

Humboldt Revisited: Knowledge Acquisition on the Sofa - Explorative Learning in the Lecture Hall

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What pupils and students have been dreaming about for decades could become a reality now, even if it is likely to take Germany longer than the Anglo-Saxon region: ex-cathedra teaching will eventually lose its justification for good. Digitalization is revolutionizing our educational system. While some build on replacing the majority of analog learning by e-learning, scientific universities worldwide are working on new concepts to reconnect digital and analog learning in the sense of a problem and research-oriented approach following Humboldt's tradition. In doing so, they might succeed in achieving greater willingness and ability to acquire and critically reflect upon new knowledge and to search for new solutions in a creative fashion.

While, up until very recently, students had to chase down the content taught in class if they were unable to attend in order not to fall behind, physical absence is no longer a problem for mere knowledge acquisition these days. "I study from home whenever it fits my schedule," says Katrin Lehmann. At the same time, there is more room to prepare students for their future leadership tasks in the residential sessions. Katrin Lehmann is currently completing an MBA program at HHL Leipzig Graduate School of Management and benefits from what is currently revolutionizing academic instruction: the flipped classroom.

The principle itself is rather simple: the lecturer does not teach the basic knowledge standing in front of the class with the students having to review it at home. The students acquire the content at home, in a self-regulated manner with the help of interactive learning software, and use the residential sessions to make their knowledge applicable to better understand the latest research questions and real-life case studies. What they learned at home is questioned, adjusted and rethought in class.

Full-on digital or what?

When Katrin Lehmann wants to study, it looks like this: she goes into the kitchen, makes coffee, then opens her laptop and off she goes. Various online classes replace what she had to rush into the lecture hall to see until recently. Today, Innovation Management is on the agenda. That is the art of developing new ideas into new products or services and successfully establish them on the market. Katrin Lehmann focuses on the graphics and the short videos on her screen. A man uses a real-life example to explain what an entrepreneur has to do to convince consumers to use a new product. For Lehmann, digital learning is not a new concept: she studied Mathematics at university for two terms and solved differential equations with the help of online classes. "The good thing is that if there is something I have not understood, I can immediately research it online," says the 27-year-old.

The lecture hall becomes the lab

At the private university HHL, where Lehmann will obtain her Master of Business Administration degree next year, there has not been ex-cathedra instruction in a while; the school uses interactive teaching and learning methods in smaller groups. In order to intensify scientific work on specific practical issues, HHL welcomes the flipped classroom concept as approach to make the residential phases, which are indispensable in providing high-standard academic qualification, more exciting and productive. Together with a team of international colleagues, among them innovation researcher Prof. John Bessant, Ph.D., from the University of Exeter, Prof. Dr. Andreas Pinkwart conducts experiments on the topic at his Chair of Innovation Management and Entrepreneurship. They examine how teaching and learning content can be distributed in different ways between the classroom and self-study and how new opportunities for learning through can be created. To the extent that knowledge is taught in the form of self-study through new media, the lecture hall is more and more becoming a lab which can deal with specific research-related and relevant practical questions in a more in-depth manner. Instruction is conducted using, for instance, interactive e-learning modules which are developed in cooperation with Lecturio, among other specialists.

Improved quality, more fun

However, not all students handle this way of self-guided learning equally well. "Like with everything that is new, we faced a lot of skepticism," says HHL lecturer Dr. Nagwan Abu El-Ella. "We noticed that students - particularly those in the full-time Master programs - felt overwhelmed at times. We must therefore make sure that the workload does not end up being higher than before." The junior scientist can say one thing for sure, "The quality of the work presented and theses has increased significantly since the introduction of the flipped classroom concept." Additionally, many students stated on their evaluation forms that the classes which use the flipped classroom were much more enriching than others and were also a lot more fun.

Studying following the American model

Learning methods have changed radically over the last few years, especially in the United States. Kids in elementary school now sit in a circle on the floor, obtaining their knowledge with the help of tablet PCs in a playful way. In schools, the students may build their own curricula and in university, they can acquire the academic content on their computers at home. Many of these trends are now making their way across the pond. For Tobias Georgi of Lecturio, digital content is the future. "The market for digital education keeps growing," he comments. He wins over skeptics with better academic achievements because - and entire generations of students have already experienced this - the knowledge you had to acquire yourself lasts much longer than anything that was spoon-fed. It all sounds very modern but does this system not expect too much responsibility from the students? They are the ones that will need the knowledge later. "Students these days are now longer seen as robots who take notes for 90 minutes and then regurgitate the content," says Martin Schlichte, HHL graduate and founder of Lecturio. According to the expert, the goal is better consideration the students' strengths and responding to them in the best possible way.

More differentiated knowledge and holistic classification are required

Due to the flipped classroom, Katrin Lehmann now spends more time in front of the computer. A large part of the content is online so without the Internet, she would be lost. She does not see this as a disadvantage though - exactly the opposite. It is all about the mix. While the traditional residential classes require a great amount of time for knowledge acquisition on campus and reflective self-study and sheer e-learning has no personal contact at all, the flipped classroom learning offers a mix of both. "In class, I can directly ask the lecturer and learn how to better query and classify the increasingly differentiated knowledge," the student comments. She also appreciates the wealth of knowledge offered to her by digital education. The world is becoming more and more complex, requiring more and more differentiated knowledge. Studies show that 30 years ago, employers had to memorize about three quarters of the expert knowledge required to hold their own on the job while today, that figure is down to about 10 percent. "I learn where I can find information on a certain topic," says Lehmann.

From teacher to coach

The flipped classroom not only changes the students' learning perspective; the role of the teachers changes as well. Particularly at well-known

universities, the outstanding professors tend to have a packed schedule. Thanks to the flipped classroom, they can better coordinate the scheduling of their various tasks in research, teaching and knowledge transfer. The lecturers also benefit better knowledge-based discussions with their students. "In instruction, the professors develop from a mere teacher of knowledge to being a researcher and coach again who is able to delve into special fields," comments Dr. Nagwan Abu El-Ella. This method of instruction offers students more flexibility and more control of how they acquire the necessary knowledge. It also increases their competence in analyzing and acting as the knowledge acquired during self-study is critically examined in a discourse with science and practice before it is applied.

On the way to the learning through research following Humboldt's ideal

New media provide an opportunity to approach Humboldt's ideal of researching learning in a community of teachers and students again. The students can experience the entire research cycle in a cognitive emotional manner, starting with the initial questions, which they chose themselves ideally, the phrasing of research questions and hypotheses as well as the selection and execution of suitable methods and the critical reflection and presentation of the findings. The opportunity for self-reflection of the science as well as the individual subject using science and the critical reflection considering the common good creates the prerequisites for responsible action within the scientific society in the future. According to Prof. Dr. Andreas Pinkwart, residential instruction shaped by the close cooperation of students and lecturers offers more space for the promotion of social and intercultural competencies as well as reverse learning. The practical relevance of research is increased by aligning the research projects with findings relevant to third parties. Both aspects have proven to be particularly constructive for scientific corporate governance schools with regard to the future leadership tasks of junior executives.

HHL Leipzig Graduate School of Management

HHL is a university-level institution and ranks amongst the leading international business schools. The goal of the oldest business school in German-speaking Europe is to educate effective, responsible and entrepreneurially-minded leaders. HHL stands out for its excellent teaching, its clear research focus, its effective knowledge transfer into practice as well as its outstanding student services. The courses of study include full and part-time Master in Management as well as MBA programs, a Doctoral program and Executive Education. HHL reached one of three first places for the best entrepreneurial universities in Germany in the Start-Up Radar ranking published by Stifterverband für die Deutsche Wissenschaft (Founders' Association of German Science) and the German Federal Ministry for Economic Affairs and Energy (BWMi). According to the Financial Times, HHL ranks first in Germany and fifth globally for its entrepreneurship focus within the M.Sc. and EMBA programs. HHL is accredited by AACSB International. <http://www.hhl.de>

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HHL Leipzig Graduate School of Management

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Anlage: Bild

