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# Challenging Learning Myths Through Intervention Studies in Formal Higher Education

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**Abstract.** The introduction of open and networked learning practices in formal higher education regularly collides with the personal beliefs and convictions that students hold in relation to their own capacity for learning and the structural and procedural conditions that they expect to be met in such settings. A series of systemic intervention studies at Tallinn University highlighted the disabling role that these personal learning myths can play when students are confronted with practices that promote a new culture of learning. This paper offers some selected examples from a qualitative data analysis and discusses the possibility to embrace personal learning myths as a core concept for further research and the development of more effective intervention instruments and approaches.

**Keywords:** learning myths, intervention, higher education, new learning culture

## 1 Introduction

*“For most of the twentieth century our educational system has been built on the assumption that teaching is necessary for learning to occur”* (p. 34) [1]. In this conception teachers transfer information to students, who need to prove (usually by testing) their acquired knowledge in accordance with pre-defined standards. In general teachers control the learning activity of others and assume that a process of quality instruction actually “produces” desired outcomes on the receivers’ end [2].

This dominating pattern has become deep-seated in our culture and has produced pervasive beliefs of how education in general and learning experiences in particular should be structured and organised. Throughout history these rigidly held beliefs have determined every aspect of pedagogical practice: the roles of teachers and students; teaching (learning) methods; assessment procedures, supporting environments, and so forth. The continued exposure to this type of teacher dependent learning environments throughout formal schooling leads many people to develop a set of potentially disabling beliefs and convictions that function as a personal “commentary” on their own capabilities for learning. These deeply engrained beliefs are labeled as “learning myths” [2]. They were able to show in their empirical work that such myths were

regularly invoked in educational settings and influenced the capacity to learn of many adults.

Professional educators also hold beliefs and prejudices about learning [2] and their students' capabilities. Their professional myths influence how educational systems and the embedded teaching and learning practices develop over time, thus contributing considerably to the acquisition of specific personal myths about learning among students [2].

Among many other researchers and educators, [1] claim that the current, mainstream educational system can't keep up with the rapid rate of change in the twenty-first century. The omnipresent and continuously expanding digital transformation requires and enables fundamental shifts and changes from old models to new approaches of learning. The process of establishing a new learning culture, however, is fundamentally restricted by the values, myths and beliefs about education and learning among the various stakeholders. Establishing innovative approaches, which are conflicting with the current traditional views and principles of formal education and learning requires not only the implementation of new technological instrumentation but also rather different mindsets, values and beliefs. The development of a new learning culture poses formidable challenges to existing learning myths, which need to be explored, elaborated, de-constructed and re-built.

## **2 Open and Networked Learning: Intentional Change Meets Learning Myths**

Over a period of 5 years the authors of this paper have been engaged in a series of intervention studies that tried to promote a shift towards more open and networked forms of teaching and learning at Tallinn University (TLU), Estonia. One master level course administered by the Institute of Informatics at TLU has been used as an evolving test-bed for the iterative implementation and evaluation of intervention ideas and concepts related to various aspects of personal learning and its digital re-instrumentation through networked, open access and open source tools and services in formal higher education. Existing teaching and studying practices have been fundamentally re-designed to support the advancement of competencies for self-directing one's study and change in increasingly networked environments in work and education. This required a re-configuration of patterns of control and a redistribution of responsibility over instructional functions (such as setting objectives; selecting and executing appropriate actions and activities; selecting, combining, and integrating resources and technological tools and services; and defining criteria and procedures of evaluation). A learning contract procedure [3] has been adapted and used to support this shift of control and responsibility. Students have been encouraged to explore a wide range of digital instrumentation options (such as wikis, weblogs, and so forth) that fundamentally allow the opening up of networked learning activities beyond the confines of their local institutional context (for a more detailed overview of the intervention studies see [4-6]).

Observational data gathered throughout our intervention studies continuously indicated that the reconfiguration of typical patterns of control and responsibility in

general, and the emphasis on the exploration of personal digital instrumentation options in particular, seemingly clashed with the learning myths of a good number of students. Those students expressed very strong beliefs on how formal educational environments should be structured and organised and what conditions need to be met to make “learning” in such settings possible for them. Furthermore, we were able to observe a reoccurring developmental trajectory among a number of students whose initial rejection of all concepts and practices that ran against their myths slowly gave way to personal experimentation and exploration, and finally resulted in the adaptation and reconstruction of their own systems of meaning.

These initial observations were extended into a more systematic review of data that could be interpreted as the expression of personal learning myths running counter to the intentional change goals promoted through our interventions. In particular, we analysed the students’ written reflections on the course and on their study progress in relation to the courses from the academic years of 2009, 2010 and 2011. An initial qualitative content analysis [7] was conducted and complemented with the facilitator’s observations of students’ reactions, thoughts and complaints gathered during face-to-face meetings. The purpose of the content analysis was to detect students’ challenges; problems and contradictions and map a range of personal learning myths. The analysis was also looking for any indication that the students claimed to have changed their personal learning myths by the end of the course.

### **3 Traces of Personal Learning Myths: Examples from Our Data Analysis**

Being exposed to a rather different way of going about learning in a formal higher education setting immediately triggered some of the participants’ resistance and protest. These adult learners had largely arrived at convictions about their own learning, their myths of themselves as learners, and the formal educational system altogether. For instance, one of the students shared her experiences: *“When I went to the first face-to-face meeting I was first pleasantly surprised about the unusual way of going about learning. In the next moment I was shocked, when I heard that there are no traditional lectures waiting for us, we have to think ourselves what we want to study and how; we are going to use weblogs. How is it possible, no lectures? How come all of the sudden I have to write down my learning objectives? Presenting my homeworks on the weblog? Where am I now...?”*

Our data analysis showed that one major issue for a number of students was the level of “openness” that was promoted within the re-designed course. Presenting course-related tasks and reflections publicly, being open for critical and constructive comments from peers and wider audience was met with surprise and resistance. Being asked to document and expose in public what had been so far a predominantly private activity challenged many students’ personal learning myths. The following statements illustrate it rather well: *“In the beginning it was quite strange to share my thoughts with the whole world through my weblog, it was so unusual and produced resistance”* and the other one claimed: *“Blogging and me...totally opposite words. We’ll see later whether I’ll be addicted to blogging after this course or I’ll turn back to my*

*aforementioned statement*". Statements like *"I really had to work hard on myself before publishing my first homework on my weblog. I have never use it and I have some prejudices about that"* have been rather typical throughout the 5 years of intervention work carried out at TLU. Although being skeptical of sharing one's thoughts in public, students tended to enjoy reading, for example, weblog posts of their peers. One of the students admitted: *"It is exciting to read peer students opinions and be part of the other person's wisdom"*.

Research has suggested there is a difference in how openness and public weblog authoring should be interpreted in education [1]. Using weblogs in education should be understood as generating the space for a conversation to emerge [1] and a support for the construction of a community. However, this requires a give-and-take approach, adopting the idea of sharing, active engagement, and participation, instead of merely belonging. For instance, one of the students admitted: *"I didn't become a commentator. I read and explored what the others were doing, but I was too shy to comment on others' work myself"*. This leads to the next related issue, which triggered students' resistance. The notion of getting feedback from others besides the teacher or facilitator is rather contradictory to many students' ideas of learning and turned out to be challenging to accept. One student claimed: *"The thought that everybody can read my work, even comment on it and cited it, it requires a lot of courage to publish"* and another added: *"I also have to mention how HORRIBLE was to read comments, especially if the comment consisted of a poisonous remark. I guess it is a matter of one's feelings and obviously not discussed with oneself, because not everything shouldn't be taken so seriously"*. Realizing that this approach not only allows learning from each other but also learning *with* others [1] takes time. Obviously the myth that a lot of knowledge exists in a rather fixed form and needs to be provided by a teacher is still a rather dominating conception among students.

Taking control and responsibility (setting objectives; finding the right strategies and resources; and defining the desired outcome) is not a common occurrence within a traditional way of learning in formal educational settings. This is expressed in statements of the following kind: *"I have never created something like this [learning contract] for myself or thought about my learning objectives"*. Such statements demonstrate what students tend to perceive as the typical roles and responsibilities of teachers and students alike.

In addition, the students also expressed their resistance in relation to technology and the exploration of digital instrumentation options for their purposes. One of the students shared her preferences: *"I would rather like an environment like Moodle or Blackboard, where everything is in one place and I don't have to learn and fiddle with different tools"* and the other one added: *"Jumping into an unknown situation, the speed, new information and tools, made me feel I am drowning, chronic lack of time, feeling stupid...I could continue with this list endlessly. I am never able to learn how to use these tools, what for? This is too much for me"*.

Although, some of the students had initial difficulties to get started within an overall system of considerably increased personal degrees of freedom and responsibility, they regularly admitted at the end of the course that their learning myths did not remain entirely stable throughout the overall educational episode. For instance, one of them said: *"I feel a bit better and more relaxed now. This kind of learning can be quite nice. Blogging is difficult, but possible to overcome,*

*commenting is even more difficult, but I am developing. The next step is to overcome of myself and swim on the surface. I have to admit it is a very unusual situation".* The aforementioned statement can also be interpreted as the student's understanding that learning has changed and requires different ways of thinking, new attitudes and skills, yet also constant reflection on one's activities and progress. This is clearly stated by one of the students from the 2011 course, too: *"This course turned out to be a totally new experience - a weblog-based learning environment. It took me almost two months to get used to this. I still have to practice to be faster in reflecting, reading and commenting peer-students Weblogs. My understanding of learning has definitely changed - a web-based learning, working together on assignments..."*

Throughout our intervention studies we were able to collect recurrent empirical indication that personal learning myths played a key role for the individual reception of structural and procedural changes to existing teaching and studying practices among our student body. While we are currently in the process of refining our categorisation of seemingly disabling or limiting personal learning myths (as they were recorded through our data gathering efforts), we can already share that there is some indication that certain personal learning myths seem to hold some diagnostic, or even projective value, in relation to potentially problematic trajectories of adaptation (or rather objection, rejection, and resistance) in the context of decisively open and networked forms of learning practice in higher education. This preliminary insight, however, requires further analysis and more thorough empirical validation.

#### **4 Discussion and Concluding Remarks**

While we certainly cannot get into a more comprehensive exposition and discussion of our qualitative data analysis in this short paper format, we would like to argue that systemic intervention into current teaching and studying practices with the purpose to establish more open and networked learning formats can generally benefit from the exploration of students' personal learning myths and their potentially disabling influence. Students who are unable to revise their personal myths run the risk of remaining victims of their own, strongly rooted constructions [2]. This often results in low levels of motivation, performance, and commitment, if not an overall drop out from their educational endeavor [1]. Understanding their personal obstacles and beliefs, educators and teachers can better support students to overcome their difficulties while they are getting gradually immersed into a new culture of learning. Many students need to be supported while they are undergoing (an often underestimated) process of personal transformation in which they need to adapt to the practices and conventions of open and networked learning, re-build their learning myths accordingly, and become integrated into the new culture. Although, personal myths do not tend to be changed overnight, they can be purposefully and self-critically brought into awareness [2] by consciously and systematically exploring and analyzing them. Our preliminary analysis showed that learners being imprisoned by their rather rigid personal learning myths tend to "assimilate" new practices and technologies during the early stages of adoption and attempt to replicate existing practices and trusted patterns of action. Even, if students embrace new practices by the end of a course, it is often not enough to achieve a sustainable and lasting effect

on students. The new practices need to continue in the context of other course environments or educational episodes to encourage students to refine, elaborate, deconstruct and re-build personal learning myths that can be actually experienced as enabling within an increasingly networked society.

The intervention work at Tallinn University of the last 5 years has made some progress in this regard. Some of the open and networked learning practices that were established and refined within the context of our test-bed course have been expanded into other parts of the various Master curricula that are administered by the Institute of Informatics. Some of our intervention instruments (such as the personal learning contract procedure and the systematic use of individual weblog authoring) have proved to be considerably effective in eliciting qualitative material that expresses disabling personal learning myths held by our students. However, we feel that our educational intervention work could benefit from further research into the range and specific quality of personal learning myths that manifest themselves in the context of open and networked learning practices. We are thus planning to extend our data gathering with explorative interviews that are carried out at various points in time while students are attending our test-bed courses. Furthermore, we are interested in the longitudinal oriented mapping of individual trajectories of development when students are actually exposed to a whole series of educational episodes that embrace open and networked formats of learning. Fundamentally, we believe that the systematic exploration and integration of the concept of personal learning myths should enable us to develop more effective intervention instruments and strategies over time.

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