

HEADMASTERS' AND NON-HEADMASTERS' PEDAGOGICAL PROBLEMS AND THEIR PROBLEM-SOLVING

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Abstract. There have been several studies supporting the idea that there is a relation existing between the quality of human resources and the characteristics of the organization and leadership of a school, and these affect student-performance. This study has been carried out in the framework of ELTE Faculty of Education and Psychology Institute of Education using and further observing the results of a previous research about 'Learning Teachers' in 2017. The aim of this study was to explore teacher collaboration in learning and professional problem-solving, including the presence of reflective paradigm in the school by analyzing the ideas of leaders and non-leaders. The study has identified differences from the rest of the sample in problem-solving in the case of 'Learning Teachers'. Although teachers usually tend to evaluate their reflective competence high, further analysis of the smaller sample has shown the descriptive level of reflection. In the case of each sub-sample, most of the teachers choose informal/non-formal discussion, or turn to the leader of the school if they need help. Collaborative problem-solving does not seem to have a well-established tradition in schools, which might well be the reason why teachers try to solve their problems individually and do not consider an organizational solution.

Keywords: Learning Teacher, Problem-solving, Reflective paradigm in education, Spaces of learning from each other

1. Introduction

“As a leader, your role isn't to solve problems: it is to make sure, problems get solved.” (Scott Seroka)

According to the report based on the OECD Teaching and Learning International Survey (TALIS) teachers play a critical role in improving student learning outcomes (OECD, 2008). As for Hungary, it can be seen that many teachers are insecure in the efficiency of their competencies. And, as for school management/leading style we can say that headmasters have excessive amount of administrative tasks to do. Although they have an impact on their teachers and students through these responsibilities, there is little time and energy available for professional pedagogical tasks. Several research carried out earlier and later reinforce the notion that the quality of human resources and the characteristics of the school in terms of organisation and leadership are in relation with each other and influence students' learning. In our paper, we introduce the results of a 2017 follow-up research based on the results of a teacher research carried out between 2014 and 2016 by the Institute of Education of Eötvös Loránd University, Faculty of Education and Psychology, focusing on the so-called learning teachers. Our new research focus was the exploration of headmasters' and non-headmasters' beliefs in relation to institutional functioning. We were interested in the types of pedagogical problems the leaders face and the way they solve them.

2. Theory and Literature.

2.1. Organisational and management theory

Research concentrating on leadership in business organisations reinforces that the improvement of the workers' human relationships can be an important factor of production. It is also less and less doubtful that the efficiency of business organisations measurably depends on the quality of leadership,

including caring for human resources. This kind of thinking has reached public education as well. Educational research also supports that school functioning is similarly determined by the quality of its people's interactions, which can be understood in the context of organisational culture and personal network (Golnhofer, 2006 – quoted in Horváth, 2015. 24.). From the 2000s, many researchers investigated the role of reflection trending towards problem solving in the processes of organisational management, its relationship with organisational culture, cooperation characterizing the organisation, knowledge sharing and trust (Loughran, 2006; Marzano et al., 2012; Hargreaves & Fullan, 2012; Hilden & Tikkamäki, 2016).

Quinn et al. (1996) developed four models with the help of which the efficiency of organisations can be assessed in a complex way. (1) *Internal process model* emphasises stability and control, which is predominantly supported by well-organised information management and communication. Roles are well-defined, basic requirement towards individuals and subassemblies is accepting and keeping the rules. (2) *Rational goal model* sets efficiency in the centre and systematic planning and management are associated with it. Individual goals are led by organisational goals. Leadership is strong and determined, goals are clear, tasks are unambiguous for everyone. (3) *Human relations model* places a great deal of emphasis on internal relationships. Internal cohesion helps the development of human resources and efficiency. The model offers the possibility of individual development and peer relationships. The leader is a facilitator and a mentor in this model. Organises group work and deals with interpersonal conflicts. (4) The *open system model* emphasises flexibility more than the third one, and there is a greater emphasis on activity and proactive thinking. These factors help the acquisition of resources and external support, which goes together with responsibility at each individual. The leader is initiative, brave and creative.

2.2. Reflective paradigm in education

As for the definition of reflection we accept that it is the teacher's evaluation system, conceived by his or her personally designed cognitive strategy and practical knowledge together with the beliefs originating from his or her previous experiences, which plays a central role in the relationship of knowledge and action and in development. The evaluation system (including previous experiences, the teacher's personality, role expectations and knowledge) interprets and analyses theoretical knowledge and practical activities together; the result of which affects his or her further practice. The base of reflection is usually a problem situation. Reflection can be self-reflection, peer-reflection and can be regularly applied at an organisational level. Research results assign reflection a cognitive strategic importance in the teacher's learning (Wilson, 2008), in professional efficiency (Grimmett; MacKinnon; Erickson & Riecken, 1990) and in continuous professional development (Johnston & Badley, 1996). Problem-solving taking place in educational institutions along with the relationship of reflection and organisational functioning are fields taken under investigation by several researchers since the 2000s (Loughran, 2006, Marzano et al., 2012, Hargreaves & Fullan, 2012, Hilden & Tikkamäki, 2016).

2.3. Professional problems in education

The complexity of the process of problem-handling ranges from the simple, spontaneously solved problems to the convergent or divergent solution of the complex problem. The process of divergent problem-solving is typically divided into five steps: (1) the recognition and identification of the problem, (2) drawing up the alternative ways of reaching the required condition, (3) decision about which alternative is appropriate, (4) actions serving the attainment of the required condition, and (5) drawing the conclusions and moving on. In the case of divergent problem-solving, several options for solution are kept open, leaving space for accidental solutions in those cases when the goal value is not defined. Reflection can be present at certain points of these cycles or continuously. Problem-solving can be based on self-reflection and on peer-reflection or on the reflection of the community. This cyclicity, that is the interaction between the situation and the reflecting person, has an importance in the reflective problem-solving process.

3. Research design

The Organisation, Teacher and Teacher Education Research Group of the Institute of Education of Eötvös Loránd University, Faculty of Education and Psychology carried out a research between 2014 and 2016. Results were published in a volume (henceforward: Learning Teachers). In 2017, some members of this research group undertook the task to answer certain remaining questions.

4. Research goal and sample

We used two samples for the investigation carried out in 2017. (1) The Learning Teachers' sample (N=37) of the 2014-2016 ELTE-research, which was derived from (2) data collected with an online questionnaire by the Hungarian Institute for Educational Research and Development (HIERD) based on a research sample (N=8571) gained from a randomly stratified sample according to micro-region. In 2014 from this national database (henceforward: National Database) the Research Group chose 37 teachers, who – according to the answers gained from the online questionnaire – were characterized by openness to learning, knowledge sharing, development, innovation. The goal of the research was to explore the notion of learning from each other, cooperation of teachers, professional pedagogical problem-solving and, in an indirect way, the presence of reflective paradigm in the functioning of the organisation through the analysis of the headmasters' (henceforward: H) and non-headmasters' (henceforward: NH) opinion. Our goal was to investigate in what aspects do Learning Teachers' problem-solving differ from other elements of the source database and what organisational model typifies the school where those teachers work.

5. Research questions

- 1.) Do Learning Teachers' pedagogical problems and the ways of problem-solving resemble or differ from the Headmasters' and Non-Headmasters' opinion in the National Database?
- 2.) What are the similarities and differences in the National Database between the Learning Teachers' reflective behaviour and the Headmasters' and Non-Headmasters' opinion in connection with reflection and those elements of organisational functioning that support problem-solving (e.g. learning from each other, common problem-solving, self-reflection)?
- 3.) What organisational model is typical according to the sample of 37 teachers and what can be assumed based on the source database?

6. Research methodology

We collected narratives, data by interviewer administered questionnaires and made group interviews for investigating Learning Teachers. The questions related to the collective analysis of the efficiency of pedagogical work, to the support school leadership gives in this analysis and to the reflectivity accompanying regular professional meetings, pedagogical questions, problems and discussions. Furthermore, we asked for the written description of a noteworthy problem. We also asked about the depiction of the ideal school leader and about the general expectations towards him or her. We were also looking for these pieces of information in the National Database and used methods of descriptive and correspondence analysis; we presented $p < 0,005$ sig. results in our study (where it is not the case, we indicate it).

7. Results along research questions

7.1. First research question

- 1.) Do learning teachers' (N=37) pedagogical problems and problem-solving resemble/differ from that of the source database (N=8571)? (In this latter, splitting headmasters and non-headmasters)

Problem areas

Learning Teachers' problems in the decreasing order of those who indicated it: in relation to learning/teaching (N=19), education (N=12), professional functioning (N=10). As for reflection, there is more made on teaching (N=44) than on education (N=23). The so-called noteworthy problems are the following (in descending order): students' adaptability, learning/evaluation, student behaviour, relationship with parents, problems related to child protection, school functioning, development, learning. It also happened that problems overlapped (e.g. adaptability and child protection).

On the contrary, in the National Database the 40-50% of the respondents indicated that educational issues make problems for them, e.g.: teaching SEN students, managing aggression and conflicts, co-education of students with different social backgrounds. About 20-30% of the respondents (also) mentioned classroom related problems (Figure 1.). More respondents from the NH subgroup mentioned problems directly related to practice (e.g.: classroom management, co-education of students with mixed social backgrounds) than from the H subgroup. There are respondents in the H subsample mentioning problem areas directly related to practice as well, e.g. knowledge of the subject taught.

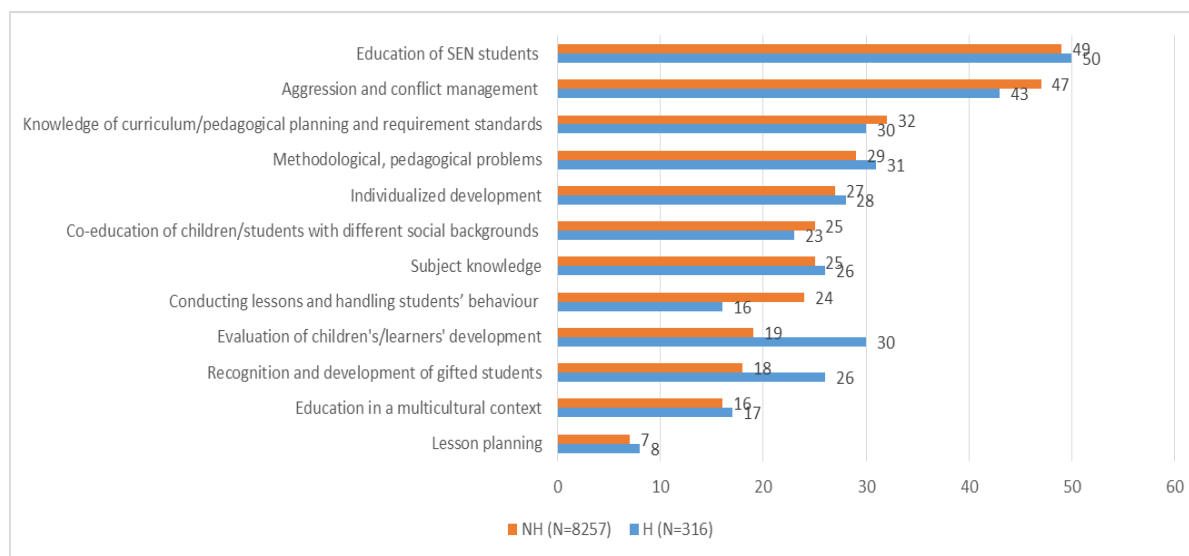


Figure 1. The pedagogical professional problems of the subsample H and NH¹

We found strong correlation between individualized development, holding students' behaviour in hand and co-education of students with different social backgrounds in both of the subsamples of the National Database. The strongest correlation in subsample H was found between colleagues learning from each other, cooperation between colleagues and holding students' behaviour in hand. The strongest correlation in the NH subsample was found between co-education of students with different social backgrounds and methodological and subject knowledge (Table 1).

¹ Questionnaire question: *To what extent do the problems listed below make difficulties for you?*

Table 1. Correlations of the pedagogical professional problems of the H and NH subsample

Headmaster subsample - H (correlation)	Non-Headmaster subsample – NH (correlation)
<ul style="list-style-type: none"> • Individualized development and <ul style="list-style-type: none"> ○ handling students' behaviour (.546), ○ methodological knowledge (.538), ○ co-education of students with different social backgrounds (.497), ○ education of SEN students (.473). 	<ul style="list-style-type: none"> • Individualized development and <ul style="list-style-type: none"> ○ recognition and education of gifted students (.504) ○ education of SEN students (.498)
<ul style="list-style-type: none"> • Handling students' behaviour and <ul style="list-style-type: none"> ○ colleagues learning from each other (.652), ○ cooperation between colleagues (.629), ○ aggression and conflict management (.598), ○ co-education of students with different social backgrounds (.566). 	<ul style="list-style-type: none"> • Holding students' behaviour in hand and <ul style="list-style-type: none"> ○ aggression and conflict management (.527), ○ preparing lesson plans (.527)
	<ul style="list-style-type: none"> • co-education of students with different social backgrounds and <ul style="list-style-type: none"> ○ methodological and subject knowledge (.589), ○ aggression and conflict management (.545).

Problem-solving

We found in the Learning Teacher research that the majority of the teachers solve their problems alone. As we could see in the National Database, 58% of the school leaders rarely or never ask for help, which percentage is 78% in the case of non-headmasters. The headmaster solving his or her problem alone reads professional literature and searches the Internet. Those who do not solve their problems alone, personally ask for help from the leader of the institution, colleague 95%, professional community within the institution 89%, or beyond the school 55%. From the NH subsample 99% seek help from their colleagues, 97% from the headmaster of the institution, 90% from a professional community within the institution and 47% from a professional community beyond it.

Answer to research question #1: According to the Learning Teacher research, the majority of the professionals indicate the presence of teaching problems and fewer teachers mention educational ones. The National Database subsample shows that the majority of the problems relate to the everyday practice, and there is no significant difference between the Headmaster and Non-Headmaster subsamples from the aspect of the perceived severity of the problem. Both the majority of the respondents in the Learning Teacher research and those of the National Database state that they try to solve their problems alone. In this latter sample several problems appear in the case of which it seems that the headmaster perceives intelligently that they (could be) handled and prevented by the cooperation of the colleagues. Something similar can be detected at the non-headmasters as well. That is to say there is a strong connection between the teachers' cooperation and mutual learning if it is not about a concrete own problem/unsolved situation/mistake.

7.2. Second research question

- 2.) What are the similarities and differences in the National Database between the Learning Teachers' reflective behaviour and the Headmasters' and Non-Headmasters' opinion in

connection with reflection and those elements of organisational functioning that support problem-solving (e.g. learning from each other, common problem-solving, self-reflection)?

Signs indicating the reflective practice

We found in the Learning Teacher research that when solving problems regarding their own practice teachers first reach to their schemes connected to similar situations. There is only a few of those, who analyse the cause, circumstances and context of the problem, and only a couple of people out of the 37 reflect on the problem with other teachers, investigate alternatives, consider, decide and – later in another reflective cycle – learn from this process. The technical level of reflection is more typical, where only the description of the problem happens without analysis and interpretation.

58.8% of the respondents in the National Database indicated that the professional self-reflection competence is of good standard. 17% indicated that they are perfectly in possession of the competence, 18% possess it to a certain extent and 0.8% do not have it in their possession (5.4% were not aware of it or did not give an answer). The majority of those (73.1%) who think they are completely in possession of the competence of professional self-reflection consider teachers' cooperation in problem-solving is efficient. The H subsample considers the lack of colleagues' learning from each other less severe. There is a difference between the two subsamples in the extent of the rejection of the problem (figures), however, the severity of cooperation as a problem is indicated by NH respondents in lower numbers. According to the data, in the school leaders' assessment, cooperation – a requirement of the efficient solution of the tasks – is not connected to learning from each other.

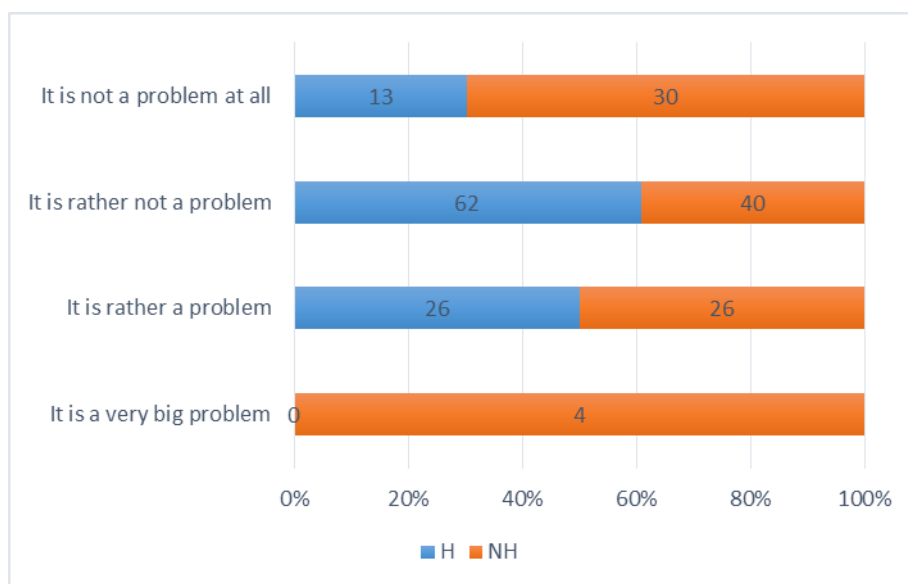


Figure 2. The severity of colleagues learning from each other as a problem in the H and NH subsamples

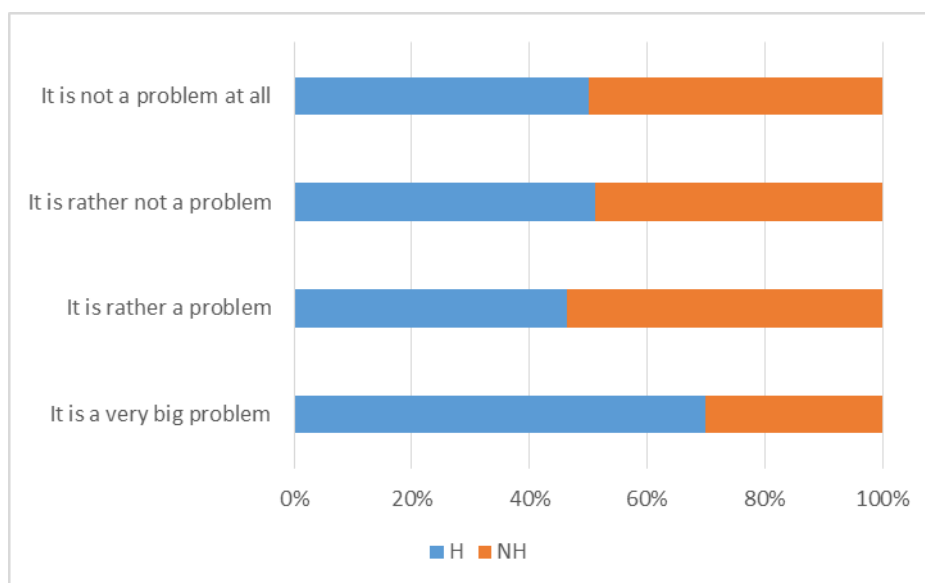


Figure 3. The severity of colleagues' cooperation as a problem in the H and NH subsamples

We investigated what kind of pedagogical professional problems were specified by those teachers of the two subsamples who indicated cooperation among the colleagues and learning from each other (answer alternative in their case: yes). We examined what those teachers according to whom cooperation and learning from each other is not a problem (answer alternative in their case: no) did not indicate to be a problem (answer alternative to the individual problems: no) (see Table 2.). This result reinforces what we have previously found with the correlation-analysis (Table 1.): More than the half of those teachers in the NH subsample who consider cooperation and learning from each other to be problematic, connect with problems appearing at meso level as well, such as integration of SEN students. We have seen in both subsamples that according to those who do not consider cooperation between colleagues problematic, seem to get by with lesson planning as well.

Table 2. End values of NH and H's problem-solving in relation to learning from each other and cooperation

	NH yes & problem yes ²	NH no & problem no	H yes & problem yes	H no & problem no
Colleagues' cooperation	<ul style="list-style-type: none"> Highest proportion indicated education of SEN students (64%). Lowest proportion indicated lesson planning (28%). 	<ul style="list-style-type: none"> Highest proportion rejected lesson planning (97%). Lowest proportion rejected the education of students with special needs (54%). 	<ul style="list-style-type: none"> Highest proportion indicated aggression and conflict management (62%), Lowest proportion indicated lesson planning (28%). 	<ul style="list-style-type: none"> Highest proportion rejected lesson planning (97%). Lowest proportion rejected the education of students with special needs (53%).
Colleagues learning from each	<ul style="list-style-type: none"> Highest proportion indicated education of SEN students (70%). 	<ul style="list-style-type: none"> Highest proportion rejected the problem of multicultural 	<ul style="list-style-type: none"> Highest proportion indicated aggression and 	<ul style="list-style-type: none"> Same as in the case of cooperation.

² In the case of non-headmasters the problem indicated in the first column: yes & the problem indicated in this column: yes

other	<ul style="list-style-type: none"> • Lowest proportion indicated aggression and conflict management (28%). 	<ul style="list-style-type: none"> • education (97%). • Lowest proportion rejected the education of students with special needs (53%). 	<ul style="list-style-type: none"> • conflict management (72%). • Lowest proportion indicated lesson planning (32%). 	
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Spaces of learning from each other, cooperation

The two subsamples see the *spaces* of learning from others and teaching others differently and the proportion of participation also differs. 72% of the NH subsample did not visit their colleagues' lessons in the last academic year, furthermore, for 52% of the teachers an academic year can pass without considering one staff meeting being the source of knowledge. The participation of the school leader (H) in the situations when knowledge is shared or where there is possibility for professional development is remarkably higher in proportion than in the case of the NH respondents both inside the institution and beyond it. The most outstanding differences can be marked in connection with class visits, conference attendance and participation in professional trainings (Table 3.).

Table 3. Forms and frequency of learning from each other and cooperation in the H and NH subsamples

Knowledge transfer, professional development	NH (%)	H (%)
Class visit in other institution with the aim of transferring experience, counselling	8	16
Class visit in own institution with the aim of transferring experience, counselling	27	54
Holding demonstration lessons	36	26
Mentoring beginner teachers	20	37
Knowledge acquisition	NH (%)	H (%)
Class visit in other institution with the aim of gaining experience	34	48
Class visit in own institution with the aim of gaining experience	27	58
Mentoring their own work by others	4	7
Further professional education of staff, training	46	50
Participation in national conferences	14	36
Participation in international conferences	2	4
Participation in training leading to qualification	9	20
Individual or peer research	3	13
Cooperation	NH (%)	H (%)
Participation in professional groups	57	64
Work in communities, networks focusing on professional further development	33	48
Individual or peer research	3	13
Non-formal professional discussion, conversation with colleagues	86	90

Answer to research question #2: Analytical, deeper and strategic reflection accompanied by learning and knowledge sharing is inhibited by the fact that the teacher does not consider, or only a few colleagues of the staff consider the community benefits of learning situations aiming their professional development, and we did not find signs that school leadership would systematically stand for it. Therefore, many colleagues stay away from knowledge and experience gathered by others and shared at organisational level. Signs of internal horizontal learning are present, but few teachers bring knowledge from outside of the school, and even fewer of them, more likely the headmaster undertakes the task to share their own knowledge with others, apply elements of learning from each other. Cooperation is what many teachers appreciate: the subsamples of the National Database indicate it

almost equally. Nearly everybody reports that there are colleagues with whom not in a formalized way, but problems can be discussed. We have not grasped its reflective nature and role in actual learning within this research. The forms and content of learning from each other in the lives of organisations are not connected, collectively developed at a system level by the school leader in order to foster the colleagues to generate and function in real professional learning communities instead of an island-type of operation.

7.3. Third research question

- 3.) What organisational model is typical according to the sample of 37 teachers and what can be assumed based on the source database?

According to the respondents in the Learning Teachers research the mentor/facilitator institutional model of the Human relations model was mentioned in the first place. In this model it is expected from the school leader to be an active participant of the community, to know it and live within it. Typical characteristics: pays attention to the individual, builds partnership, human. It is as if personal values were more relevant expectations than professional values. The teachers investigated gave an account of the leader's significant impact in the organisation; he or she leaves a trace on its life. It is important to highlight that the majority of the learning teachers interrogated defined the ideal school leader as a democratically directing professional endowed with autonomy and decisional competencies who is open and emphatic in his or her personal relationships. Nevertheless, content knowledge in connection with leadership, coordination of an organisation, organisational development, organisational learning as well as conscious support and motivation of colleagues' individual personal development appeared rarely among the expectations from leadership. Teachers desire a predictable leader able to create a peaceful atmosphere, rather than an innovator who is undertaking or inducing conflicts. This mechanism points out to an interesting phenomenon. It looks as if teachers wanted to enforce the "principle of closed doors" to their own organisation as well. It is about teaching with closing the door of the classroom and then doing whatever they want, as if they worked on islands independently of what happens in the mainland, in other words working in the classrooms without considering what happens in the education system, society, world at large (Lénárd, 2016).

In the National Database, 20% of the respondents of the NH subsample do not feel or feel it to a minimal or limited extent that they bear the responsibility of their work. 27% feel the same way about the responsibility related to their colleagues, 98% think that they only bear responsibility for themselves. By contrast, 82% of the respondents of the H subsample bear responsibility for their colleagues and 75% for themselves. Out of the three most important indicators of the quality of the pedagogical work of the institution, the quality of the teachers was mentioned by about the half of the respondents in the case of both subsamples, while only 20% mentioned cooperation among teachers. The non-formal forms of cooperation are dominant. According to the Learning Teachers research, these occasions are drinking coffee together, conversations in the corridors, loose team discussions. The National Database also reinforced that only a few teachers perceive formal cooperation and mutual learning. They indicated common research, staff programs in a small number.

Answer to research question #3: *Human relations model* seems to be illustrative. According to the samples, subsamples, emphasis is on the intrinsic (mainly informal) relationships. The leader endeavours to create inner cohesion, endeavours the development of human resources, the possibility of individual development, the evolvment of social relationships. The leader is a supporter (facilitator) and a mentor in this model. In his or her former role, he or she nurses and supports common efforts, organises group work and handles interpersonal conflicts. In principle, professional relationships are strong and professional debates are frequent in school organisations functioning according to this model, and if it is represented by a trustful atmosphere, then knowledge transfer operates well and members are open for further training within the institution. The presence of these latter cannot be supported by the data gained from the Learning Teachers research, or from the National Database. Based on the results we rather hypothesise that although the majority of the teachers included in the research struggle with problems, it depends on their schools' organisational

culture whether they seek help from their colleagues within the institution and from professionals, professional communities beyond it.

8. Summary

The Learning Teachers research period 2014-2016 raised many further questions. Hence, in 2017 we returned to the examination of the National Database, from which the sample of Learning Teachers is also derived. We created two subsamples from this big sample, the Headmaster (H) and Non-Headmaster (NH) subgroups, which we compared with each other and with the Learning Teachers subsample.

We consider it as a result that the majority of the Learning Teachers perceive learning and teaching problems the most and amongst educational problems, they notice the ones in connection to students' adaptability. In the circle of the teachers of the National Database, it is the other way round. Several factors can stand in the background of this controversy: a) the Learning Teachers function and hence define their problems professionally, too, b) maybe they are the teachers who develop their teaching competencies (e.g. planning, methodology, classroom management), and therefore they are more confident in handling educational situations as well, c) and presumably they run their lessons professionally, that is to say their aim is not to deal with disciplinary issues and create an obedient atmosphere but to ensure the continuous support of adaptive learning. This seems to be supported by the fact that the correlation of the educational type of problems within both subsamples of the teachers of the National Database is high, i.e. they reinforce each other: if one educational problem presents difficulty, then in all probability, another will also present some struggle.

As for the problems, the majority of the teachers in all subgroups try to solve them individually. It is not necessarily a problem, since there are many situations the solution of which do not require further people. The teachers in the large sample rate their own reflective competencies high, while analysis carried out in the smaller sample shows signs of the technical level of reflection. In all subsamples, the majority of teachers report that in case they need help, they choose informal/non-formal social discussions or turn to the school leader. We consider it a result that more respondents among the Headmasters' subgroup perceive low level of cooperation and knowledge transfer among colleagues and feel it to be a serious problem compared to the respondents of the Non-Headmasters' subsample.

Finally, we also consider the reinforcement of our hypothesis to be a result that several signs of elements of Quinn's Human relations model are present in Hungarian institutions. The teachers examined explicitly expect management role from the headmasters, whose ambitions trending to this direction can be detected (e.g. work in professional communities, networks is higher than among Non-Headmasters), as well as ambitions in relation to the improvement of human resources (e.g. knowledge transfer is higher among them than among Non-Headmasters). However, in the world of teachers the leader is a professional and organisational reference person, but basically understood in personal relationships. Teachers consider themselves as crucial agents of efficiency. The institution as organisation is tacit in connection with problems; its role in problem-solving is not indicated. Social problem-solving does not have a real tradition in the schools; maybe this is the reason why teachers try to solve their problems individually instead of thinking in organisational solutions. The question is whose responsibility it is?

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