Enhancing Student Evaluation Through Student Idol

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Abstract—Since after the historical moment of Malaysia Independence Day on the year of 1957, the government had been trying hard in order to find the most efficient methods in learning. However, it is hard to actually access and evaluate students whom will then be called an excellent student. It because in our realtime student who excellent is only excel in academic. This evaluation become a problem because it not balance in our real life interm of to get an excellent student in whole area in their involvement of curiculum and co-curiculum. To overcome this scenario, we proposed a method called Student Idol to evaluate student through three categories which are academic, co-curiculum and leadership. All the categories have their own merit point. Using this method, student will be evaluated more accurate compared to the previously. So, teacher can easily evaluate their student without having any emotion factor, relation factor and others. As conclution this method will helps student evaluation more accurate and valid.

Keywords—evaluation, curiculum, co-curriculum, idol.

I. INTRODUCTION

ALL schools in Malaysia are having award for best student at the end of the year. To evaluate the best student is very important to make sure the best student is really best among the best. Since 1957, the government had been trying hard in order to find the most efficient methods of learning in education industry. It is hard to actually access and evaluate students whom will then be called an excellent student, because in real life, most excellent students are students who only excels in academic. To overcome such scenario, a program called Student Idol program to evaluate students through categories of academic, co-curriculum and leadership where students will collect merit points for every accomplishment. However, the program lack of consistency and facing difficulties in data handling as it involves data from hundreds of students.

Moreover, with the manual procedure, it will encourage occurrence of several problems that relates with it, like inconsistency of evaluation. Through the accumulation of many data, some might be slipped or even get unnoticed or wrongly calculate. Mistakes could occur as data are hard to maintain. Even with that, the error might not get detected by anyone. The evaluation result could become biased as it is almost like based on human perception.

Furthermore, humans are prone of doing mistakes. This situation could harm data integrity when the data also might be missing and damaged which is bad for later reference as well as for program performance. What's more, excessive workers are needed as it involves a lot of hard work in collecting, analyzing, calculate and sort through data for hundreds of students. To achieve the current high standard of what most people come to realize, the values one student should have, not just being excellent in the field of academic, but being a real person who have knowledge and skill and able to put it to practice whenever it suites. According to chapter five in 'Pelan Induk Pembangunan Pendidikan 2006-2010' by Malaysian's Ministry of Education [2], in order to achieve the goal of ensuring Malaysian's youth to be equipped with sufficient knowledge, a part of it suggested that the development of human capital should be focused on developing students' competency through enhancing curriculum, co-curriculum program, sports as well as consolidating discipline among students.

To overcome such situation, Student Evaluation System is build to computerize the current system and helps to evaluate in more consistent and precise way.

II. LITERATURE REVIEW

Since the beginning of the a best student program formation and implementation in certain school, it strongly holds on to the idea of producing excellent human person who are equivalent to a world class worker next to being a high quality citizen of Malaysia [1]. The program is carried out with a long term goal of realizing the school's goal of being exceptional thus setting a standard where others will look high at their perseverance and thus, become a role model to everyone.

In parallel with the government's goal, certain school has underlined several aspects including physical, human resource, academic, co-curriculum, personality and spirituality

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that must be achieved by all denizens [1]. The current system is implemented with the intention of encouraging students to further improve them particularly in guiding towards a point where it would benefit the students in future.

A. Student Information System (SIS) Prototype for School Administration

In a paper [3] written by three researchers from University Utara Malaysia for the development of SIS after being approached by school administrators of one school at Sintok, asking for their help in terms of expertise and financial aid to develop a system that could combine students' information, co-curriculum as well as details on their students' disciplinary attitude. The real objective of building the prototype was to help the school in administering students' information in an efficient manner.

B. Characteristics of SIS

The information system is of a stand-alone type where it can only be used solely on a computer without having to connect to other computer as it is one of the requirements specified by the client. The system keeps record on students' details that includes personal information, co-curriculum activities and discipline. Meanwhile, the method of user interaction with the system is through filling out forms, accessing menus and buttons for direction. The users could search for students according to certain personal particular or co-curriculum activity through the search interface. The main menu interface of SIS is shown in the following Fig 1.

Fig. 1: Interface of SIS main menu

The user could print out students' details information in a format introduced by the Ministry of Education. This function is used for preparing testimonial letter for graduated students. Other than that, the system allows its users to change their password, system configuration that includes add, edit or delete list of classes, clubs, sport houses or position. This function is shown in Fig 2.
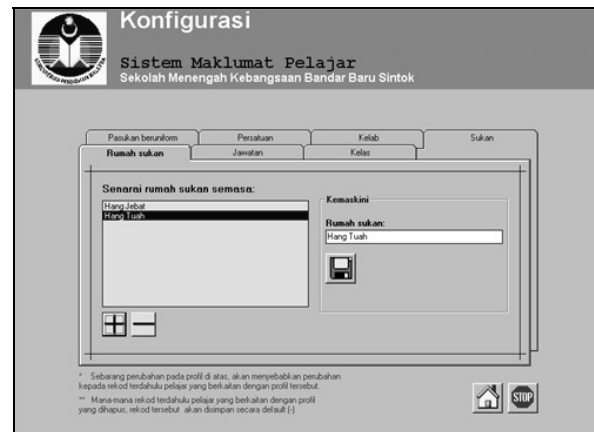

Fig. 2: Interface of SIS configuration

SIS offers decision support function through graphical statistical presentation. In this section, the overall statistic of students can be displayed according to race, religion, gender, 'Skim Pinjaman Buku Teks' (SPBT) qualification and disciplinary record. Moreover, the system offers a function for the user to save students' information as backup files.

III. IMPLEMENTATION OF SIS

The system has been tested and implemented at the school. In order to access the level of users' satisfaction, a survey method had been done which focused on overall reaction on the system, level of learning capability in using the system and the system ability and achievement. The evaluation was done through applying a set of survey form containing 31 questions, given to six respondents after using SIS. The respondents consist of selected administrative teachers.

A. The proposed "Idol" Program

The program was first proposed by the school's principal as a mean of evaluating students. The main idea is to evaluate through different aspects of accomplishment which includes academic achievement, school's activities involvement as well as leadership value. To promote a solution through rather a refine way, the principal set the evaluation calculation to a percentage of like 50% for academic, 30% for co-curriculum and 20% for leadership. The ratio would give an idea on how important the other aspects (co-curriculum and leadership) are, small but not to be forgotten. The process involves mainly the school's teacher, particularly, the class-teacher, as they are the one who are responsible to input information regarding matters involving their students' achievements. Fig 3 is shows the flow to get student report. Teacher has to insert all data for academic, co-curriculum and leadership for each student. The system will calculate marks according to the scheme set. Then system will compare the marks to get the highest. Then produce the report.
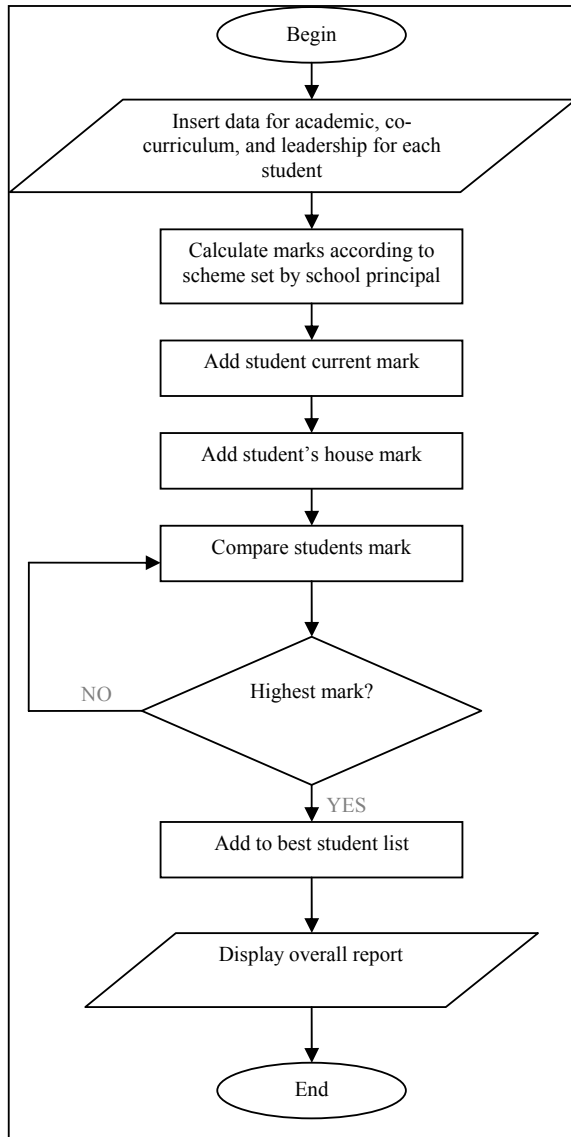
Fig. 3: To get overall report

B. Calculation Methods

Students will be evaluated according to three categories which are academic, co-curriculum and leadership. For each category, there will be different ways of calculation. However, each category will comprise of different percentage set by the Super-Administrator.

While to ensure that all the calculation follow the percentage set by Super-Administrator, product of calculation for all the categories will multiple with k value which are calculate through accounting the student number of average involvement for a year. Say, in a year there will be maximum of four examinations or three kind of activities involvement or three leadership positions k would be the percentage set for a particular category and divide by the number of average value for the given category.

For an easier explanation, an example of a student, Jane who is an SPM student is calculated like in following Table 1.

TABLE 1 EXAMPLE OF CALCULATION FOR ACADEMIC CATEGORY

Subject	m (mark)	x (point)	b (ballast)	xb	n (bonus)
Bahasa Melayu	77	3.75	1	3.75	0
Bahasa Inggeris	60	3.25	2	6.50	0
Matematik Moden	79	3.75	2	7.50	0
Matematik Tambahan	80	4.00	4	16.00	2
Sejarah	86	4.00	1	4.00	0
Pendidikan Moral	67	3.50	1	3.50	0
Fizik	88	4.00	3	12.00	2
Kimia	63	3.25	3	9.75	2
Biologi	86	4.00	3	12.00	2
Prinsip Akaun	50	2.75	3	8.25	2
$\sum$ (total)			23	83.25	10

The academic percentage is 50 and the maximum number of examination for a year is 4. The calculation would be,

$$\begin{aligned} &= \; \sum xb \;/\; \sum b \;*\; \sum n \;*\; k \qquad\qquad (1)\\ &= \; 83.25 \,/\, 23 * 10 * (0.5 \,/\, 4)\\ &= \; 4.524 \end{aligned}$$

Example is one student also had participated in a Tae Kwon Do Tournament in 'state' level and had achieved '1st Runner Up' ranking. Table 2 shows the detail the point stated for this category.

TABLE II VALUE FOR EACH LEVEL

LVL_TYPE	LVL_DESC	LVL_POINT
ACHIEVEMENT	Participation	1.0
ACHIEVEMENT	2nd Runner Up	2.0
ACHIEVEMENT	1st Runner Up	3.0
ACHIEVEMENT	1st Place	4.0
INVOLVEMENT	School	1.0
INVOLVEMENT	District	2.0
INVOLVEMENT	State	3.0
INVOLVEMENT	National	4.0
POSITION	President	4.0
POSITION	Vice President	4.0
POSITION	Secretary	3.0
POSITION	Vice Secretary	3.0

POSITION	Treasurer	2.0
POSITION	Vice Treasurer	2.0
POSITION	Committee Member	1.0

The co-curriculum percentage is 40 and the maximum number of involvement is 3. So, the calculation would be like following.

L (level) = State = 3
A (achievement) = 1st Runner Up = 3

$$= L * A * k \qquad (2)$$
$$= 3 * 3 * (0.4 / 3)$$
$$= 1.2$$

At school one student held the title Treasurer in the Tae Kwon Do club. The mark stated for each category. Table 3 shows the level of leadership point.

TABLE III MARK FOR EACH LEVEL OF LEADERSHIP

Title	Mark
President	4
Vice President	4
Secretary	3
Vice Secretary	3
Treasurer	2
Vice Treasurer	2
Committee Member	1

The percentage for leadership is 10 and average number of position is 3. So the calculation would be like following. Let say the T is 2.

T (title) = Treasurer = 2

$$= T * k \qquad (3)$$
$$= 2 * (0.1 / 3)$$
$$= 0.066$$

IV. RESULT & DISCUSSION

For future enhancement of Student Idol, it is suggested that Student Idol be implemented in schools all over Malaysia in order to achieve the government's goal of producing high quality human capital. Additionally, Student Idol process could be enhanced through implementing the use of MyKad reader particularly during student registration process as well as PDAs to add mobility throughout the course of evaluation.

V. CONCLUSION

The Student Idol will develop to cater the requirement of school in Malaysia to get the best student. It is used to more reliable calculation in hoping to overcome difficulties faced by the school which is consistency and data organization.

Student Idol is build by using software engineering approach. The system development objective is to help evaluate students in a more consistent and precise way through using software engineering approach. Using this method, the teachers can easily evaluate the students and administrators can keep all the data in a much more advance and systematic manner.

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