

IMPLEMENTATION OF IMK IN EDUCATIONAL MEASUREMENT

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ABSTRACT

Science & Technology development is followed by the development of the age, demanding each student not only has a good intellectual acumen, but also must have the discipline and dedication that is very high, not least, students also must be committed to the rule does not apply because when the student was sliding and eliminated competition from the world of work. Unfortunately universities in general less attention to this problem. To date, the university is only a list value that contains the Cumulative Performance Index (IPK) as one of the students received in describing or determining success after 4 (four) year course in universities. To answer the challenges the world of work, list the value of IMK must be side by side with a list of values in the GPA provides a comprehensive assessment of students. Therefore in this article presented some problems breaking methodology, including identifying at least have some problems with regard to the fundamental methods of assessment of students a long time, defines the methods through the list of EQ assessment IMK value, design value IMK through the list of flowchart, and the last is to build a list of values through IMK Macromedia Dreamweaver MX. The end result of this article, namely a draft assessment was born discipline students who we call the term IMK. IMK is the average value of the Index Quality Students (IMM) each semester. IMK that this is a role in measuring a student's EQ continuously for 4 (four) years which should capture the value in the form of a list of IMK.

Keywords: EQ, a list of values IMK, IMM, IPK

I. INTRODUCTION

At this time about the old paradigm that intellect intellectual (IQ) as the only measure decline that ingenuity is often used as parameters of success and the success of the performance of human resources, the emergence of the paradigm has finish by other intelligences in the success and to determine the success of someone in his life. Based on a survey conducted Lohr, written by Krugman in the article "On The Road On Chairman lou" (The New York times 26/06/1994), said that IQ was surely not enough to explain the success of someone. [6]

College graduates during the time measured from many Cumulative Performance Index (IPK) or identical to the IQ as an indicator graduation. A fact that after 4 (four) year students studying at universities declared passed with only one title index measuring the Cumulative Performance Index. IPK see whether the user is a graduate of the company can answer the new employee acceptance of the terms defined? If the stakeholders on the test set and the chain does not see the candidate's GPA is, if means the system of higher education, does not "link and match" with the user?

In the end we realize that the need to EQ more dominant want tested by users before the graduates received at a company. The problem is, its own stakeholders feel that the difficulty of the test chain by the company may not necessarily reflect the real EQ. That a candidate, seemingly has a

"Good Attitude" in a short time (short time), at the time received and work with the tempo of the old (long time) appeared to have a (Bad Attitude).

To answer the challenges the world of work is as if each university can take advantage of ICT, a capture-the IMM is a form of EQ assessment of the student on a continual basis, so that in the end can remove Cumulative Quality Index (IMK), which measures the dominant emotion of the intellect graduates and can also be used as an index measuring education through attendance.

II. PROBLEMS

In order to answer the challenge of quality graduates, universities need a system of assessment that lead to behavior, discipline and commitment to rules that are running. This is a challenge that must be faced in the current era of globalization where the company does not always take the assessment only in terms of versatility and ability to absorb lecture material but also in terms of discipline someone. Therefore, the required measurement facilities EQ practical, smoothly and accurately, where the results mirror the value of EQ is a student for 4 (four) year course in universities. [4]

Need to realize that until this time there is no EQ is capable of measuring accurately. However, during 4 (four) years educating students, universities and the opportunities that have a great potential to educate as well as measure the student's EQ.

Based on the contention that there are 2 issues preference that is making this article:

1. How can be able IMK measure as a tool in educational measurement?
2. Such as whether the output should be received by the students as a form of measuring the value of EQ for a student in the university?

III. LITERATURE REVIEW

Many of the previous research conducted on educational measurement in developing educational measurement to be performed this study as one of the libraries of the application of the method of research to be conducted. Among them is to identify gaps (Identify gaps), to avoid re-creating (reinventing the wheel), identify the methods that have been made, forward the previous research, and to know other people who specialize, and the same area in this research. Some Literature review are as follows:

1. Research that is done by I Made Suartika Department of Mechanical Engineering Faculty of Engineering Mataram University "Design and Implementation of Performance Measurement System With Integrated Method Performance Measurement Systems (Case Study: Department of Mechanical Engineering Mataram University)". In this research to do to ensure quality education in the Department of Mechanical Engineering, the design required a performance measurement system (SPK) that is integrated with the method of IPMS (Integrated Performance Measurement Systems). With the method IPMS, Key Performance Indicators (KPI) Department of Mechanical Engineering requirement is determined by stakeholders through four stages, namely; stakeholder identification requirement, external monitor, the determination of objectives, and identification of KPI. In this research shows there is no system of bookkeeping and neatly organized, there is no adequate database system, the system of administration that have not been organized, has not been effective evaluation of the suitability of the curriculum development with the quality of graduates needed by the graduates, lack of control over the implementation of the curriculum and syllabus on the teaching-learning process, and others. It is necessary for the solution of the problems is done to improve performance (performance) Department of Mechanical Engineering, namely: Department of System management services, learning management, and management relations with the outside world. To measure the level of success, efficiency, and effectiveness of activities carried out, needed a performance measurement system (SPK) Major and its implementation.
2. Research that is done by Chahid Fourali Research Department, City & Guilds, 1 Giltspur Street, London EC1A 9DD "Using Fuzzy Logic

in Educational Measurement: The Case of Portfolio Assessment." This paper highlights the relevance of a relatively new quantitative methodology known as fuzzy logic to the task of measuring educational achievement. This paper introduces the principles behind fuzzy logic and describes how these principles can be applied by educators in the field of evidence assessment of the portfolio. Currently, the portfolio assessment is considered as a step in measuring performance. Finally, this article argues that although fuzzy logic has been successful in the industry's contribution must be very important in the social sciences. At least it should provide social scientists with tools that are more relevant with the field investigation[2].

3. Research that is done by Dawn M. VanLeeuwen, Assistant Professor New Mexico State University "Assessing the Reliability of measurements Generalizability Theory: An Application to Inter-Rater Reliability." Research that is done by Dawn M. VanLeeuwen introduce application Generalizability Theory to assess the reliability of measurement. This theory can be used to assess the reliability in the presence of several sources of error. In particular, the application of Generalizability Theory for the measurement of the rating involves several considerations and some applications that can measure the variables are low. This theory is also related to the object measured. Usually the object of the measure that is human error, and rating the condition or environment. However, in this theory only in the GT use to measure an error that occurs in humans, and environment outside the system so that the scope is too broad[9].
4. Further research is done by Glen Van Der Vyver, University of Southern Queensland, Toowoomba, Australia "The Search for Adaptable ICT Student'. Research was conducted to Troubleshooting in the business world and in the field of technology. ICT itself is short for Information and Communication Technologies. Research conducted by Glen Van Der Vyver is on ICT [8].

IV. TROUBLESHOOTING

To be able to answer all the above problems, it has launched a new assessment system through the Student Quality Index (IMM).

Student Quality Index (IMM) is a system that is prepared to measure and know the level of discipline a student attendance by using Online (AO). AO through the presence of all these students when the Teaching Learning Activities (KBM) will be recorded in whole, will be recorded so that it also delays the time the student.

Level of discipline that IMM is described through the measurement of the level emotional

(EQ) is a student continuously recorded from time to time, as well as the University record the value of each semester until the students finally produced a Cumulative Performance Index (IPK). So that each student can measure the academic ability, usually the management of universities to provide student learning in the form of a list of values. In the list of values generated an average of all values that have been obtained which is called with GPA. To date, the GPA is to be continued as a quantitative value to measure the level of intellect to absorb all the students in the lecture material.

Like the GPA, IMM will be recorded continuously. So that students know the value of each discipline, the management should be a university-IMM capture all data in the form of a list value IMK. From the list of values must be calculated on average for its then packed into a value Cumulative Quality Index (IMK). IMK that this should be trusted as a measure of the value of quantitative measure behavior, discipline, emotional and a student for 4 (years old) studying at the university. Not only that, should the value of IMK has become absolute level EQ picture of a student forever.

With the list of values IMK this list with a combined value of GPA, it is expected that universities have been able to challenge all the world of work. The graduate of the user, there is no need to test the filter to know the graduate level EQ, because the EQ is clearly envisaged in the list of values measured by the IMK management of the entire university to its students for 4 (years old).

Designing Algorithms

1. Algorithm update the list of values IMK

```

Var
Main ()
{
Select Database Genap 20072008
Select NIM, Nama_Mhs, Kode_Kelas,
Mata_Kuliah, Sks, IMM Into DMQ from
A_View_IMM_All_Detail
Select Database Ganjil 20072008
Select NIM, Nama_Mhs, Kode_Kelas,
Mata_Kuliah, Sks, IMM from
A_View_IMM_All_Detail
Repeat Until
Select NIM,Kode_Kelas from DMQ where NIM
,Kode
If
Add data on DMQ
If
Update data DMQ where NIM ,Kode_Kelas
If then
Else
}

```

2. Algoritma Daftar nilai IMK

```

Var
Char strNIM
Float AM, Total_AM, Total_SKS, IMK
Main ()

```

```

{
strNIM = request("NIM")
Select NIM, Nama_Mhs, Kode_Kelas,
Mata_Kuliah, Sks, IMM where NIM = strNIM
Repeat until
AM=IMM*Sks
Total_AM=Total_AM+AM
If
Select sum(sks) as jum_sks where NIM =
strNIM
Total_SKS = jum_sks
IMK = Total_AM / Total_SKS
}

```

Designing Through Program Flowchart

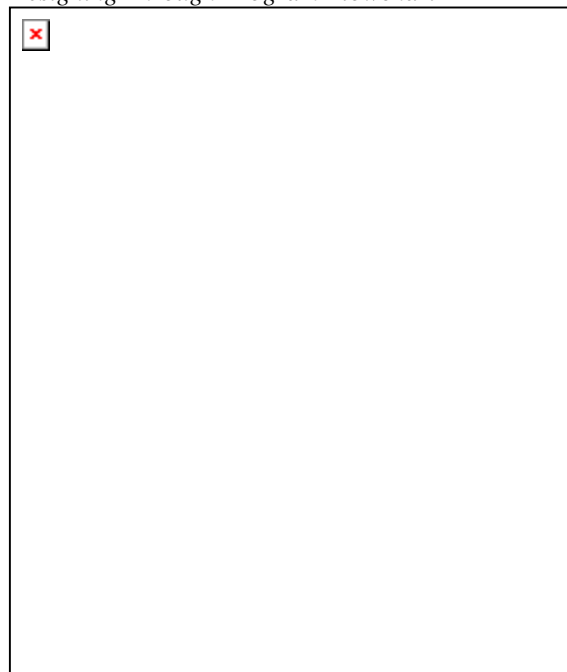


Figure 1. Flowchart Register Value IMK

Applications Program

Software used to create a program list that is the value of IMK ASP, ASP Because a framework that can be used to create dynamic web. ASP is used for many applications related to the database, using either Microsoft Access database to SQL server or Oracle database. Scripting the most widely used in writing are ASP VBScript. [Raha207] ASP is Macromedia Dreamweaver MX, which is dynamic using the database connection. To connect between ASP with SQL database is used (Structured Query Language).

ASP (Active Server Pages) is an object more precisely Component Object Model (COM), not a programming language that we often see. ASP ISAPI was developed on the basis that consists of 6 (six) simple objects. However, because the structures are combined with other Microsoft technology, the object is to be useful. Sixth object is the Application, Session, Response, Request, Server and Object Context. [1]

SQL is the abbreviation of Structured Query Language. This language is a standard that is used to access the Relational database. At this time a lot of

software that uses SQL as a language to access the sub data. This software is usually called RDMS (Relational Database Management System).

Database used is SQL server where SQL is designed to be used in client server in the intranet and internet environment.

In making the SQL database server does not provide the ability to create a form, report, and so forth. SQL server database and provides only the right (privileges), security and all that related to database management. Type of data that can be used in almost the same SQL server with Microsoft Access but just a different name, the following list naming conversion for Access - SQL Server:

Table 1. List naming conversion for Access - SQL Server

Microsoft Access	SQL Server
Yes / No	Bit
Number (Byte)	Smallint
Number (Integer)	Smallint
Number (Long Integer)	Int
Number (Single)	Real
Number (Double)	Float
Currency	Money
Date / Time	Datetime
Autonumber (Counter)	Int
Text (n)	Varchar (n)
Memo	Text
OLE Object	Image

Program Listing

IMK value list is a program that uses the method DMQ (Query Data Mart), so that the listing program that will display the listing includes the list of update values IMK, listing and a list value IMK. Following the program listing:

a. Program listing updates list value IMK

```

<!--#include file="database.asp"-->
<%
server.ScriptTimeout=3000
Sql_Create="Create table
DMQ_Daftar_Nilai_IMM(NIM
varchar(10),Nama_Mhs
varchar(50),Kode_Kelas
varchar(7),Mata_Kuliah
varchar(60),SKS int,IMM float);"
set
rs_Create=conn6.execute(Sql_Create)
'Sql_Drop="delete from
DMQ_Daftar_Nilai_IMM"
'set rs_Drop=conn6.execute(Sql_Drop)
Sql="select
NIM,Nama_Mhs,Kode_Kelas,Mata_Kuliah,S
KS,IMM from A_View_Imm_All_Detail
where Kode_Kelas<>'TA101A' and
Kode_Kelas<>'TA100A' and
Kode_Kelas<>'KP100A' and
Kode_Kelas<>'TI999A' and Mata_Kuliah
not like'%(Praktek)%"
set rs=conn.execute(Sql)
While not rs.eof
        Sql3="select * from
DMQ_Daftar_Nilai_IMM where
NIM='"&trim(rs("NIM"))&"' and

```

```

Kode_Kelas='"&trim(rs("Kode_Kelas"))&
"'
        set
rs3=conn6.execute(Sql3)
        If rs3.eof then
                Sql4="Insert
into
DMQ_Daftar_Nilai_IMM(NIM,Kode_Kelas,M
ata_Kuliah,SKS,IMM)
VALUES ('"&rs("NIM")&"', '&rs("Kode_Ke
las")&"', '&rs("Mata_Kuliah")&"', '&rs
("SKS")&"', '&rs("IMM")&"') "
                set
rs4=conn6.execute(Sql4)
        else
                Sql5="Update
DMQ_Daftar_Nilai_IMM set
IMM='"&rs("IMM")&"' WHERE
NIM='"&rs("NIM")&"' and
Kode_Kelas='"&rs("Kode_Kelas")&"' "
                set
rs5=conn6.execute(Sql5)
        end if
rs.movenext
wend
Sql2="select * from
A_View_Imm_All_Detail where
Kode_Kelas<>'TA101A' and
Kode_Kelas<>'TA100A' and
Kode_Kelas<>'KP100A' and
Kode_Kelas<>'TI999A' and Mata_Kuliah
not like'%(Praktek)%"
set rs2=conn4.execute(Sql2)
While not rs2.eof
        Sql6="select * from
DMQ_Daftar_Nilai_IMM where
NIM='"&trim(rs2("NIM"))&"' and
Kode_Kelas='"&trim(rs2("Kode_Kelas"))
&"' "
        set
rs6=conn6.execute(Sql6)
        If rs6.eof then
                Sql7="Insert
into
DMQ_Daftar_Nilai_IMM(NIM,Kode_Kelas,M
ata_Kuliah,SKS,IMM)
VALUES ('"&rs2("NIM")&"', '&rs2("Kode_
Kelas")&"', '&rs2("Mata_Kuliah")&"', '&
rs2("SKS")&"', '&rs2("IMM")&"') "
                set
rs7=conn6.execute(Sql7)
        else
                Sql8="Update
DMQ_Daftar_Nilai_IMM set
IMM='"&rs2("IMM")&"' WHERE
NIM='"&rs2("NIM")&"' and
Kode_Kelas='"&rs2("Kode_Kelas")&"' "
                set
rs8=conn6.execute(Sql8)
        end if
rs2.movenext
wend
%>

```

Figure 2. Program listing updates list value IMK

b. Listing the value of the program list view IMK

```

<!--#include file="database.asp"-->
<%
strnim=trim(request("NM"))
strsql="select distinct * from
view_mahasiswa2 where
nim='"&strnim&"' "
set rs=conn2.execute(strsql)

```

```

strsql2="SELECT * FROM
DMQ_Daftar_Nilai_IMM where
Nim='&strnim&' order by
Mata_Kuliah"
set rs2=conn6.execute(strsql2)
strsql3="select sum(sks) as jumsks
from DMQ_Daftar_Nilai_IMM where
Nim='&strnim&'"
set rs3=conn6.execute(strsql3)
strsql4="select sum(IMM) as jumam
from DMQ_Daftar_Nilai_IMM where
Nim='&strnim&'"
set rs4=conn6.execute(strsql4)
%>
<% No=1
While not rs2.eof
jumam=int(rs2("IMM"))*rs2
("SKS")
jumam_all=jumam_all+jumam
%>
<% No=No+1
rs2.movenext
wend %>
<%=int(jumam_all/rs3("jumsks"))%>
    
```

Figure 3. Listing the value of the program list view IMK

V. IMPLEMENTATION

The concept of assessment of student discipline through Quality Index Students (IMM) has been implemented on the University Raharja. IMM is a result of fusion between the program Raharja Multimedia Edutainment (RME) versions 1 and On-line attendance (AO).

THE SCREEN

The screen (interface) Quality Index Students (IMM) has been integrated with some system information such as Raharja Multimedia Edutainment (RME) versions 1, On-line attendance (AO), and Panel Chair. The interface - the interface consists of:

a. IMM on RME Interface



Figure 4. IMM on RME Interface

In the picture above there is a number of quantitative IMM: 1246. That number is the number of active students in the semester following the process is active Teaching Learning Activities (KBM).

When the value in the click, it will open a URL that contains all active students in detail and its value IMMTH, IMMT, and IMM. URL has the interface as the image below.



Figure 5. List of all students

In the interface described above can IMMTH that is a value that describes the level of attendance of students following the KBM. IMMT is a value that describes the level of accuracy of the student into the classroom, while the average value is IMM - IMMTH between the average and IMMT. To be able to see the detail data value discipline a student for each class that take on this semester, please click on the name of students. Next image from their interface.



Figure 6. Recapitulation IMM per student

Interface described above value IMMTH, IMMT, IMM and for all classes taken by a student in this case "AHMAD ZAMZAMI" as one example. Value above the value as follows:

- "IMMT = 100, mean AHMAD ZAMZAMI never have been present in the classroom.
- "IMMTH = 100, mean AHMAD ZAMZAMI did not attend the lecture.

- "IMMG = 100, mean AHMAD ZAMZAMI a student with a discipline that is not high because the entry does not have and never late in the KBM.

While IMM is the average value of all classes IMMG that are traveled by each student in one semester. IMM will be enshrined in the form of a "Charter IMM". IMM Charter not only contain a value IMM students, but also the highest value IMM, IMM lowest, IMM deviation, the average - the average IMM, and the most important is the ranking of IMM. The ranking can be measured against that level of discipline that a student be at the point where all proportionate to the student active at this time? If the student is a student the best, then he should get the ranking of "1". Next is the interface "Charter IMM".

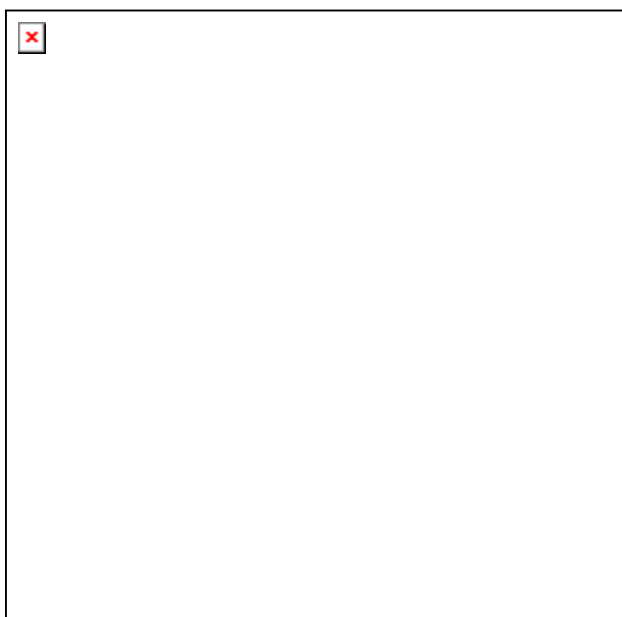


Figure 7. Charter IMM

b. IMM on Panel Interface Board

Unlike the previous interface, the interface panel on the IMM leaders describe this special value Cumulative Quality Index (IMK) of each student. IMK is the average value in the IMM entire semester that has been executed by each student. IMK is packed in a "Value List IMK" format that can be seen in the picture below.

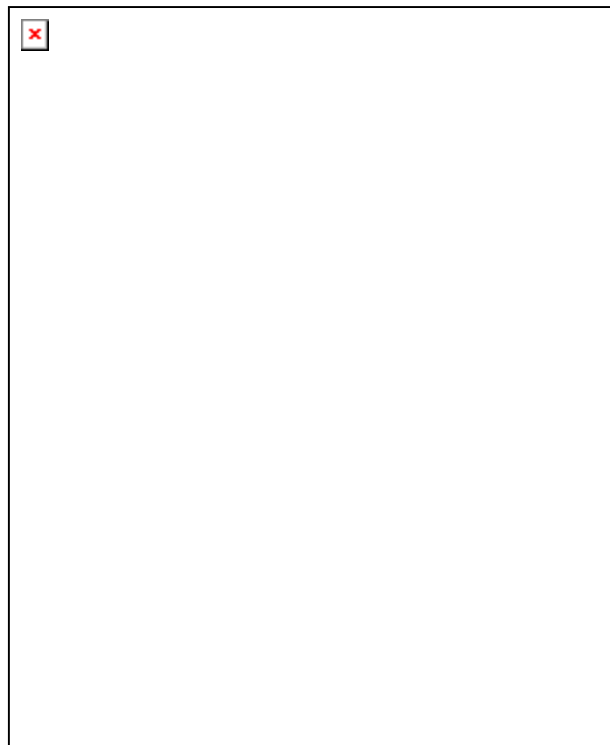


Figure 8. Register value IMK

This is a list of values that should be given to students every semester as a form of self-evaluation of its assessment for the EQ Learning Teaching Activities (KBM).

VI. CONCLUSION

Based on the description above, the Register concluded that the value IMK is suitable to be developed dilingkungan Universities. Register Value Through IMK, university can prove to the user's graduates, graduates that they actually have a competency that is not only measured by the value of intellectual but also based on the value emosionalnya.

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