology Center – Lampung, Universitas Riau – Riau, Hasanuddin University – Indonesia, Diponegoro University – Indonesia, King Abdulaziz University – Saudi Arabia, Parahyangan Catholic University – Indonesia , National Taiwan University– Taiwan, Surakarta Christian University – Indonesia, Sugijapranata Catholic University – Indonesia, Semarang University – Indonesia, University of Brawijaya – Indonesia, PPKIA Tarakanita Rahmawati – Indonesia, Kyushu University, Fukuoka – Japan, Science and Technology Beijing – China, Institut Teknologi Sepuluh Nopember – Surabaya, Researcher of Starch Technology Center, Universitas Muhammadiyah Metro – Metro, National University of Malaysia – Malaysia.

I would like to express my deepest gratitude to the International Advisory Board members, sponsor and also to all keynote speakers and all participants. I am also gratefull to all organizing committee and all of the reviewers who contribute to the high standard of the conference. Also I would like to express my deepest gratitude to the Rector of Bandar Lampung University (UBL) who give us endless support to these activities, so that the conference can be administrated on time

Bandar Lampung, 29 August 2013-08-26

Mustofa Usman, Ph.D
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Effectiveness Analysis Of Applications *Netsupport School 10 Based Iso / Iec 9126-4 Metrics Effectiveness*

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Abstract-*Along with the development of technology in this era of globalization, many organizations and educational world that requires increasingly sophisticated technology and assist in employment and education today, One technology that is helpful in the world of education is NetSupport School 10 technologies that can help teachers to monitor students' computer time lessons. NetSupport Discovered by a group called NetSupport Limited or now called NetSupport Inc.. based in peterborough English in 1989. Analysis Monitoring System NetSupport School 10 was conducted to determine whether this software has been effective in its use in accordance with Standard ISO / IEC 9126-4 Effectiveness Metrics and targets expected by the users, To find out more the effectiveness of NetSupport School 10 authors will describe the calculation of the level of effectiveness using metrics-metrics that exist in ISO / IEC 9126-4 Effectiveness Metrics.*

Keyword : *NetSupport School 10, ISO / IEC 9126-4 Effectiveness Metrics.*

INTRODUCTIONS

Teaching and learning activities in the computer lab, in the school environment and higher education, teaching and learning process in the laboratory have problems in monitoring student computers in the computer lab during school hours and lasted less conducive classroom when the teacher explains.

attention to the problems that exist when a computer lesson progresses, many laboratories implement systems NetSupport School 10 is often referred to NSS 10 in its aim to create a conducive classroom lessons.

Computer technology is the application of NetSupport School 10. NetSupport School 10 Concept is a concept where teachers can monitor any application or site is in open students.

However, many users do not know the exact effectiveness of the software, so the need for an evaluation of the effectiveness of the software that will be useful to the users for the development of technologies and systems in use today.

At The study will measure the effectiveness of NetSupport School 10 by Standard ISO / IEC 9126-4 Effectiveness Metrics. So the research conducted to provide answers to questions will be the effectiveness of using NetSupport School 10. In accordance with some of the problems that had previously didefinis as yet learned the effectiveness of the system NetSupport School 10, has never been done measuring the effectiveness of the use of NetSupport School 10 according to

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Standard ISO / IEC 9126-4 Effectiveness Metrics, unfavorable classes take place during school hours, the instructor is difficult to monitor praktikan activities take place during school hours.

If these aspects in an effective software criteria in use are met, then a valuable software to meet the needs.

NetSupport School: Classroom Instruction & Management

NetSupport School is the class-leading training software solution, providing teachers with the ability to instruct and visually/audibly monitor, as well as interact with their students, individually, as a pre-defined group or to the whole class.

Rising to the challenge and requirements of today's modern classroom, NetSupport School provides the ability to deliver lesson content, simultaneously monitor all student PCs and work collaboratively, ensuring that complete student attention and focus is maintained at all times. There are no hidden extras, all features are included as standard including a customised testing suite, dedicated technician console, digital student revision aids, lesson planning tools and the option for teachers to reward students for good effort.

Found By NetSupport School NetSupport NetSupport Limited Or Now Called Inc.. In Peterborough UK In 1989. Technology combines advanced PC monitoring, real-time presentation and Annotation tools, with an innovative customized with Internet Testing, suites and control applications, real-time audio monitoring, automated Lesson Plans, Printer Management, Instant Messenger control, Content Monitoring and Desktop Security , the latest version of NetSupport School

is growing into the challenges and requirements of the modern classroom.

ISO/IEC

ISO (International Organization for Standardization) ISO First established in Geneva, Switzerland, in 1947. ISO is the world standards body formed to improve the international trade-related goods and services changes. ISO can be summed up as the coordination of international labor standards, international harmonization of standards publication, and promotion of the use of international standards. IEC (International Electrotechnical Commission) is an international standards organization that prepares and publishes international standards for all electrical and electronic technology. ISO and IEC form the specialized system for the entire standardization in the world. ISO or IEC joined in the development of International Standards through technical committees established by the respective organization to deal with particular areas. ISO and IEC collaborate in certain areas for the common good. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the standardization work.

ISO / IEC 9126

ISO / IEC 9126 Software Engineering - Product Quality is an international standard for evaluating the software quality. The fundamental objective of this standard is to overcome some of the prejudices well known that humans can influence perceptions of project delivery and software development. The international standard is divided into 4 sections namely Model Quality (ISO / IEC 9126-1), External Metrics (ISO / IEC 9126-2), Internal Metrics (ISO / IEC 9126-3), the use of quality metrics (ISO / IEC 9126 - 4).

External Metrics, Metrics Internal, and

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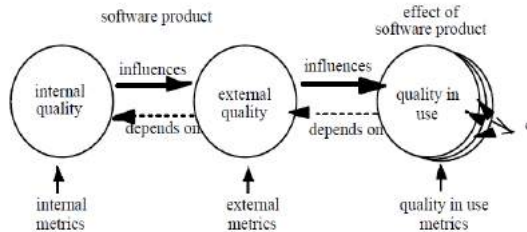use quality metrics have relationships with each other as

fig 1. Metrics

ISO / IEC 9126-4

ISO / IEC 9126-4 Use of Quality Metrics used to measure the extent to which a product meets the requirements specified users to achieve specified goals. Metrics is a unit for measuring software. In the ISO / IEC 9126-4 are metrics of effectiveness, safety, productivity, and satisfaction in a specified context of use of quality metrics. Quality in

use is not only dependent on the software

product, but also on the specific context in which the product is being used. Context of use is determined by the user factors, task factors and physical and social environmental factors. Quality used was assessed by observing representative users perform tasks in the context of a realistic representation use

Metric ISO / IEC 9126-4

Metric is a measurement scale and the method used for measurement. In the ISO / IEC 9126-4 are 4 metrics, namely:

1. Effectiveness

Effectiveness metrics measure the accuracy and completeness with which goals can be achieved.

2. Productivity

Measure of productivity related to the level of effectiveness achieved to the expenditure of resources. Relevant resources may include mental or physical effort, time, material or financial costs.

3. safety

Security measures related to operational risk software products from time to time,

conditions of use and the context of use. Safety can be analyzed in terms of operational safety and safety contingency. Operational safety is the ability of the software to meet the

needs of users who are normal during operations without endangering other resources and the environment. Safety contingency is the software's ability to operate outside the normal operations and divert resources to prevent the escalation of risk.

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4. Satisfaction

Satisfaction measures the extent to which users are free from discomfort and their attitudes towards the use of the product. Satisfaction can be defined and measured by subjective judgments on a scale such as: high qulity for the product, satisfaction with the use of the product, revenue workload when performing different tasks, or the extent to which a certain quality in use objectives (such as productivity or ability to learn) have been met.

Result

Questions Design for get effectiveness software using Metrics Effectiveness ISO/IEC 9126-4

No	Pertanyaan	Hasil
1	Is there a component of Net Support School 10 is not appropriate when it is run?	frequency Error
2	How many times have you made a mistake while using the software Net Support School 10?	frequency Error
3	How long is the software Net Support School to finish the job?	Task completion
4	How many times Software Net Support School to finish the job?	Task completion
5	How does your work after using Software Net Support School 10?	effectiveness Task

Analysis Techniques

The analysis techniques are in use in this study contained in ISO 9126-4 on the use of quality measures:

1. Effectiveness metrics

Effectiveness metrics assess whether the tasks done by users achieve specific goals with

accuracy and completeness in the particular context in use. Effectiveness metrics are divided like at the table

1. Analysis of Interview Results
This calculation is based on the results of interviews Effectiveness metrics in ISO / IEC 9126-4. Inside there are 3 subcharacteristric metrics, namely

1. Task effectiveness
    Using the method of calculation of data elements:
    $M1 = | 1-\Sigma Ai | 1$
    $Ai = 0$ (there is never a wrong component output current task)
    Thus,
    $M1 = | 1-0 | = 1$
    Boundary = 1, so that the results are close to 1 is the result of effective or better. Thus the effectiveness of the task has been good or effective.
2. Task completion
    In this subvariabel data element method calculation:
    $X = A / B$

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Assignment A = 8, B = 8 tasks
Thus,
X = 8/8 = 1
Results 1 is closest to the most effective results or better. Therefore Completion Task software NetSupport School 10 is Effective.

3. Frequency Error
   X = A / T
   A = 0, T = 8
   Thus,
   X = 0/8 = 0
   The results were most close to 0 is the best result, and therefore Frequency Error software NetSupport School 10 It's effective.
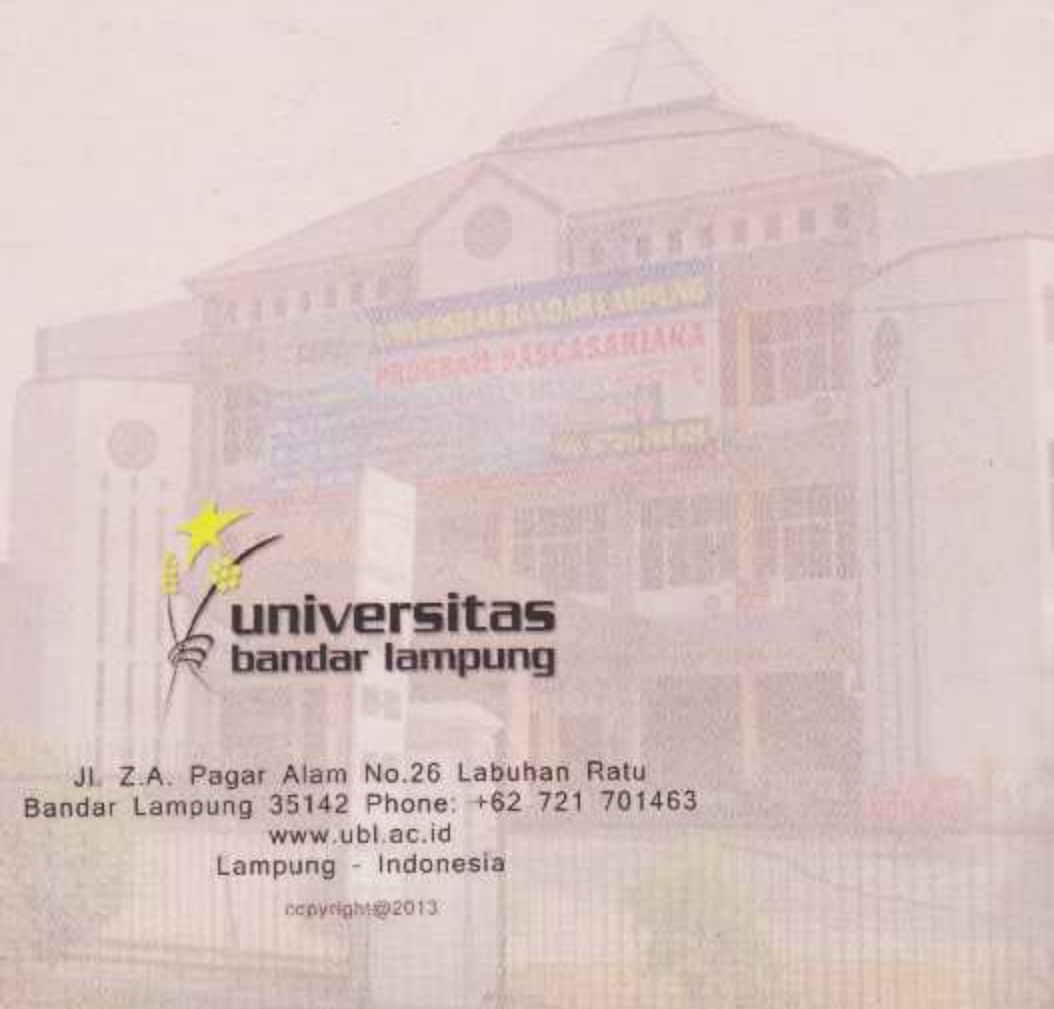
Discussion

Results Software NetSupport School 10 is based on ISO / IEC 9126-4 from interviews with User Server (Operator).

Quality of Use			
Effectiveness metrics	Result	Levels in Need	observations
Task effectiveness	High	High	Effective
Task completion	High	High	Effective
Frequency Error	High	High	Effective

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