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Developing Undergraduate Students' Teaching Competences

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Abstract:
Introduction: The goal of this paper is to show how the undergraduate students are able to differentiate among learning-centered, learner-centered, feedback-centered and community-centered knowledge acquisitions. We wanted them to recognize which method is used by the teacher and how each method influences the primary school pupils' knowledge acquisition.
Methods: We chose the video analyzing technique to make the students recognize different learning organizational methods.
Results: The results of the study suggest that the observation helped the undergraduate students understand the aims, tasks and techniques of teaching and organizing classroom work. They realized that this type of analysis helps them develop their own teaching strategies.
Discussion: Drawing on the results it is not possible to be a "good teacher" without obtaining and continuously maintaining a high level of professional knowledge, whose important element might be the Complex Instruction method and the recognition of the knowledge acquisition methods in the classroom.
Limitations: This study was limited to only undergraduate students who attended the study voluntarily. The sampling was confined to 46 participants.
Conclusion: The students are able to spot the teacher's activities that support pupils' learning. They recognized the positive impact of generating debate among the pupils on the development of their skills.

Key words: student, competences, complexity, instruction.

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Introduction

While it is important for higher education institutions to familiarize their students[1] with the way they teach, we find that the awareness of novice teachers is unsatisfactory. One of the reasons for this is that they were unable to acquire the appropriate level of practical knowledge alongside theoretical information during their studies.

There are several shortcomings in this regard in the Hungarian higher educational practice, which - for the sake of simplicity - can now be reasoned by the lack of funding. The universities do not have the possibility to fund their students' daily and weekly practical teaching experience beside the theoretical knowledge they gain from their first day of entering the higher educational system. We consider it as an essential condition of building teaching competences, that students are able to immediately experience the theoretical information in practice. The situation is also aggravated by the lack of training institutes that apply various types of methodologies to manage heterogeneous pupil environment in an excellent way. Even if there are such institutes, they are not close to the universities; it is difficult to access them on a daily basis. We also lack a mentoring system that could support the students' preparation to become teachers, both at the university and the training institute's level.

To mitigate the above mentioned - apparently unavoidable - gaps, we need to find the possibilities to develop teaching competencies by applying the educational institutions' already available tools. Our objective is to develop the students' teaching competencies through recognizing learner-centered, learning-centered, feedback-centered and community-centered knowledge acquisition methods. We start presenting our thoughts by reviewing the literature related to the subject. This will be followed by showing the results of the examination conducted among the students, and the opportunity of developing teaching competencies through the practical application of the theoretical knowledge.

1 The impact of the teacher's knowledge on the pupils' performance

Goldhaber and Brewer (2000) found that pupils' performance show a significant correlation with the teachers' readiness and competencies. Although the results may be linked to the students' successful knowledge acquisition, they do not give an accurate feedback to define the format- and content related elements of teacher training. Therefore, they believe that it is important to determine the purpose of the coaching; furthermore, what knowledge we want the pupils to acquire. It is getting more and more important how the knowledge transfer and acquisition takes place.

[1] Concepts: Student = an undergraduate person at university; Pupil = a primary school child

The teaching methods, techniques and their efficiency in the classroom are significantly impacted by the teacher's competence (see also Geršicová & Barnová, 2018). Perkes (1967) examined as early as 1960's, how the teachers' preparedness affects the successfulness of the pupils. He found that those teachers, who were able to improve their practical knowledge during their studies, applied various teaching techniques already at the beginning of their careers more often and more easily than those, who had less such opportunities in the educational institution. This latter group of teachers continued focusing on getting the pupils to memorize the material.

Wenglinsky's (2002) test results show that those schools performed better at the national competence testing (National Assessment of Educational Progress - NAEP), where teachers were prepared to work in a heterogeneous classroom and compile tasks that require multiple intelligence skills. According to him, the teachers who have acquired theoretical and practical knowledge during their teacher training will be the most successful in their work.

The research conducted by the U.S. National Research Council (2000) is crucial for our work, according to which the effective teacher is able to balance the pupils' abilities, interests, knowledge, skills and gives continuous feedback to them. The study differentiates among learner-centered, learning-centered, feedback-centered and community-centered knowledge acquisition.

Teachers who focus on learner-centered methods build on the students 'existing knowledge while looking for answers on how and why they are learning and taking into account students' abilities, knowledge and interests.

Learning-centered teachers focus on what they teach and why they teach. They consider it important to answer what knowledge they want to transfer, why this information is important, and how they can plan and execute knowledge transfer. They support students in presenting the problem at a high level and are encouraged to enrich their presentation with ideas.

The feedback-centered method focuses not only on feedback, but supports the children's development through analysis, emphasizing what efficient learning means. The teacher applies formative feedback rather than summative one, which helps the pupils to develop their multiple abilities.

The community-based learning is influenced and supported by the standards and patterns in the group, where students use each other as an information source. The teacher relies on the already existing knowledge of the group to a high extent, and considers the class, the school and the environment's effects on performance. It motivates pupils when they realize that they will need the knowledge they acquire, when this knowledge meets their interests; the task is challenging; they receive performance feedback and when they feel that they are members of an active learning community. The real challenge for the teachers is to find balance among the above knowledge acquisition methods to reach these goals.

Zumwalt (1989) believes that it is essential to clarify the entrant teachers' primary goal and their role in the knowledge transfer as a teacher. His ideas start from the finding that it is easier to determine what pupils need to know and what kind of performance they should demonstrate, than how these goals can be achieved. The teacher should be proficient in knowledge transfer, all tailored to the individual needs of the pupils. The daily work might appear ad-hoc in nature, instead of exact plans and conscious activities, where the teacher aims to extend the pupils' knowledge step by step. In accordance with the set objectives, the teacher must understand the knowledge acquisition methods and the tools chosen to assist teaching. The goal of the lesson should not be simply delivering the information stored in the book. The pupils should formulate their innovative thoughts and actively participate in the process of knowledge acquisition. Peterson and Clark (1978) raised their concerns of teachers sometimes paying more attention to teaching their lessons according to the pre-designed way, than the knowledge the pupils acquired on the lesson.

According Merseth and Koppich (2000), students need to improve their skills during the preparation for their seminars, that they can compile tasks that that meet the requirements of student development. They need to know what attracts the pupils in the task, but their attention also needs to be raised to what holds pupils back from active participation in it. They should keep in mind to what extent a task stimulates the pupils' thinking, what new teaching strategies promote successful knowledge acquisition, and what make the students rethink their teaching strategies.

The teacher has to think over the execution of the tasks during preparation, and assess the possible barriers and the required tools for the solution of the task. Only those tasks that build on the pupils' already existing competencies, experiences and knowledge should be selected. It is worthwhile to apply different teaching techniques to raise attention and motivate. Various tools should be used to enrich the lesson, considering the pupils' needs (Hammerness et al., 2002).

2 Research

Besides linking theoretical and practical experience, an important goal of teacher training is to prepare future teachers for consciously starting their teaching career and accommodating to changing educational needs and knowledge acquisition requirements. Accordingly, our research aims to investigate how the students' teaching competencies can be developed through applying the Complex Instruction method in practice. The method focuses on teaching heterogeneous pupil groups (K. Nagy, 2012, 2015).

Our goal was to teach students how to recognize and analyze different knowledge acquisition techniques and how to construct their lesson based on this knowledge. They learnt which methods make their work more successful and how to use these different methods. We looked for an answer to the question

whether these attitudes and processes have an impact on the pupils' knowledge acquisition.
We chose a video analyzing technique[2] to make the students recognize different learning organizational methods. The primary goal of the examination was to identify how the analysis of the video supports the understanding of organizing classroom work and developing the tasks.
The study was conducted in case of full-time students of the Eszterházy Károly University (Hungarian language and literature, English language, History).

Table 1

Number of students involved in video analysis

Institute	*Year*	*Students*	*Full-time students/n*
Eszterházy Károly University	2018	Full-time students	22
	2019		24
All			46

2.1 Recognizing the knowledge acquisition methods applied in the classroom
We wanted to teach the students how to build up their lessons and what techniques they should use to increase success during class-work, through recognizing and analyzing different knowledge acquisition methods. We were looking for an answer to the question whether the participants in the examination understand and are able to differentiate among the ways of acquiring knowledge. Examining this has become important for us because we assumed that those who consciously adapt the different knowledge acquisition methods will more possibly apply them during their pedagogical career.
Accordingly, we asked 46 students to differentiate between learning-centered, learner-centered, feedback-centered, and community-centered knowledge acquisition methods in their video analysis. They had to pay attention to which identifiable technique is used by the teacher during class-work. We also wanted to know how these methods influence the pupils' knowledge acquisition. The students' task was to make short notes and jot down short parts of the pupils' conversations. The essence of this task lied in giving us feedback about whether the students recognize and understand the different knowledge acquisition methods and the importance of applying them.

[2] The video was created by the Stanford University and dubbed by the civil organization Foundation for Human Rights and Educating Peace. The Hungarian recordings were made in the Hejőkeresztúr primary school which has been applying the Program for over ten years: 3rd grade mathematics class, 5th grade Hungarian literature class, 7th grade biology class.

After having watched the videos, the students had to discuss and analyze what they had seen. Based on a pre-specified criteria list (Appendix) we wanted to know if the observers understood how the teacher offered the new knowledge through the Complex Instruction method, and how well it was understood by the pupils. How well did the teacher catch the pupils' attention? How did she motivate their performance? To what extend did she rely on the pupils' already existing knowledge, experience and ideas? How did the teacher encourage cooperation among the pupils within the group and at the whole class level? How did she evaluate and analyze the pupils' answers and classroom work? The observers also had to answer how the teacher built up the lesson and how she organized the process of knowledge acquisition.
The purpose of this exercise was that the observation helped the students understand the goals, tasks and techniques of teaching and the organization of the classroom. We wanted to raise the students' awareness that the answers given to the observation criteria help them develop their own teaching strategies and learn how to teach. The significance of the task lies in the fact whether students recognize that the different knowledge acquisition techniques have a knowledge developing role and this way they would more likely apply them during teaching in the future.

2.1.1 Analysis of the results

- The students' typical responses to the question what learning-centered teaching methods were used by the teacher to increase the pupils' knowledge acquisition (Table 2).

Table 2

The students' typical responses to the question what learning-centered teaching methods were used by the teacher to increase the pupils' knowledge acquisition

The teacher delivers new knowledge.
The teacher discusses new knowledge with the pupils. She asks and waits for a response.
The teacher stimulates the pupils to search for multiple solutions.
The teacher generates a debate among the pupils through open-ended sentences.
The teacher analyzes the upcoming problem or new knowledge.
The teacher discusses the steps of solving the task with the pupils.
The teacher uses and provides tools and applications to the pupils in order to assist learning.
The pupils use tools.
The teacher performs experiments to help acquire theoretical knowledge.

Most of the students were able to recognize those teacher activities that increased the pupils' knowledge. Due to the preliminary delivered theoretical

knowledge, the students recognized the positive effect of the debate generated among the pupils on the development of communication skills. They agreed that the more the children discuss and debate about the curriculum, the more they learn. They also concluded that generating debate can be achieved through open-ended tasks which are typical of the Complex Instruction method.
They noticed that the teacher's proficiency in composing open-ended tasks contributes to the cooperation of the pupils within the heterogeneous group and acquiring knowledge. They understood that the teacher is responsible for being able to compose such tasks.

- The students' typical answers to the question of what learner-centered methods the teacher uses to increase the pupils' knowledge acquisition (Table 3).

Table 3

The students' typical answers to the question of what learner-centered methods the teacher uses to increase the pupils' knowledge acquisition

The teacher calls the pupils on their names.
The teacher raises the pupils' attention with a sort, interesting icebreaker in the beginning of the class.
The teacher distributes personal task to the pupils.
The teacher distributes differentiated tasks to the pupils.
The teacher praises the pupils.

The students had no difficulties in recognizing what learner-centered methods are used by the teacher; however, they chose some answers that are specific of the community-centered method. The reason for this might be that it was difficult to distinguish whether the teacher put an emphasis on the individual or the community; the knowledge of the individual or the cooperation within the group and its joint output. We were pleased that all students mentioned positive feedback and praising of the pupils, which, according to the method, is an activity that increases the status of the low-status children. If a pupil is able to catch up with the others, they will be pleased to work with him/her, they will communicate more intensively and get closer to mastering the required skills.

- The students' typical answers to what feedback-centered methods were used by the teacher in order to improve the pupils' knowledge acquisition (Table 4).

Table 4

The students' typical answers to what feedback-centered methods were used by the teacher in order to improve the pupils' knowledge acquisition

The teacher gives feedback to the pupils.
The teacher gives feedback to the groups.
The teacher praises the pupil.
The teacher praises the group.
The teacher praises the whole class.
The teacher gives analytical feedback to the individual performances.

The students noticed the teacher's evaluating activities towards the pupils' performance, however - either due to some deficiencies of the questionnaire or in the preparation work - they did not answer the why and the when out of the why-what-when-how questions. We expected that status treatment, an important element of the Complex Instruction method would be found among the answers, suggesting that it stimulates cooperation within the group and individual development. The answers did not refer to when i.e. at what stage of the lesson the teacher evaluates the pupils' performance either. It would have been desirable if the students had referred to the feedback during the class and at the end of the lesson, and also how the teacher evaluates the pupils' work, whether she positively reacts on the pupils' performance during class-work. We expected that if they see and understand the importance of praising to motivate students, they will most likely use it during their classes, which will facilitate knowledge acquisition.

It is however satisfactory that during the oral analysis of the questionnaire, the students knew that feedback is effective when it is tailor-made for the individuals. The answers mentioned the fact that the children's class performance needs to be related to their own average performance; hence the feedback has to be personal.

- The students' typical answers to what sort of community-centered techniques the teacher uses to improve the pupils' knowledge acquisition (Table 5).

Table 5

The students' typical answers to what sort of community-centered techniques the teacher uses to improve the pupils' knowledge acquisition

The teacher stimulates cooperation among the pupils through the tasks.
The pupils present the joint work of the group to the class.
The teacher repeats to the group that they can perform better together than individually.

The students assumed well that the teacher was able to encourage the pupils to cooperate both orally and in writing. While in writing she sent the message through the task, orally she often emphasized that the group had a greater chance to solve the task together than if the pupils had worked individually. The stimulating effect of the group tasks lies in the fact that none of the pupils (even the most talented one) is able to solve the problem individually. Successful completion of this task requires the participation of all members of the group. This teaches the group members to consider each other's opinion and take joint decisions in order to reach a quick and successful solution and become an active part of the outcome. Debate is an important part of the development of communication skill, it enforcements the principle that the more the pupils speak, the more they learn.

2.2 Assessment of the pupils' skills

The students were also asked to try to determine the pupils' skills needed for knowledge acquisition, based on their classroom performance. We wanted to know whether it was visible for them, how much the teachers contributed to strengthen the cooperation among the pupils by providing some of them with tasks that required more, and some that required less competencies. We looked for the answer whether they thought that the teachers sometimes allowed more space for the good performers to act during class, than to those with a weaker performance.

The students' responses revealed that based on the videos, they did not think that there were pupils who had all skills to solve the tasks. This suggests that during their pedagogic careers, they would strive to compile a lesson plan that allows all pupils to actively contribute the task, even if they have different skills and are talented at different fields. The students even realized that during the group-work, not all of the pupils had all required skills to solve the task successfully.

We asked the students whether they thought it was true that everyone was talented at something. Only 61% of them agreed with this claim which certainly does not mean that they considered every pupil having extraordinary skills. 39% believed that there were pupils who – regarding their skills – were not talented at anything. This made us conclude that the students thought that there were pupils who could not contribute to the successful solution of the task in any ways. It is an important feedback for this research that future teachers – even before having started their career – and already practicing teachers think, that they have to count with pupils that are not capable of solving the tasks at a satisfying level (Figure 1).

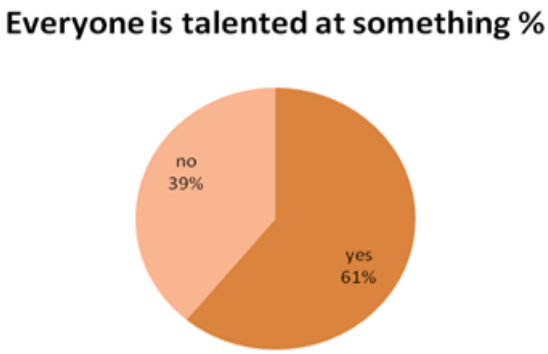

Figure 1. The students' response rate related to the claim "everyone is talented at something."

A low number (29%) of the students believed that some pupils had all intellectual skills to solve the task (Figure 2). This answer rate only lets us conclude at this stage that the students did not have excessive prejudices regarding the pupils' skills that would have influenced them while creating the lesson plan.

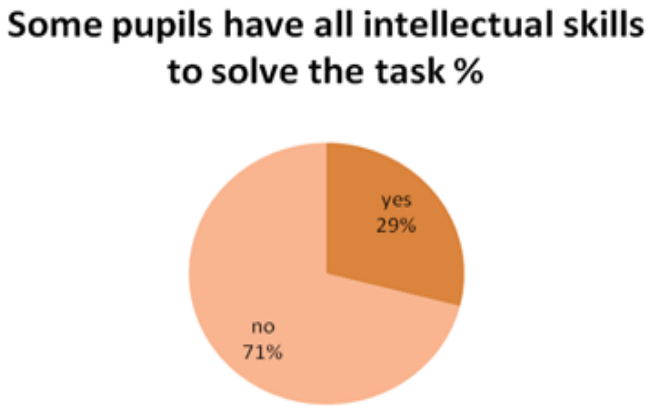

Figure 2. The students' response rate related to the claim "some pupils have all intellectual skills to solve the task."

The purpose of the above observation was to direct the students' attention towards the important principle that every pupil had a skill that he could use to successfully solve the group-task, and that should be considered by the teacher when building the group and compiling the group work.
From our research's perspective, the students noticed further important elements during the analysis of the lesson which will be summarized below.

2.3 Delivering new knowledge during class

After having learnt the Complex Instruction method during the seminar sessions, the students felt the cooperative techniques can be used most successfully when summarizing the curriculum; and the easiest way to organize these classes is to use this framework. However, while analyzing the video, it became clear that the method was just as well suitable for acquiring new knowledge, as reinforcing information or summarizing the material. Nevertheless, they saw it clearly, that the Complex Instruction method was not suitable for acquiring all types of materials. They mentioned an example from mathematics, where the teacher's help was needed to demonstrate how to measure angles. They had the same opinion about the subjects of multiplying or dividing a fraction by fraction, when it was new information for the children.

The students correctly noticed that the source of information was not the teacher, but the fellow pupils in case of this special cooperative method. Transferring knowledge can be interpreted in two ways. The under-performing pupils with weaker skills receive information and support from their more talented or more knowledgeable peers an activity is guided by certain rules. Anyone can ask for help, and the peers are required to provide help in a way that they do not solve the individual task of the person. The pupil in need of help must be guided towards the solution of the task. More knowledgeable pupils do not receive help from the group to expand their lexical knowledge; however, they often face the fact that their peers are located above them in terms of practical skills and technical knowledge. Since even the most talented pupils cannot solve the open-ended task compiled by the teacher based on the Complex Instruction method, they realize that they need their peers' support. In order to receive assistance, they must know who can help them in what, who is good at what.

2.4 Availability of new information

The students first met one of the characteristics of the Complex Instruction method, namely that when the pupils do not understand the group-task or differentiated personalized task, only the facilitator can ask for help from the teacher. His role is to convey the questions related to the open-ended group-task or any group-member's differentiated individual task to the teacher.

The students had difficulties in realizing the development possibility in this rule; that is that this pupil, while turning to the teacher with questions, can improve his thinking, focus and communication skills. The pupils' roles, including the facilitator's role rotates every lesson - including higher and lower performers –, which results in all pupils acquiring proficiency in formulating and articulating the problem, while he discusses the curriculum and acquires knowledge.

2.5 Motivating the pupils and keeping their attention

Teachers' most common complaint today is that children are undisciplined and they are not interested in learning. As an important aspect of the video analysis,

the students had to observe how the teacher achieves that the pupils are motivated and disciplined during the Complex Instruction class. The effect of the teacher's positive reinforcement is stronger than it is believed by the teachers. The children love to perform well and the meet teacher's request and expectations. However, to achieve it, the tasks need to be properly motivating and interesting to help students think, discuss and debate about them.

The students did not receive the lesson plan; hence they could not completely determine what group-task the pupils received. What they could see though was how the children behaved after having read the instructions. They saw that the short time given for the solution of the group-task forced them to work quickly, every pupil tried to take part in the solution. Based on what the students saw, it was concluded that the motivation to work is achieved through the tasks which need to be compiled in a way that they raise all pupils' attention and encourage them to contribute to the successful solution.

It was also found that the teacher's continuous, conscious and tendentious work results in the pupils' organized, sometimes automatic, practiced actions. The students felt that it took time and a lot of attention for the teacher to gradually evolve these behaviors. After having watched the video, their question was how they would acquire all this practice as future teachers during their training.

One of the key principles of the Complex Instruction method is the compilation of open-ended tasks that facilitate debate among the pupils. The teacher aims to generate debate, through the tasks. The pupils are encouraged to exchange ideas and start a discussion about the curriculum which results in reaching agreement in solving the tasks. The teacher has to be aware of open-ended tasks that offer multiple solutions and require complex skills; result in strengthening the interdependence among the pupils. This interdependence requires a lot of attention from the pupils in their cooperation and joint decisions. In a group where the group-members are dependent on each other, there is a more intense need for interaction and this interaction is even more required due to the complex and unfamiliar tasks. The purpose of the group-work is to maintain and strengthen the appropriate level of the interdependence. The more opportunities the pupils have to solve the group-tasks without the teacher's involvement, the easier it will be to cooperation, jointly think and develop communication skills.

During the analysis, the students entered the dilemma of what the teacher's correct reaction is, when she realizes that the pupils are in the wrong direction in the problem solving. There was a dispute among the students about whether the teacher should raise the pupils' attention that they are on the wrong way to solve the task. At the end of the discussion, the students concluded that it has an educating affect when the pupils face the fact that they did not think over the problem properly. It is useful when they realize that they did not use their existing knowledge, hence the failure of their solution is the consequence of not carefully planned group-work. So they considered the lack of the teacher's intervention as a positive act.

There were students, who considered the more violent pupils, the fuglemen within the pupil group, who endangered the successful resolution of the task with their incorrect ideas.
The students were able to articulate one of the important significances of catching attention, i.e. when a pupil does not join to the task from the beginning and it does not catch his attention, the teacher loses him for the rest of the lesson. An exciting conversation was started among them about what sort of task is able to get the brightest and the under-performing pupils to cooperate in a heterogeneous classroom.

2.6 Building on the pupils' already existing knowledge

The Complex Instruction method addresses heterogeneous pupil groups. Heterogeneity can be interpreted in many ways, and from these we were focusing on the diversity of the children's knowledge.
In a heterogeneous group - with regards to the pupils' knowledge –, the best performers work together with under-performers and children with weaker skills. The teacher has to compile tasks that are able to reach all children at all knowledge levels at the same time. In order to be able to achieve this, the teacher has to be aware of the pupils' status based on Bloom's taxonomy and Gardner's intelligence. She has to know at what knowledge level the students stand and she needs to know their field of interest, which is the basis of motivating and building on the pupils' already existing knowledge. She has to be aware which pupil is good at what, what they like, what they are interested in, which helps her compile the appropriate tasks. The levels of Bloom are built on top of each other, they are prerequisites for each other, and no step should be missed or skipped. The pupils' level of knowledge consists of these levels that follow each other, are built on each other and are organized in a hierarchical order, which has to be considered by the teacher when designing the tasks.
As the students had only superficial knowledge of Bloom's taxonomy and Gardner's intelligence theory, we found it important to demonstrate the integration matrix that links these two theories and how to apply this knowledge.
The measurements show that the developer teacher students were the most successful in the acquisition of applying the integration matrix in learning. This result is not surprising, since the primary objective of developing teachers is individual differentiation and personalized knowledge acquisition; hence they are required to compile the appropriate tasks that meet the pupils' level of knowledge and interest.[3] It also became clear that out of the elements of the

[3] A letter from a student:
Dear Teacher,
At the moment I don't teach, but I asked for permission to observe the developer teacher in a school 2 days per week. She handed over her teaching responsibilities in the 4th grade, so I had the chance to try our talent development and development itself as well. I

complex lesson, the developer teachers put a greater emphasis on personal differentiation than on group-work.

2.7 Feedback, recognition, praising

One of the characteristics of the Complex Instruction method is that it emphasizes the importance of positive feedback which encourages the pupils to go the extra mile and perform better. It was clear from the videos that the teacher had to take all opportunities to praise the pupils. The students saw that the teacher highlighted the work of the pupils who performed the roles (facilitator, timer etc.) well. They noticed that the teacher praised the individuals spectacularly while they were solving the task. These are indeed the characteristics of the Complex Instruction method. It was however not visible for the students that the teacher had prepared for this activity and she wrote notes even during the class in order to be able to praise the individuals in the end of the class, by this increasing their status.

Three of the four videos ended with evaluating the lessons. Watching the recordings provided the students with important information about how a lesson should be ended. It became obvious that positive feedback is an essential element of the method and that a joint praising to the whole group is not as effective as personalized recognition. The students appeared uncertain about how to find a balance between praising the talented, "good" pupils and the weaker ones who fall behind in learning. Their concerns were formulated in the fact that a talented, high performer pupil can easier and more often be praised than a lower performer. It has become clear to them that it requires great proficiency and competence to compile tasks which allows the teacher to give positive feedback, and this way address both the lower performers and the more talented pupils of the heterogeneous classroom.

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really liked what we learnt at your seminar and I thought I had to try them, too. I tried a few elements of the method in a development group of 7, in a Hungarian grammar class. I differentiated during the whole class; the children worked in groups and in pairs and then everyone got their individual task. The children loved it, everyone experienced success, they worked a lot and didn't even realize that it was the 5th lesson that day.

The developer teacher thanked me for the lesson and next day she called me that she had been thinking about it all night. She said that everyone worked very hard and how much the children could develop this way. She asked for further information and said that she became motivated again and thought that teaching would be the most beneficial and effective this way.

What makes me sad is that my own children don't have the chance to learn this way, they receive the stuffy, rigid frontal-teaching every day…

Conclusions

Knowing different methods of acquiring knowledge is essential for strengthening teacher competencies. Through the video analysis, our goal was to achieve that the students are able to differentiate among learning-centered, learner-centered, feedback-centered and community-centered knowledge acquisition. We wanted them to insightfully recognize which method is used by the teacher and how this method influences the pupils' knowledge acquisition. The importance of this task was that it gave us feedback whether the students recognize and understand various knowledge acquisition methods and the significance of their application.

The students understood how the teacher offered new knowledge through the application of the Complex Instruction method and how comprehensible this knowledge was for the pupils. They understood how the teacher caught the pupils' attention, how she motivated their performance and how she relied on the pupils' already existing knowledge and experience. They saw how the teacher stimulated cooperation within the group and in the whole class and how she evaluated and analyzed the pupils' classroom work.

The results of the study suggest that the observation helped the students understand the aims, tasks and techniques of teaching and organizing classroom work. They realized that this type of analysis helps them to develop their own teaching strategies and learning how to teach.

We conclude that the students were able to spot the teacher's activities that support the pupils' learning. They also recognized the positive impact of generating debate among the pupils on the development of their communication skills. They understood the teacher's responsibility of being competent at compiling the tasks. The students had no difficulty in recognizing the teacher-centered methods and the evaluating techniques regarding the pupils' performance. They understood that feedback is only motivating and effective in case it is personalized. They learnt that the teacher can stimulate cooperation both verbally and in writing.

They saw that group-work influenced the improvement of the pupils' performance. The students understood and were able to analyze the structure of the lesson and its rhythm. They saw that every lesson showed in the videos consisted of the same units, providing the flow of the lesson with a definite frame. We assumed and proved that through the analysis of the videos, the students in could distinguish among learner-centered, learning-centered, feedback-centered and community-centered knowledge acquisitions. We conclude that students understood that the balanced application of these methods has a positive impact on the pupils' knowledge acquisition.

During teacher training the students learn how teachers should teach. It is not possible to be a "good teacher" without obtaining and continuously maintaining a high level of professional knowledge, whose important element might be the

Complex Instruction method and the recognition of the knowledge acquisition methods in the classroom.

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Appendix

Questioner: *Observation criteria for a Complex Instruction lesson*

How does the teacher deliver the new knowledge? …… To what extent do you think the new knowledge is comprehensible for the pupils? …… How does the teacher raise the pupils' attention? …… To what extent does the new knowledge motivate the pupils? …… To what extent does the teacher rely on the pupils' already existing knowledge, experience and ideas? …… How does the teacher drive cooperation within the group and the whole class? …… How does the teacher evaluate and analyze the pupils' work? …… How does the teacher build up the lesson, how do they organize the flow of acquiring knowledge? ……