PROCEEDING
the international conference on
Management of
Innovation
& technology
Copyright (c) by Diponegoro University. All Right Reserved.

ISBN : 978 - 979 - 097 - 078 - 6

Title: Proceeding The International Conference On Management of Innovation & Technology

Organised by
Diponegoro University

in co-operation with

Director General of High Education (DIKTI)
ASEA UNINET
National Chamber for Industry and Trade

Secretariat of ICMIT2010
Diponegoro University
Jl Prof H. Soedharto, SH, Tembalang, Semarang
Phone : +62 24 7460017 fax : +62 24 7460017
email: icmit2010@undip.ac.id and icmit.undip@gmail.com
website : www.icmit2010.undip.ac.id
# Table of Contents

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing Committee</td>
</tr>
<tr>
<td>Preface</td>
</tr>
<tr>
<td>Contants</td>
</tr>
</tbody>
</table>

## KEYNOTE SPEAKERS

**K-1. Keynote Speakers 1**

Johannes (Joop) Van der Flier : Innovation Management  

**K-2. Keynote Speakers 2**

Prof. Dr. Ir. Zuhal MSc EE : National Innovation System (N.I.S)  

**K-3. Keynote Speakers 3**

P. Purwanto : Management of Innovation & Technology  

**K-4. Keynote Speakers 4**

Prof. Drs. Imam Ghozali, PhD : Research Excellent Of Diponegoro University  

## PAPERS

### A. Social, Humaniora, Economic, and Culture

**A.1. Determinant Factors to Classify the Growth Phases of Industrial Cluster in Indonesia**  

**A.2. Conceptual Model for Strengthening the Growth of the Furniture Industrial Clusters in Klaten (Case Study: Furniture Industrial Clusters in Serenan and Mireng)**  

**A.3. Analysis of Technology Transfer Effectiveness (Case Study of Ceper Foundry Cluster and Ceper Manufacturing Polytechnic)**  


**A.5. The Development of Batik Trade and Industry in Pekalongan in 1900-1998.**  

**A.6. Social Dynamics and Appropriability Regime in formulating Indonesian Innovation System**  

**A.7. The Development of Religious Tourism Potential In The Area of The Tomb of Sunan Muria Colo Dawe Subdistrict Kudus Regency**
B. Science, Technology, Engineering and Life Science

B.1. Quality Improvement Program to Reduce the Prevalence of Pressure Ulcers in an Intensive Care Unit; Pillow Campaign as Nursing Intervention

B.2. Application of Nursing Process Documentation Nursing Information System in accordance with Internet-Based System Design Connection.

B.3. Impact of standarized phaleria macrocarpa extract of cellular immunity on against of adenocarcinoma breast cancer cell C3H mice

B.4. The possible development of community based wildlife management, using a co-management model in West Papua (A preliminary analysis of a Case study on Kangaroo species).

B.5. Neural Network Modelling With Discrete Wavelet Transform Pre-Processing for Financial Time Series Data

B.6. Production Of Active Compounds By Plant Mesophyll Cells Suspension Culture

B.7. Development of Aquaculture Environmental Management for the Improvement of Production Capacity for Sustainable Aquaculture Activities


B.10. Fundamental and Applied Researches In Chemical Engineering Department Undip

B.11. Automatic Continuous Measuring Device for River Bed Scouring

B.12. Dipo Technology as Industrial Services Business Unit Bridging Laboratory Research to a Commercial Product
Organizing Committee

Advisors
: - Prof. Dr. dr. Susilo Wibowo, MS. Med, Sp.And
  - Dr. Muhammad Nur, DEA

Technical Advisors
: Dra. Sri Ismartini, M.Si

International Editorial Boards
: - Christian Tischer (Germany)
  - Ioannis P. Gerothanasis (Greece)
  - Abdul Jalil Bin Nordin (Malaysia)
  - Tim Zwaagstra (Netherland)
  - Nikita M. Golovin (Russia)
  - Bibiana Munoz Clares (Spain)
  - Ngo Chi Trung (Vietnam)
  - Vladimir Marik (Chequ Republic)

Chair
: Dr. Berkah Fajar TK, Dipl. Ing.

Co-Chair
: Dr. Istadi, ST, MT

Secretaries
: - Moh Djaeni, ST, M.Eng, Ph.D.
  - Dra. Dian Nugrahini

Conference Programs
: - Johanna Maria K, SE, Mec, Ph.D.
  - Ibnu Widyanto, SE, M.Sc, Ph.D.
  - Endah Ratna Hendarsih, SS
  - Bhuna Rizal Rahman

Innovation Exhibition
: - Dwi Cahyo Utomo, SE, M.Si, Akt.
  - Dr. Agus Suherman, S.pi, M.Si.
  - Wahyu Setiadi, S.Kom.
  - Hendra Gunawa, ST

Personal Contact
: - Dwi Wulandari, S.Sos, MA
  - Dra. Agnes Esti Sudarman, M.Si.
  - Kenny Dwi Purwani, SS.
  - Retno Widowati, A.Md
  - Yolanda Febrilia, A.Md

Proceeding
: - Drs. Sapto Purnomo P, M.Si, Ph.D,
  - Slamet Purwanto, S.Si.
  - Prih Haryati Hadi
  - Ahmad Fatoni, A.Md.

Treasurers
: - Dra. Purnomo Pujiwati, M.Si.
  - Slamet
  - Sri Rahayu Setyorini, SE
  - Tutik Mulares
Documentation

- Drs. Tri Herry Wibowo, MM
- Noer Chasanah
- Suryanto
- Iwan Setia Wardhana A.Md.
- Atin Riyantini
- Abdul Rohman, A.Md

Utility and Transportation

- Sumargito, SS
- Suyatno, SE
- Sutarno, SH
- Subagyo

Publication & Reports

- Gagad Rahino, ST
- Erfina Ariyanti, ST
- Alaik Taufiq, A.Md,
- Linda Wahyuningsib, S.I.Kom
Application of Nursing Process Documentation
Nursing Information System in accordance with
Internet-Based System Design Connection.

Sarah Uliya, Agus Santoso
School of nursing Diponegoro University, suliya @ undip.ac.id, rksf03@yahoo.com,
School of nursing Diponegoro University, cakusp065@yahoo.com

ABSTRACT—Nursing documentation has a significant
meaning from the legal aspects, quality assurance,
communications, finance, education, research, and
accreditation. So it is needed nursing management system
for nursing documentation to make more effective,
efficient, and appropriate standards. Nurses require a
standard of documentation as a guide and direction to the
storage and recording of the correct technique. According
to development of Information Technology (IT), the nursing
documentation move from traditional method with paper
documentation to computerized documentation. School of
nursing, Faculty of medicine Diponegoro university as an
educational institution try to facilitate students to introduce
computer-based nursing documentation, so we must create
prototype of nursing documentation information systems
through Internet-Based System Connection.

This prototype has been used by nursing students
UNDIP to fulfill a subject. Students appreciate the
reliability of the program, because it gives simplicity in
documenting the clinical course of nursing duties in the
form of nursing care with clinic algorithm system. It's just
that the program is yet to be developed further, especially to
improve the data in the master program. Trials are also still
needed in several related hospitals and community health
centers that exist so that one day this program could help
nurses to make nursing documentation in clinical setting.

Keywords: nursing documentation, computerized

A. INTRODUCTION

Nursing care is an important part in the implementation of
hospital services. One of the nurse responsibilities in the
implementation of nursing care is nursing care
documentation. Nursing documentation is a confidential
document that records all nursing services and client
document that records the quality of service and legal records
have many benefits and usefulness.

Standard terminology documentation nursing includes
assessment, diagnosis, planning, implementation, and
execution. But in practice the quality of nursing
documentation is not in accordance with applicable
documentation is not in accordance with knowledge and
standards. This was due to a lack of knowledge and
perception of the importance of documenting nurses, nurse
levels low, a long time to record the
documentation. Whereas nursing documentation has significant
meaning when viewed from the legal aspects, quality
communications, finance, education, research, and
accreditation. For that needed nursing management system
relating to the documentation of nursing to make it more
effective, efficient, and appropriate standards. Nurses
require a standard of documentation as a guide and direction to the
storage and recording of the correct technique.

Science and technology development in various fields
very quickly, especially Information Technology (IT) in
which all units of service using a computerized system.
Field nursing course must follow the development of
science and technology are good in service, education,
management, and nursing research
But the phenomenon happening that left care services and
developed slowly in the application of Information
Technology on aspects of nursing documentation. During
these nurses do documentation by recording or writing on
the form that has been provided on the patients medical
records. Use of the manual documentation system
encountered some obstacles include: requiring a long time,
lead to different perceptions, inefficient storage, records
missing documentation, communication and decision
making was not optimal.

As a result of these phenomena, the documentation of
nursing are not effective and efficient so it does not fit the
standard or it can be said only satisfy the element of
quantity rather than quality. In fact the appropriate standard
of nursing documentation will support the legal aspects of
nursing practice and professionalism. So we need a nursing
documentation system are more effective, efficient, and in
accordance with the standards based on science and
technology development. One solution is to create
documentation of nursing with the media or material which
is called Information Technology Management Information
System for Nursing. Moreover, for the scope Hospital in
Central Java were mostly already using Health Information
System (medical) and the Administration, but for Nursing
Management Information System can only be found in
hospitals Banyumas. Though ideally Nursing Management
Information System needs to synergistic and integrated with
the Health Information System and the Administration on
health care at the hospital.

The existence of the Management Information Systems
Nursing documentation time can be faster, improve
motivation, do not use a lot of places, and as a practical means of learning for nurses because it can be a role model documentation of nursing would be more efficient, so the effective, and appropriate standards to strengthen the legal aspects of nursing practice.

Nursing Management Information System also functions as a support system in nursing management systems, among others: improving communication, supervision, controlling, decision making, regulatory, and management. Quality Assurance can be done and ultimately improved health care, especially nursing can be increased.

The data contained in the Nursing Management Information System also obtained more quickly, accurately, and specifically making it possible to be subject and the basis for conducting research in the field of treatment for the advancement of science and profession of nursing.

The many benefits that have been presented on nursing documentation based Nursing Management Information System and weaknesses of nursing documentation manually, then we attempt to develop a Nursing Management Information System in the hospital. Program information system development in hospitals are not yet sufficient and become the main requirement for simplicity and learning in documentation of nursing process for the nurses.

B. MATERIALS AND METHODS
Making nursing information system prototype design of technology-based clinical algorithm system internet connection, conducted by a team of nursing UNDIP with a programmer. By using the nursing process of assessment, nursing diagnosis, planning, implementations and evaluation. The process in this prototype use the theory in nursing, example NANDA.
C. RESULTS AND DISCUSSION

Nursing documentation becomes one of the indicators of quality nursing care that supports the quality of health services in hospitals or other health care arrangements. Clinical algorithm system has been designed by a team to give a positive impact on fast service, accurate and reliable. Quality of nursing documentation can be enhanced through computer-based documentation. According to Mahler, C, et al. nursing ward there are two significant developments in the quantity and quality of nursing process documentation, but there is a negative side associated with the content of care plans.

In the past, a paper based documentation often cause complaints from the nurses in the ward. It is causes make a nurse boring when writing all the nursing process for all patients. The nurses needs much time for make client's nursing documentations when caring for clients and quite tiring for the nurses.

The system of nursing clinical algorithms have a significant difference in the efficiency and effectiveness of nursing documentation. The system can also easily enhance interactive communication in the field of nursing organizations quickly and accurately by using additional support such as LAN network computer. Test results showed that system have convinced the nurse in the room to document the nursing process without too long and tiring. From the test result of this prototype in school of nursing Diponegoro University students, when the student learn SIM Nursing courses in the classroom. Many students appreciate the reliability this prototype was given the ease in documenting the clinical course of nursing duties in the form of nursing care with clinic algorithm system. It's just that the program is yet to be developed further, especially to improve the data in the master program. Tests are also still needed in several related hospitals and community health centers that exist so that one day this program could help nursing process documentation activities of nursing and community clinics. Currently the program has been added to the Web site menu www.keperawatan-undip.ac.id. We need to improve this prototype so we can applicative this program for nurses in hospital or the other setting. so we should improve this program must suitable with nurses need in clinical setting and facilities all the documentation function.

Along with the application of entrepreneurship and opportunities for implementation of these programs in several health care arrangements, then we predict that the program will be revised to give a big selling point and as one of the business opportunities in the field of health care systems development services and nursing in hospitals and health institutions other.

D. CONCLUSIONS AND SUGGESTIONS

Conclusion
1. Information system in nursing documentation can facilitate the documentation process for the nurses in the nursing ward.
2. Information system in nursing documentation also allows interactive communication between nurses in the ward with nursing leaders in the field of nursing.
3. Information system in nursing documentation allows students to understand the concept of data management and the nursing process while learning basic nursing, clinics and community.

Suggestion
1. Program clinical algorithm still needs to be developed again considering the concept of nursing diagnosis continues to grow every time.
To improve fluency in the access program, the need to develop more bandwidth is large enough in each health care institution that uses the system so that when you're documenting the nursing process more smoothly.

ACKNOWLEDGEMENT
Thanks to all our partners in school of nursing Diponegoro University, especially for fundamental of nursing department's team, hopefully information system in nursing documentation will be give contribute for our profession.

REFERENCES
10. Heermann, Judith A., Effect of Computerized Nursing Documentation on Clinical Care Activities in a Neonatal Intensive Care Unit (NICU), University of Nebraska Medical Center College of Nursing, Omaha, NE, October 2010