Inverted Classroom Model as a chance to enhance didactics and computer literacy

Possibilities and limitations in initiating a professionalization process in an Induction Phase

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Abstract

In the last decades the focus of teacher education in Austria was directed to Bachelor studies. After graduating the teachers were simply assigned to schools where they made their first teaching experiences. However, the career entry seems to be a very challenging and formative time for young teachers. Some may perceive this time as labour-intensive, others as overstrained. It is criticized that they learn rather accidentally and often use methods they learned from their own teachers, or simply are left alone. To support these teachers in best ways, some support measures were developed at the University College of Teacher Education in Lower Austria that can be consumed by the beginning teachers. One of these support measures is the Inverted Classroom Model in which an introduction in organisational work and necessary digital tools are integrated.

Das Inverted Classroom Model als Chance, Didaktik und IT-Kenntnisse zu verbessern

Möglichkeiten und Grenzen bei der Initiierung des Professionalisierungsprozesses in der Berufseinstiegsphase

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Inverted Classroom Model	Inverted Classroom Model
carreer entry	Berufseinstieg
online conferences	E-Portfolio
e-portfolio	

1   The Inverted Classroom Model (ICM)

The classic form of teaching consists of phases guided by teachers at school and related exercises at home. At the concept of the Inverted Classroom Model, the teacher creates material for the learners who can receive them at home. At school or college the exercise phases take place. Because of the outsourcing of some selected teaching sequences, there are more time resources during lessons, for examples, for exercises and applications, in which the learner can be coached by the teacher (Tenneson & McGlasson, 2006).
A combination of the Inverted Classroom model with the possibilities of digital media makes it possible to provide students with video clips, podcasts, and the like. The process offers students the opportunity to receive content in their own way and at their own pace. Videos can be paused or rewound and played back (Handke, 2014, p. 17). If there are any questions or problems with understanding, students can address teachers directly during practice sessions or via the Internet.

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Teachers are responsible for selecting, producing and providing the appropriate materials, which are received by students outside traditional classroom hours. In the face-to-face phase, questions that have arisen in preparation can be dealt with by teachers. However, in the face-to-face phase, no new material should be given out. Instead, students should practice and discuss the material prepared in advance as independently as possible. Teachers thereby act as facilitators or moderators (Scheg, 2015, p. 21).

On the one hand, when learning sequences are provided over a longer period of time, students have the possibility of repeated access to the media. On the other hand, videos can be used for purposes of revision and consolidation before exams.

When using the Inverted Classroom method, there are some methodological aspects which must be observed. To prevent learners consuming the upstream content aimlessly, accompanying tasks should be provided. In the simplest case, this may be the consideration of certain aspects or key questions when processing the content. There is a danger that students will not engage with the content if the same content from the upstream phase is presented again during the face-to-face phase. An exception to this is the tackling of questions arising from specific problems with the content.

2   Implementation of the Inverted Classroom Model (ICM) at the start of your career

At University College of Teacher Education in Lower Austria a system was developed to accompany those teachers in this Induction Phase of two years. A course was created in which reflection of teacher activities is a central element (Roters, 2011). BEKOs (coordinators for Induction Phase) were educated to host reflective meetings for young teachers and mentors are educated in Master studies (Pind-Roßnagl, 2011) to force the process of self-reflection. The beginning teachers collect their written reflections in e-portfolios to document their learning process in Induction Phase.

The general aim is to support those teachers, to challenge, but not to overtax them, while they are busy with preparing lessons, correcting notebooks and doing administrative work. The content really has to satisfy the needs of beginning teachers and the technical solution has to be as easy as possible. This training course is organized in a Blended Learning setting, like many other courses at PH NÖ (Brandhofer, 2012). The Blended Learning is realized with the e-portfolio system for post gradual courses in teacher education (Groißböck, 2013) and the Inverted Classroom Model (Handke & Sperl, 2012, Meyer, 2015). Content is shown in videos (Handke, 2014, p. 179) and learning is managed with Mahara, which is also the tool for generating personal portfolios for learning development. During this Inverted Classroom the students can post questions in a forum. After finishing the Inverted Classrooms, the young teachers are invited to an online support meeting to ask further questions about the content or to discuss individual problems. This system enables that those beginning teachers can manage by themselves when and where they like to work.

The project concept is based on the idea that those entering the teaching profession should be supported as much as possible during their first months of teaching, but that demands on their time should be kept to a minimum. Another efficiency aspect taken into account in the design is that new teachers should be required to use as few tools as possible during training courses at the beginning of their career, as the use of each new tool demands a certain familiarisation time. With this motivation, and also due to the fact that a high percentage of students are already familiar with the software from their Bachelor degree studies, the concept makes use of Mahara e-portfolio software.

Mahara makes it possible to share media, such as images, audio files, videos or any kind of document, in a straightforward manner in the form of a course portfolio, with explanations or written instructions. So in this project, e-portfolio views can be created on topics relevant to career entry, offering video tutorials and other supporting materials in digital form, which is referred to and blended service learning in combination with further support (Meyer, 2015). These videos are arranged in order, from basic to advanced. Students are therefore encouraged to proceed by stages and to watch these video tutorials sequentially, and to read the tips, hints and instructions sequentially. Thus, a digital material pool is created (Handke, 2014, p. 86ff), which teachers can use individually and tailor to their own needs, regardless of time and location. Since students are sometimes at very different levels technically, Internet meetings with experts are offered in addition to the e-portfolio views. During virtual meetings, questions can be asked and answered directly via chat or video conference (Brandhofer, 2012, p. 359). If there are still doubts, support is offered via email, and in the most intense cases, via telephone or face-to-face meeting at one of the locations in Baden or Melk. Students can also

help each other, as they are able to contact each other via Mahara, either through member administration or through a study group created in the forum.

In the first year of service i.e. the year of career entry, two courses are offered using the Inverted Classroom model. Each course covers a whole month and is part of the course "*Design and master your career entry professionally*", which is awarded 10 ECTS points (University College of Teacher Education in Lower Austria, 2014). Topics are chosen so that courses are held exactly at the time when they are relevant to the participants.

3 Introducing specific topics

Topics are chosen after reflection on exactly what input students may need at what time. Thus, they can immediately use theoretical input for their own purposes.

Courses deal with increasing the use of teacher training college learning platforms, applications to reclaim travel expenses, creating e-portfolios, and the use of digital tools and learning platforms. Each course or subject is accompanied by a web conference, in order to eliminate possible ambiguities and provide the best support. A forum is also hosted during this time. At the same time, content should be used to further strengthen the principle of learning in the digital age (Brandhofer, 2015, p. 51).

4 Evaluation

In this and future courses, evaluations are carried out which are designed to aid the continuous development of the model described here.

In a short evaluation after the course, the 34 participants of the "*Design and master your career entry professionally*" course were surveyed. 41% of them returned the survey. 13 out of 14 young teachers rated the Inverted Classrooms on teacher training college online material and applications to reclaim travel expenses as good learning opportunities. A similar picture emerged for the Inverted Classroom on Mahara e-portfolio software. In this case, 10 out of 14 people were satisfied with the course. All participants found the creation of e-portfolios easy, and 13 out of 14 people found completing the views easy. For both parts, 13 people thought that the use of videos greatly facilitated learning.

Plans are currently in the pipeline to use the Inverted Classroom model or a similar model in the Master's programmes to introduce the subjects of education management and mentoring. This may also be the case with the introduction of new curricula in teacher training colleges, as models with fewer face-to-face phases and more online working hours are increasingly being used. It is therefore foreseeable that this type of learning will be used increasingly in the future (Tucker 2012).

5 Outlook

This project for Induction Phase at University College of Teacher Education in Lower Austria is just the beginning of many further activities with the Inverted Classroom Model for students of Bachelor and Master Studies. After designing and going through those Inverted Classrooms a first time, students and teachers are asked for suggestions to improve those courses.

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