



## Implementation and Application of qualifying New Teacher Qualified With Rule Based Classification Method Master Information Engineering of West Sumatra

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### Research Highlights

This study aimed to carry out a new teacher qualification grouping of Information Engineering of West Sumatra into three areas of concentration are areas of concentration Informatics Multimedia, software Engineering and Computer Network. This study also aims to look at the validity, practicalities and effectiveness of the application of new teachers qualifying for classifying Information Engineering of West Sumatra.

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### Graphical Abstract

Teachers are professional educators with the primary task of educating, teaching, guiding, directing, train, assess and evaluate students on early childhood education, formal education, primary education and secondary education. *New teacher Qualified* is the New Teacher Qualified and professional educators who will spearhead the national education in achieving national educational goals intact. Teacher of Informatics has three different concentrations namely Multimedia, Software Engineering and Computer Network. To determine the concentration of Teachers of Informatics, do classification using qualifying applications built using the criteria of Rule Based Classification Rule established and proven valid, practical and effective.



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## **Research Objectives**

This study bertujuan to qualify for the new Master of Informatics into three areas of concentration are areas of concentration Informatics Multimedia, Software Engineering and Computer Network is valid, practical and effective.

## **Methodology**

The methodology used to adopt the ADDIE model of the stage Implementation and Evaluation. At the stage of implementation of the tests on 30 new Master Information Engineering Master's West Sumatra criteria of Informatics who teaches under 5 years old.

## **results**

The results obtained from the application does is terkelompoknya new teacher of Informatics into three areas of concentration are areas of concentration Informatics Multimedia, software engineering and concentration fields Computer Network. Of the 30 participants who carried out the test, a new teacher clustered areas of concentration Multimedia informatics techniques were 9 people, Software Engineering concentration fields as many as 13 areas of concentration dang Computer Network 8 people.

Before the implementation is done, has been done before validation of the application media to the three validators who are experts in the field of media with an average yield of 0.97 Aikens'V with the results of the application media Valid for use. Validation test was also conducted on about the content or materials used in qualifying, valiasi test conducted by three validator which each represent one area of concentration of Informatics, the average yield obtained Aikens'V 0.97 with about qualifying categories are valid for use ,

Along with the qualifying process, test the practicalities of implementation and effectiveness of the results obtained. From the test results obtained practicalities of the practicalities of an average value of 89% with a Very Practical category. The test results also examined the effectiveness and magnitude of the value obtained effectiveness ratio above 80% in the category of Most Effective



## **findings**

The research found the tendency of the 30 samples of new teachers teaching Informatics under 5 years of that new teachers Informatics Software Engineering majoring in more dibandingkan new teachers Informatics Other areas of concentration

From the results of this experiment also found an application qualifying new teacher of Informatics which qualifies the new teacher of Informatics into three areas of concentration of Informatics namely areas of concentration Multimedia, the field of Software Engineering and Computer Engineering Network proven validity, practicalities and effectiveness so well that application decent qualifying use.

## **acknowledgment**

In the process pengerjuan exam by teachers, researchers can not force teachers to answer the questions seriously because there is no influence of test results conducted on the official assessment by the teacher concerned.

Researchers can not force teachers to fill out a questionnaire practicalities properly, dikerenakan trend of teacher does not read the questionnaire given seriously.

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## **References**

- Agus Sasmito. 2013. Methods Data Mining for Customer Loyalty Classification Of Brand Products. UPN Veteran, Yokyakarta.
- Arun K Pujari. 2012. Data Mining Techniques, 3th ed.
- Arikunto. 2013. Procedure Research: A Practical Approach. Jakarta: Runeka Reserved.
- Anwar, Saifuddin. 2014. Research Methods. Yogyakarta: Student Library.
- Connolly, T., & Begg, C. 2010. Database System: a practical approach to. America: Pearson Education.
- Fadi Thabtah. 2007. A Review of Associative Classification Mining. Volume 22, issue 1 March 2007.
- Han & Kamber. 2006 Data Mining: Concepts and Techniques, 2nd ed.
- Jeffrey A. Hoffer, et al. 2007. Modern Database Management, 8th ed.
- Indonesia Dictionary. 2002. The Ministry of National Education 3rd Edition. Jakarta: Gramedia.
- He Kurgan & P Musilek. 2006. A Survey of Knowledge Discovery and Data Mining Process Models. The Knowledge Engineering Review.
- Mariscal, et al. (2010). A Survey of Data Mining and Knowledge Discovery Process Models and Methodologies. The Knowledge Egeineering Review, Vol. 25: 2.
- Mewati Ayup. 2007. The process of Data Mining In Computer Assisted Learning System. Journal of Information Systems Maranatha Christian University.
- Molenda et al. 1990. Instructional Media and The New Technologies of Instruction 3th ed. New York: Mac Millan.
- Nikulin & Mc Lachlan. 2008. Classification of imbalanced Marketing With Balanced Random Data Sets. Department of Mathemat ics, University of Queensland, Australia.



- Namsik et al. 2008. Decision Tree Based Knowledge Discovery: Single vs. Multi Decision Tree Induction. *INFORMS Journal on Computing*, volume 20.
- Oemar Hamalik. 2013. *Psikologi Learning*, Bandung: New Light Algensindo.
- Pargito. 2011. Research and Development Division of Education, University of Lampung: Bandar Lampung.
- Indonesian government. 2003. Act No. 20 of 2003 on National Education System. *Gazette of the Republic of Indonesia Year 2003*, No. 78. Secretariat of State. Jakarta.
- Indonesian government. 2005. Law No. 14 Year 2005 on Teachers and Lecturers. *Gazette of the Republic of Indonesia Year 2005*, No. 157. The Secretariat of State. Jakarta.
- Indonesian government. 2005. Government Regulation No. 19 Year 2005 on National Education Standards. *Gazette of the Republic of Indonesia Year 2005*, No. 41. The Secretariat of State. Jakarta.
- Indonesian government. 2007. The National Education Minister Regulation No. 16 of 2007 on Academic Qualification Standards and Teacher Competency.
- Indonesian government. 2010. The National Education Minister Regulation No. 27 Year 2010 About the Teacher Induction Program For Beginners.
- Indonesian government. 2007. The National Education Minister Regulation No. 16 of 2007 on Academic Qualification Standards and Teacher Competency.
- Pudji Widodo. 2014. Rule Based Classifier for Detecting Liver Diseases. Amik Bina Sarana Informatika, Yogyakarta.
- Putu Desiana. 2017. Analysis of Effectiveness and Efficiency Level Measurement Management Information System Mail STIKOM Bali.
- Sitoresmi sacred. 2013. Effectiveness of Information Systems Services and Complaints Online People's Aspirations (Report) At the Presidential Work Unit for Development Monitoring and Control (UKP4). University of Indonesia. Jakarta
- Suyanto, and Asep Jihad. 2013. *Menjadi Teachers, Strategy increase dapn Qualifications Teacher Quality in the Global Era*. Jakarta: Essence Publishing Group.
- Suyanto, and Asep Jihad. 2013. *Menjadi Teachers, improve qualification and Quality Strategy Master in Global Era*. Jakarta: Essence Publishing Group.
- Subhan Hartanto. 2017. Implementation of Fuzzy Rule Based Classification System for Mango. Development University Panca Budi, Medan
- Setyosari. 2012. *Methods of Educational Research and Development*. Jakarta: Kencana Prenada Media Group.
- Sudjana. 2011. *Teaching and Learning Outcomes Assessment*. Bandung: Teens Pt Rosydakarya
- Zubair Shobrun Jamil, Dedy Irfan, Titi Sriwahyuni 2015. Mapping Information System Design Padang City Health Facilities by Utilizing Web-based Google Maps API. Vol.3, No. 1 January-June 2015 ISSN: 2302-3295. *journal Voteknika*

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