# Learning Analytics Project - David Cachia - 3050444

## ‘Intelligent Curriculum’ and CMS/LMS interaction

There are various learning styles that fit the needs of different students. As such, there are also different testing styles that students excel at. To encourage the most efficient learning, it is imperative to determine what type of testing a student excels at. A poor test result is not always an indicator of a poor student. The questions could be confusing, there could be test anxiety, or the testing style does not match the way the student learns and expresses their knowledge. I hope to determine a system that will help educators determine what testing style best suites the needs of individual students. This will improve learning and offer more accurate testing of both the student’s knowledge and the teaching methods used.

Several methods would be used to determine what testing methods suit particular students. At the beginning of a course, students could write an aptitude style test based on previous knowledge required for the course. They could write several styles of test including multiple choice, fill in the blank, short answer, and long answer. One could measure the amount of time that has elapsed per question, and incorrect versus correct answer to see which questions caused the most problems for that student and for all students taking the test (if all students have trouble with the same question, the question itself is most likely the problem). The time that the test is taken could also indicate when the best time to administer tests is (morning versus afternoon). These indicators can be used to tailor tests to students.

Once a teacher knows what testing style will be best for students, the way the material is presented will need to be adjusted to better prepare students for that type of test. The way that material is taught can also affect student learning, especially for those that are not strong students. Classmate assist, as discussed in week 6 showed how teachers can use data from noninvasive sensors to examine students while they learn to provide teachers with valuable information they would need to track students’ progress. This could be used to determine what teaching method works best for students. Noninvasive monitoring could provide teachers with data while students complete different tasks (independent/collaborative/problem-based, etc.). This can allow teachers to see which student excel at what type of learning without intruding on student learning. Using something like Classmate assist could also ensure all students collaborate in group work rather than having all group members take credit for the work of one member. Monitoring students while they complete these types of task can give invaluable data to a teacher and create accountable students.

Creating a positive learning environment for students leads to better learning and understanding of content. To do this, it’s important to remember that students have different learning styles that allow them to excel at certain tasks and possibly fail others despite their actual knowledge. Differentiating instruction while delivering online instruction can be difficult but using testing to determine how to best teach particular students can help bridge the gap between online and traditional learning. This expands into determining how students learn best by monitoring their progress through different types of assignments. This helps teachers reach more students with the most efficiency and accuracy. These methods can also help students find out how they can excel by knowing what their strengths and weaknesses area.