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REVIEW PAPER ON DETECTION OF STUDENT PERFORMANCE

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Abstract— In traditional academics system there are two types of exams conducted during academics. Theoretical exam performance is dependent on how the students solve question paper. On the other hand practical exam performance is dependent on student's overall class performance i.e. regularity, attention in class, behaviour etc. The performance of the students is displayed on teacher's dashboard. In today's real-time working learners also work on real-time data which indicates learners progress and performance. The teachers were asked to explain how to reflect the information practicable on the dashboard. Teachers enter the existing information about class students in the system to interpret dashboard information. Task and process feedback are used for dashboard consultation. This makes dashboard more progressive and influential for teachers to use them in future.

Keywords— Dashboard, Real time students monitoring, Decision tree, Learning Analysis, Collaborative classroom, Awareness.

I. INTRODUCTION

Collaboration within the classroom is frequently tackled just by looking at the interactions among learners. It is not usually considered the collaboration between teacher and students. Yet, in some scenarios such collaboration really happens. Take, e.g., the case of a university freshmen's laboratory for learning computer tools, such as MS Excel or Matlab. The students want to master the tools because they know they will use them in other courses. Instructors will be successful if their students actually learn. Therefore, a mutual interdependency occurs. Since collaboration is involved, participants must have awareness. In particular, the teacher should have information on the students' progress in order to decide the help which can provide to selective students or to all of them.

II. LITERATURE REVIEW

Educational environments are increasing as online learning is increasing. The feedback is taken as early as possible. E-learning in education system helps students' to get result quickly which also helps to improve students' performance. The use of dashboard to represent the result makes learning with fun and also influence student to prepare them. Feedback is heavily researched in educational sciences and is defined as information provided by a teacher regarding aspects of students' performance or understanding.

[1] *Martinez-Maldonado et al.* represent a study on the use of dashboard in collaborative learning. The student works in groups of three as a part of activity to develop concept mapping. The authors studied environments of three groups monitored by each teacher. The dashboard shows the result which helps to detect group anomalies.

[2] The need of awareness about students' performance is not unique in face-to-face teaching. The same thing need in the online education or e-learning. Vozniuk et al. studies the collection of awareness information of students' performance which is presented to teacher. So that teacher can influence students for preparation of next phases.

[3] The main focus is on monitoring students activities in online collaborative learning discuss by Juan et al. They present the need for "non-intrusive and automatic ways to get feedback from students' performance for better learning of their performance and to increase the effectiveness of online courses".

[4] *Wang et al.* works on the awareness information to teacher consisting on performance of students over phases of a assignment. It is assume that a work can be split into various phases, but the obtained information may be rough.

[5] *Softic at al.* experiments semantic modelling to increase exchange of information on already worked material and activities performed by online students.

[6] A dashboard is defined as a visual display of information need to achieve one or more goals, collaborated and displayed on single screen so information can monitored at a glance.

[7, 8] *Verbert et al.* and *Mottus et al.* survey on use of dashboards to support teachers in various environments. The examples show the ways to represent compact information using graphical designs.

[9] *Kogurre et al.* deal with students learning in computer programming. They developed a system to monitor students' performance in class.

[10] *Aleven et al.* developed a dashboard with a user-centered design approach used in environment with intelligent tutors.

[11] *Kepka et al.* presents the idea of dashboard for small classrooms (15-20 students) with 5-8 activities. The dashboard represents the information in graphical form, where nodes represent activities as bubbles. The arc width provides information on the number of times it has been traversed: The thicker the arc, the more it has been traversed.

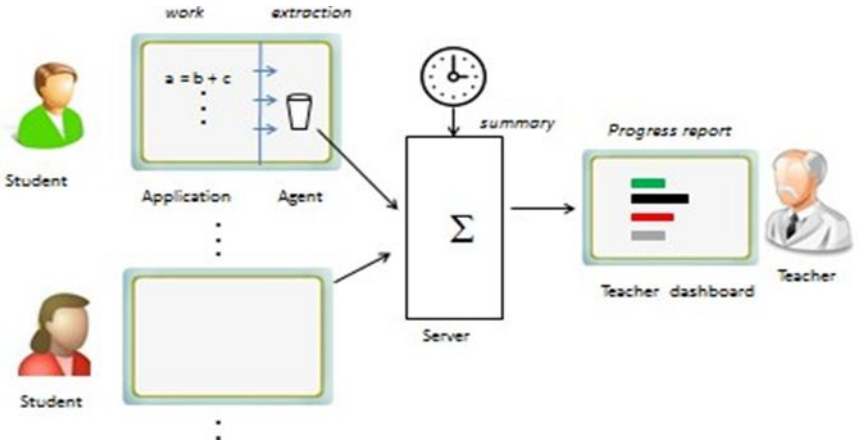

Fig. 1 flow Diagram

III. PROPOSED WORK

In proposed project, the focus is on the student performance in class test using learning analysis model. In this model, system will automatically track students click through data about attempted and non-attempted questions, time taken to attempt each question, no of attempts made on each question, no of correct answers, no of wrong answers and no of not attempted answers. Depending on this data, system will show live dashboard to view each student performance when they are attempting the test. This performance is very useful to decide assessment marks of the student using decision tree algorithm.

The system contains following modules:

1) *Admin Panel:* In this module, Teacher can do login & also create staff login, Register branches and semester wise subjects, Allocate subjects to staff, Approve pending students, view student performance reports.

2) *Staff Panel:* In this module,Teacher can View own allotted subject, Register class details ,Manage quiz questions, Arrange quiz/class test, View live student performance at the time of quiz, View subject and different category wise student performance Reports

3) *Student Panel:* Student can Register & do login, View quiz schedule, View own performance, View comparative performance

4) *Learning analysis:* In this module, students activities will be tracked in database, According to the student's activities live performance will be displayed on dashboard, Respective Staff member will be able to view student's performance live

5) *Decision Support system:* In this module, decision support system in which we will track all the activities of students during quiz period, Depending on these activities we will find out category wise student performance using decision tree algorithm.

IV. CONCLUSIONS

The first observation could make is that students did not have any disturbances by the fact of using the dashboard. Therefore, this transparency is a positive feature of this technology. This study examined how teachers use teacher dashboards during mathematics lessons. The results showed that teachers were aware of the dashboards and consulted them on average more than 8 times in a 50-minute lesson. Teachers mostly activated knowledge at the individual student level, such as knowledge of the student, progress of the student and error analysis of the student's work. As well as knowledge on the individual student level, knowledge at the class level, such as the

progress of the class and agreements made with the class, was used by teachers to make sense of the dashboard data. This type of research on the subject of dashboards usage in classrooms is essential to improve human-technology interaction and hence to optimize students' learning.

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