Research Circulation in Teacher Education

Template for Local Action Plans (LAPs) of the University of Education Weingarten (PHW)

Introduction

The innovative research strategies for their teacher training at the University of Teacher Education is primarily linked to the project "Students make school (SMS) - Schooladoption". Within the framework of this project, the project goals are to be developed and achieved. The outline of the following will first present the results of the mapping workshop as a starting point for the connection to the SMS project. The SMS project will be briefly presented and the integrated action plan.

In the following, the integration of the research strategy of the project "Students make school! (SMS) project into the knowledge management of the University of Education Weingarten (PHW) will be explained.

1. **deepening the theory-practice relationship (related to the structure and development plan)**

The University of Teacher Education Weingarten has set itself the goal of realising the theory-practice relationship in the form of intensive practical relevance. In particular, the university practice phases are to be included in the structural and development plan of 2017-2021 (PHWG 2017, p. 4) "In the next five years, the connection between theory and practice is to be further developed in an exemplary manner. To this end, cooperation with selected schools is to be expanded, with which the theory-practice relationship can be lived out in relation to innovative projects. Sustainable cooperations will be carried out for the extracurricular courses of study. In addition, the use of new media in linking theory and practice is to be further developed." (ibid.) In addition, research-based studies are to be expanded for students.

2. **results of the mapping workshops as a starting point**

From the mapping workshops with the three actors are important statements for the steering and optimisation of institutional knowledge management. The two central results serve as the basis for the reorientation of the selected project. Within this framework, the project forms the basis for knowledge transfer between school and university. More

precisely, scientific knowledge is to circulate on two levels between school and university. The following results from the mapping workshop are the starting point:

(1) "The most important result highlighted by all the groups was the representation of scientific knowledge by persons who are usually institutionally located. On model, arrows represented the persons representing the scientific transfer. Students see the scientific exchange between university and school as the most important. All other research interaction contexts play a secondary role." (evaluation-paper PHW 2020)

On the basis of the project, the institutionally located scientific transfer should be made visible beyond the institutions. Furthermore, all those involved in the research process should be treated equally.

(2) "Students (exclusively) attribute the research of scientific knowledge and technologies to the universities. From the university, the transfer aims in the direction of the school. A re-transfer of, among other things, practical knowledge back to the university is conceived as a more complex exchange process (theory-practice linkage)" (evaluation-paper PHW 2020).

The School Adoptation Project aims to establish a link between theory and practice. Due to the statements of all groups, this must be visible for all in the knowledge transfer. Another requirement is that the project extends beyond the micro level.

The knowledge transfer should take place on two levels according to the actors and steakholders involved:

- On the one hand, research should be made possible in the project and knowledge should be transferred from the university to the school and vice versa.

- Beyond the micro level, all those involved should be visible and involved in the transfer of knowledge.

3. Linking local action plan to PHW structure and development plan

a. Goal perspective and orientation of PHW in the relationship between theory and practice

"The PHW is known for its intensive practical relevance. In the next five years, the connection between theory and practice is to be further developed in an exemplary manner. To this end, cooperation with selected schools is to be expanded, with which the theory-practice relationship can be lived out in relation to innovative projects. Sustainable cooperations will be carried out for the extracurricular courses of study. In addition, the use of new media in linking theory and practice is to be further developed." In addition, research-based studies are to be expanded". (internal research strategy paper of the PHW)

On the basis of the RECITE project, the primary aim is to establish a link between research. The research, which is oriented towards school practice and linked to university-based teacher education via the three internships. In a first step, the university will take over the

mentor training of the training advisors. In a second step, the SMS project is to deepen the transfer of knowledge. The measure is coordinated with the help of the action plan and the measures developed with it on the basis of the mapping workshop.

The University of Education Weingarten has set itself the goal of realising the theory-practice relationship in the form of intensive practical relevance. In particular, the university practice phases are to follow the structure and development plan of 2017-2021 (PHW 2017, p. 4).

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In addition, the research-based learning of students is to be expanded.

With our local action plan in the Recite project, the elaborated results from the mapping workshop are to be linked to the university perspective on theory-practice. The linkage of the results is based on the institutional theory-practice linkage. The cooperation between school and university is to be optimised by Recite in terms of research and knowledge transfer.

4. linking the local action plan to the PHW research strategy

a. The innovative strategy of knowledge transfer in the SMS project

The innovative research strategies for their teacher training at the University of Teacher Education is primarily linked to the project "Students make school (SMS) - Schooladoption". Within the framework of this project, the project goals are to be developed and achieved. The main goal of the project is to optimally accompany students in their internship, but beyond that, it is to understand all project partners as equal partners and to include them in the research process. On the basis of this, a more positive and focused research ethos and culture should be created in the institutions. Thus, the main goal of the project should be achieved as an ultimate effect, namely to understand all participants as learners. They should be optimally involved in the research transfer. The optimisation of the transfer should have a positive effect on the learners in school and university. The teaching and learning, communication and exchange processes are to be improved by the local action plan in all institutions involved (educational and administrative institutions). The action plan is planned for a two-year period and builds on the results of the Mapping Exercise. The development of the local action plan follows the knowledge transfer strategy of the University. The objectives are linked to our structure and development plan and the research strategies. These can be ideally linked to the strategies of the Recite Erasmus+ project. The connection to the two university strategy papers will be briefly presented and the connection shown.

b. short description of the project "Students make school!" (Schooladoption) as Implementation of the "Student make school!" project at the PHW

At the PHW, the SMS-Project (Schooladoption) is taking place as part of the integrated semester practicum (ISP) implemented as part of the bachelor's degree in primary school teacher training. The key aspect is the "adoption days", during which student teachers take on all the tasks of the teaching staff for a week. This thus frees up the teachers for external advanced training that takes place in parallel.

As part of the ISP, the twelve student teachers spend a total of 14 weeks in the project school. Before the student teachers take over their classes, they go through an intensive familiarisation phase of approximately 9 to 11 weeks, which also leads to the student teachers being socially integrated amongst the staff. During this time frame, student teachers (12) are trained on the part of the school by the mentors (10), training advisors (4) and school management (2). As a rule, the ISP overlaps with the university semester, so that student teachers are at school for four days a week, and at the university on one day. On that day, the student teachers attend accompanying university seminars. On the part of the university, the student teachers are also supported in the areas of subject-related didactics, technical disciplines and educational science, with at least two guiding class visits per subject. By agreement with the office for practical in-school placements, one of the lesson visits can be replaced by the video recording of a lesson. After the school adoption week, a reflection meeting takes place. All steakholders take part in this meeting, i.e. the rector of the PHW and other professors from the department, the head of the practical office, the state education authority with a school councilor, and those responsible from the regional council as the lowest school supervisory authority.

c. The implementation of the optimization of the knowledge transfer process in the Action plan of the SMS project

To optimize the knowledge transfer process, the procedure of the SMS project was revised accordingly. Particular focus is placed on steakeholder involvement and knowledge transfer via an implemented research process. The action plan is initially presented as an overview table (a). The most important individual steps (b) are presented in detail.

a. Action plan as overview

	2020/2021						
action plan (Milestones)	January-March	April-June	July-September	October-December	January-March	April-June	July-September
Problem analysis of university practical phases	M1						
Cooperation/ integration of SL, StuSt u LL		Joint conference of all		M2			

		school teachers					
Cooperative conception of the media-supported consulting and reflection concept			M3				
Durchführung eines Lernkonzepts				M4/5			
Preparation of empirical data					M6 Preparation of Data		
Congress Contributions/ Publications (AP3)						M7 - Präsentation Conference	M7 – internal and external lecture in the Forum Regionality

Action plan (with Milestones) and work products

action plan (with Milestones)	**Work products**
1	Preparation of a problem analysis of university practical phases (in the E2Bs/ project)
2	Cooperative development with didactic training concept for an innovative practice concept with school and university based mentors (use of videography)
3	Media-supported consulting and reflection concept for knowledge transfer
4	Data collection instruments for evaluation & accompanying research
5	Completion Implementation of the teaching concept of data collection
6	Preparation of qualitative data and evaluation
7	Optimisation of internship formats through internal dissemination of results in knowledge transfer

b. target perspective for the SMS project in Recite:

The goal perspective after project completion is that a sustainable change in the research culture and the theory-practice link in the context of higher education practice phases can be empirically proven in all steakholder and partner institutions. In addition to the students, the teachers of the project school benefit from the school adoption, with all the resulting advantages for the wider environment such as parents or the community. The most important steps in the action plan are the following sub-steps:

Development of a didactic training concept

In a first step, a selected video from the university is used to familiarise the student teachers with the video analysis process, make them aware of the distinction between description and evaluation, and train them in identifying possible key moments (Steffensky & Kleinknecht, 2016). The student teachers then work on their own videos from the adoption week. The videos are compiled as empirical data using portable video glasses (glasses with audio and video recording) and GoPro cameras (action cameras). The teaching units videotaped during the adoption week were created from two perspectives: the first video perspective shows the vantage point of the teaching student and the second video perspective shows that of the observing student. In the case of the PHSG, the second perspective was replaced by a fixed camera installed in the room. A self-perspective was created by the person teaching, and a third-party perspective was videotaped by the observing person or a permanently installed static camera in the room. The added value of the two-fold perspectives is that this allows one the option of creating a retrospective description that alternates between the perspectives of the different actors.

The guidance concept was implemented as part of the adoption week after the videography and initiation of the survey. It is based on the theoretical observations and follows four phases: (1) professional biography/professional role identity, (2) training and awareness-raising phase, (3) oral reflection based on dialogic peer-consulting and (4) written reflection.

(1) Professional biography and professional role identity

During the first phase, participants confront their own role as a teacher and their individual understanding of the professionalisation of primary level teachers. Statements from three generations of teachers are presented to the student teachers for further consolidation, and the problems they throw up are discussed against the background of the current challenges. So as to provide a foundational text, questions reflecting on professionalism and identity are dealt with and the question of one's own goals and ideas are addressed. The approach to one's individual ideas and expectations when it comes to educational teaching and learning as well as one's own role identity is dealt with by means of four class- and student-specific case studies. The aim is to raise awareness of one's own role as a primary school teacher and actions as a teacher in everyday school life. In addition, the students were given the specific assignment of considering how they see themselves as prospective teachers during the practical work placement and what teacher they would like to be after completing their training.

(2) Training and awareness phase:

According to the findings of Steffensky and Kleinknecht (2016), video work is particularly effective when one first works with third-party videos. This enables the analytical skills to be trained with a corresponding "personal and emotional distance". This is why the video situations from previous school adoptions and those of the PHW that were relevant for the learning were re-appraised during a first stage, and the student teachers inducted using descriptions of scenes. This is followed by a video analysis based on the EDAMA model (Aeppli & Lötscher, 2016), which is used to discuss and reflect in detail on the descriptions of the lessons.

(3) Oral reflection

The competence model according to Blömeke, Gustafsson and Shavelson (2015) states that every teacher acts on the basis of cognitive and affective predispositions. These influence their perception, interpretation and decision-making in a specific situation, and also control their action and performance. One's individual performance leads to observable behaviour in a teaching and learning situation. This reveals an observable action or behaviour that is part of a complex structure in the classroom. This means that teacher's actions meet with the actions or reactions of individual students, a group or an entire class. This in turn influences the actions of the students, which are interdependent with their cognitive and motivational-affective processes (Schweer, 2017).

Students should identify these actor-specific consequences of interaction during this phase of the training concept in the situations they themselves experience and which challenge them during their lessons, and should orally reflect on these as part of peer tutoring. This deliberately places the focus on the one hand on existing competencies, and, on the other hand, on the emotions experienced.

The oral analysis should be based on the EDAMA model by Aeppli & Lötscher (2016). It is divided into five successive phases: (1) experiencing, (2) presenting, (3) analysing, and then (4) developing and planning, and (5) applying alternative courses of action. The individual phases are to be worked through together with the student teachers during the guidance process. These were adopted to our project-specific conditions as follows:

(1) **Experiencing:** Following the lessons the student teachers gave themselves, they were asked to record their emotions in writing or via an audio file. In doing so, they were supposed to name, ad hoc, one to three key moments during the course of their lessons.

(2) **Presenting:** They then described the teaching situations with the selected key moments, if possible based on the teaching videos. In addition to the description of

the interactions specific to the scenario, the student teachers were explicitly asked to express their emotions. To achieve this, they were asked how they experienced the situations afterwards. The teaching process itself and the context variables were to be described as precisely as possible.

(3) **Analysing:** In the next stage, the student teachers were asked to take a look at the situation from different perspectives. This multi-perspective approach was based on the OU model and the theoretical knowledge available to them. The starting point of the analysis using the OU model was always observation of the lessons. After that, the point of view of the pupils was taken into account and, only at the end, that of the teacher.

The aim of the phase is to promote multi-perspective thinking in relation to complex teaching sequences. The problems of subjective theories were to be discussed in order to ideally activate multi-perspective problem-solving strategies in relation to given situations. In the future, the student teachers should be able to more easily recognise interactions as they occur. One's thinking about the links between different actors and perspectives in a situation should first be broken down. This creates an understanding for the fact that cause and effect as well as action and success are interdependent (Dewey, 1993). Student teachers should enter into a dialogical learning process with the pupils, since the teacher-pupil interactions can be based on the principle of dialogical didactics (Ruf & Gallin, 2008).

(4) **Developing alternative courses of action:** Following the previous stages, the existing theoretical knowledge is translated into possible alternative courses of action, which are formulated and discussed.

(5) **Application:** The alternative courses of action that were formulated should be tried out as quickly as possible in the subsequent lessons. The reflection process, in turn, is then based on this.

During the first days of the adoption, the reflection process is guided by accompanying university support from the PHW. The student teachers are increasingly encouraged to independently analyse at least one challenging situation per day in twos or threes according to the specified procedure. As many options as possible for courses of action should be derived from this. The conversations were recorded using audio equipment so that conclusions about the quality of the conversations could later be drawn. The audio recordings and a survey of the student teachers form the basis for an institution-specific self- and external evaluation.

(6) Written reflection

The final phase includes a written analysis of one's own video sequence based on the EDAMA model, similar to the oral reflection after the school adoption. The situation is first presented, and the emotions and the key moment are described. The situation is then analysed at the teaching level, then at the pupil level, and finally at the teacher level, and interactions are shown. Afterwards, if necessary, tried and tested alternative courses of action are to be formulated and reflected upon again, and additional new alternative

courses of action are to be described if need be. The aim of this written reflection is to analyse a situation in a differentiated manner by explicitly drawing on theoretical knowledge and with regard to possible interactions between the individual fields in the OU model, and to demonstrate this with arguments. In addition, the student teachers are asked at this point to refer back to the first phase of their own role identity as a teacher.

Summery and reflexion

During the first part of the project as part of the action plan, the student teachers are set various requirements, which they must satisfy in an individual or peer-based reflection and decision-making process before the process of knowledge transfer. As part of the adoption days, they have to examine their own lessons for individual uncertainties in advance of the video-based guidance. After the videography, the material collected must be viewed, and situations that bear relevance for the teaching must be identified retrospectively, and this discussed with the peers. Of central importance are the subject-specific competencies, which require one to assume a dual role as teacher and observer or require an in-depth examination of the analysis instruments. When developing the guidance concept, the project managers came up against the question of what challenges students perceive in their lessons altogether, and what relevant key moments they can identify in the videotaped lessons.

Literature:

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