



SCRIPT OF TALK

TITLE: **What is inside a MOOC - Analytics**

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NARRATION:

Hi!! Welcome back. Today we look at Analytics. My name is Prabhakar, I am with IIT-Kanpur. What do analytics do? They help us measure the student's engagement with the course. For example, we can see how much they are participating in the course? How well they're interacting with the course material like the videos other reading material and of course, how well you are interacting with the rest of the classmates, their participation in the discussion forum? These formal, semi-formal definitions of what learning analytics are from a conference call for papers learning analytics and knowledge 2011 let's read it. 'Learning Analytics' is a measurement collection, analysis and reporting of data about learners and their context for purposes of understanding and optimizing learning and the environments in which the learning occurs. This is a crisp way of covering what learning analytics is all about. Of course, learning analytics happens not just in Moocs but any internal course offering in any university especially when it is on a learning management system it's easy to gather these kinds of statistics. But actually analytics about courses are nothing new we have been doing this. The feedback we take during the course is a form of analytics for example I take attendance sometimes in the course and some courses they happen every day, we look at class participation even though it is not formally measured but I do notice which student is active in what fashion. We look at data in the library how many books that and reference materials that have kept in the reference section are accessed by the students. That will give me an indication of how active the students are with course content, we look at their performance in the exams. So, all this actually constitute what we call Analytics and finally of course at the end of the course we ask this big question. Has the instructor taught well? And this is a form of analytics. All problems with this kind of analytics are often it comes late in the course or at the end of the course which doesn't allow me any mid-course correction. I can take measurements in between but often that is more difficult. Now, in an online course when a class is happening over a management system

there are more opportunities. The goals of these learning analytics are basically to improve the quality of the offering. Whatever I measure I should make use of it to see that my next offering is superior to what I have and student retention I don't want students to drop out of the course and lose out. So, if I know and can predict potential dropouts then maybe I can take corrective actions. So, student retention is one of the major objectives of monitoring course interaction data and of course I want to increase student participation that's one of the goals of learning analytics. If you asked the question for whom are these analytics meant for? Of course the learner because I should be able to tell the student what percentage of course he has covered and what is the status? We serve either overall course objectives and so on so, a learner can be given information about herself. The teacher can use learning analytics to figure out is the course engaging enough or not. Where are the students finding the difficulties for example your video is being repeatedly watched than you can say look the reason that students are watching this again and again is because maybe some things are not properly explained. For example, if there's a question which is incorrectly answered by most students that mean there is some problem there. The Institute of course will benefit greatly by data of this kind a simple example is what kind of students come to do my course is an example. What kind of courses is do they prefer and how well they engage with that kind of courses? This kind of data can be got through analytics. Okay, now the question we ask is when you are saying analytics what do you measure? In the what kind of information do you track so one simple one is how much time are the students spending on the course how frequently are they logging in are they coming back again and again or they just come once in a few days when a new lecture is released or what. How many of the resources they are accessing? I might have put large number of educational resource which includes videos and reference material but are they looking at all of them or not. Artifacts produced by the students are they asking questions are they making Comments, are they participating in other engagement forums assignments they are submitting and sometimes the students upload reference material are they doing things like that and so on and of course it's trivial thing like how many assignments they have actually finished and when they have finished and so on. For these are the kinds of things we measure when we talk about measurements that happen in a moocs under the analytic banner. Here is an example of a very

famous course now the world knows this course number and this the one of the largest mooc and well-researched mooc by MIT.

Circuits and Electronics from the statistics they managed to gather by the clicks that are happening while the courses is on. They come up with some observations. They say 76 percent of the students who registered for the course but just browsing the course that means they have not done the course from end to end and submitted the assignments and exams but they came to learn some part of the course they picked up some things. They were just browsing the course and the total time that students have spent on the course 8 percent of it was accounted by this 76 percent of the browsers. Whereas, those set of students who finally ended up getting a proficiency certificate which is seven percent of them they consumed about 60 percent of the total student time spent on the course this is an interesting figure that they could compute calculate based on the analytics and again they have figured out that if you look at where do the students spend their time they see that the lecture videos one place where they are spending a lot of time the most time and they spent time in discussion forums and then they have this course has online laboratories so that is fair they spend the next large amount of time. So, this kind of observations can be got through by capturing the analytics. Now, in this context I have to mention what are called 'Site Analytics'.

This is we are a website rite a mooc is nothing we are a website and very often a learning analytics are part of the Moocs software and we are monitoring what is happening inside the course but, you could also see for example where the student has come from? How did the student come to know that such a course is being offered has somebody referred to it, has the student seen it on a social networking site? Did he click a Facebook page and clicked on it and hence came to this site or did he get one of the messages that has been sent? So, these are called 'Referrers'. So we can keep track we can also figure out what are the sources of the traffic. So, Site Analytics will help you do that. Google Analytics is one very well known popular heavily used Site Analytics software. It's very easy to incorporate Google Analytics into any website. It will generate detailed statistics about a website's traffic and traffic sources were it is

coming from and so on and then it can track the visitors from who are the referrers of the visitors. This is the result of a search engine or a social network or whatever.

Thank you