**PODCAST: Learning analytics: Why, What, How – Valuable tool for teachers and learners**

**Episode 3, part 1: How do I use learning analytics in my teaching?**

This is a “Why, What, How” podcast series in which we delve into the world of data and learning analytics from the perspective of teachers and learners.

In the third episode of our podcast, we hear how teachers from different fields use learning analytics in their own teaching. In the first part, **Sami Heikkinen**, Senior Lecturer at the business unit of LAB University of Applied Sciences, shares his expertise with us. Sami mainly teaches project management, creative problem solving, as well as the study unit Expert in the insurance sector. The episode is presented by **Olesia Kullberg**, Senior Lecturer at LAB University of Applied Sciences.

OLESIA KULLBERG

Welcome to the ‘Learning analytics: Why, What, How – Valuable tool for teachers and learners’ series, where we’ll focus on the basics of learning analytics and why its use is so central in the development of teaching. We’ll discuss the role of learning analytics in supporting decision-making done by teachers and how it can help students succeed. The podcast series is part of the Digivisio work of higher education institutions.

In the episode How to use learning analytics in my teaching?, I’ll interview three teachers and find out how they use learning analytics in their teaching.

I’m Olesia Kullberg, Senior Lecturer at LAB University of Applied Sciences, and I have an expert guest here today, Sami Heikkinen, lecturer at LAB University of Applied Sciences. Welcome, Sami!

SAMI HEIKKINEN

Thank you!

OLESIA KULLBERG

Would you like to introduce yourself? What do you teach? What's your work profile? And then, if you'd like to tell me again, which courses you usually teach?

SAMI HEIKKINEN

Sami Heikkinen, I’m a lecturer in business at LAB University of Applied Sciences. Recently, I’ve mainly taught online. I mainly teach project management, a study unit on expertise in the insurance sector and also creative problem solving.

OLESIA KULLBERG

And you're also conducting research on learning analytics, aren't you?

SAMI HEIKKINEN

Yes, I'm on my third year of working on my PhD.

OLESIA KULLBERG

Great! That means you have a great deal of knowledge and expertise on this topic. If you could tell us, first of all, what are the learning analytics tools you use in your own study units?

SAMI HEIKKINEN

LAB uses the Moodle learning environment with a learning analytics plug-in installed. It contains basic tools that provide information on how much students use various materials, for example. It is a low-threshold tool, which should actually be used in all courses.

OLESIA KULLBERG

When you're using these tools, what kind of data do you collect during the course and how do you analyse it? What are you using it for?

SAMI HEIKKINEN

The Moodle tool collects the data for me, so I don't have to do anything about it. On the other hand, it also restricts the reports it provides to what’s been decided on in the design of the system. So, you can see which students have accessed which materials, for example. Perhaps the most important function is the one that lets you see students who haven't accessed some material yet, for example. Using the same tool, you can send a personal message to the student that it’s time to get to know this material so they can remain involved in the learning process. You can also see when students are active on the learning platform. You can use that information, for example, for selecting times when to offer support sessions.

OLESIA KULLBERG

How do you see what you should use the data for in teaching that the learning analytics provides? What does it affect?

SAMI HEIKKINEN

The primary objective must be to support learning. It helps to identify students in need of some kind of support. When we work in the classroom, we see who's gonna fall behind or doesn't understand. In the classroom, it’s easier to detect it. But when we're online in a learning environment, we can't see if students have been there and what they've done. So, we need to get to know what the students have done in some way. Learning analytics allows us to see which students have progressed according to the assumed learning process and who have fallen behind. It gives the teacher the opportunity to do something for the students who need it. And, of course, it’s really in the interest of the teacher to see the big picture, what's the direction. This enables the teacher to identify the areas that require more repetition from the student, for example during the course. Or do you need to try a task several times before you can pass? Or how long do students spend going through a material? The teacher gets an idea of what the level of difficulty is and where support measures might be needed; or what kinds of points the study unit should develop in order to make learning smoother.

OLESIA KULLBERG

How do you analyse Moodle quizzes and student answers using learning analytics?

SAMI HEIKKINEN

For example, if I see in the quiz report what was a difficult question for the students, I start thinking about what I can do about it. Are the questions too difficult? Are things explained in the materials in an overly complex or difficult way? It helps to understand precisely where the support for learning is needed.

OLESIA KULLBERG

Talking about students, do you see that a student could also use learning analytics in some way?

SAMI HEIKKINEN

Actually, what Moodle offers is tracking the learning progress. By using it, the student can see how big a part of the study unit they have completed. It’s probably the only clear learning analytics aid that a student can use. Anything else requires you to set up an add-on. In English, it’s called the learning analytics dashboard. By using them, students can view different parameters of their own learning. Typically, these aids give students the opportunity to monitor how they relate to other students. The student can set personal goals for themselves and monitor how they've achieved their personal goals, what kinds of things they should still complete. And to varying extents, there may be visual graphs or clear verbal instructions on what you should do next, what kinds of things you should learn next, so that you can get to the next level of learning.

OLESIA KULLBERG

Since you’re conducting research, would you like to tell us what your research is focused on within learning analytics?

SAMI HEIKKINEN

Thank you for asking! In my own research, I conduct sequence research related to studying. In other words, instead of checking the actions completed in the student's learning environment as individual one, we start to examine what the student has done when they log in to the platform. Then we can look at how online learning processes differ between students who are doing well and those who are doing less well. And when we understand these differences, we can offer better support to those students who need some help in achieving their own learning goals. In addition, you can look at sequences and also assess, for example, the way in which students interact in different ways, for example in discussion forums. The research also begins to focus on the fact that instead of checking individual study units, the examination time span affects longer time ones such as the entire study year or the entire degree. How students' ways of learning develop over a longer time span and what kind of study-related tactics and strategies are the winning models that have helped them do well in their studies. It provides us with information that can also provide advice to those for whom learning online is, perhaps, more challenging.

OLESIA KULLBERG

Sounds very interesting! Especially that you can see a bigger picture than just your own course. This would probably also be important in counselling in order to support the student more efficiently. Thank you very much, Sami Heikkinen, for this interview! It was very nice to talk to you about learning analytics today.

SAMI HEIKKINEN

Thank you!

OLESIA KULLBERG

Thank you also to the listeners for joining in this interesting discussion on the practical applications of learning analytics in education. We hope this podcast gave you the impetus to gather useful information about your students’ learning process and how you can apply it. Olesia Kullberg is responsible for producing and editing the episode.