



A qualitative study of students' cooperative and collaborative relationships during the internship period

Un estudio cualitativo sobre las relaciones de cooperación y colaboración de los estudiantes durante el periodo de prácticas

 Annika Bush¹ y  Núria Carrete-Marín²

¹ Bielefeld University (Germany)

² Universitat de Vic-Universitat Central de Catalunya (UVic-UCC) (España)

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Abstract

Teacher collaboration is a key factor in improving school quality, professionalism and even health. However, these aspects are not sufficiently taken into account. One way to improve this situation is to implement cooperative behaviour from the very beginning, from teacher training at university level. This study shows how, with whom and why students collaborate at the university during their internship semester, considering a project at a German university for a Master's programme in education. The method used was qualitative interviews in which the students also pointed out the benefits and disadvantages of the teaching collaboration and whether they were satisfied with the dimensions they experienced. The results show that although there is a willingness to collaborate, there are many aspects to improve in order to make it really effective.

Keywords

Collaboration, cooperation, teacher training, professional development, internship

Resumen

La colaboración del profesorado es un factor clave para mejorar la calidad de la escuela, su profesionalidad e incluso su salud. Sin embargo, estos aspectos no se tienen en cuenta lo suficiente. Una forma de mejorar esta situación es poner en práctica comportamientos cooperativos desde el principio, desde la formación universitaria del profesorado. Este estudio muestra cómo, con quién y por qué colaboran los estudiantes en la universidad durante su semestre de prácticas, considerando un proyecto realizado en una universidad alemana, para un programa del Máster en Educación. El método utilizado fueron entrevistas cualitativas en las que los estudiantes también señalaron los beneficios y desventajas de la colaboración docente y si estaban satisfechos con las dimensiones que experimentaban. Los resultados muestran que a pesar que existe una predisposición a la colaboración, hay muchos aspectos que mejorar para hacerla realmente efectiva.

Palabras clave

Colaboración, cooperación, formación del profesorado, desarrollo profesional, prácticas

1. Introduction

Collaboration is vital in order to bring about profound changes in educational institutions. In fact, the terms teamwork, cooperation, collaboration have become buzzwords in organisations to achieve improvements and progress.

It has become increasingly important to join forces with other people in order to reach higher goals together. Since the 1970s, the theme has also applied to the school sector. Cooperative forms of learning must be promoted to help pupils become the team players needed in the world of work. But it also requires the cooperation of the teachers providing the training.

In the light of decades of research and the global consensus on the success of cooperation, it is surprising that there is little evidence of change in teachers' attitudes towards it. Reasons are sought to explain why the new approaches are not adopted or not sufficiently adopted by teachers and why they continue to act more like lone fighters than team players. One solution is to implement cooperative approaches at an earlier stage, during teacher education. However, few studies have been carried out to date and without an empirical basis, scientifically sound and action-oriented approaches to improve teacher education cannot be developed.

1.1. Terms and problems of definition in the school context

At the outset, 'Cooperation is characterised by reference to others, to goals or tasks to be accomplished together. It is intentional, communicative and requires trust. It presupposes a certain autonomy and is committed to the norm of reciprocity' (Spieß, 2004, p. 199).

Basically, cooperation is 'the transition from an isolated individual effort to pursue a goal to a collective effort for the sake of higher performance' (Kuper & Kapelle, 2012, p. 41). Therefore, cooperation should always go beyond the limits of individual performance and result in an overall performance that is better than the sum of individual performances (Kuper & Kapelle, 2012).

In school research, the concept of cooperation is commonplace. For decades, collaboration between teachers has been attributed with a positive effect. It goes so far that the benefits are put in the foreground and associated with effectiveness and improvement in all areas of school and teaching (Bush & Grotjohann, 2020). Furthermore, previous forms of teacher performance are discredited and 'in the relevant guidelines and research literature salvation is sought in the demand for pronounced [...] forms of cooperation' (Bondorf, 2013, p. 14). Cooperation is described as 'the guarantor of a better school' (Bauer, 2008, p. 839). These conclusions are largely derived from research on school effectiveness, which shows that successful schools have a high level of cooperation among staff and with other educational agents and institutions (Carrete-Marín et al., 2024; Krečič & Grmek, 2008; Rothland, 2012).

Given that cooperation is almost always associated with positive connotations, it is surprising that collaboration between teachers has so far hardly been put into practice and is of almost secondary importance. This has been documented in various studies since 1970 and to date no trend has been identified to indicate that this is changing (Gräsel et al., 2006; Rothland, 2012; Steinert et al., 2006; Werner, 2012). The larger the school's educational programme, the lower the level of cooperation between teachers (Rothland, 2012).

Weaknesses of previous research are that teacher cooperation is operationalised

differently and that there is not yet 'a consistent theoretical basis and empirical record of the teacher cooperation construct' (Bondorf, 2013, p. 14). Furthermore, the dominant method of data collection to date has been limited to teacher self-report (Bondorf, 2013).

Gräsel et al. were able to identify the problematic nature of the definition of the term in their own research: many teachers only consider cooperation as the exchange of information or materials, which the researchers classify as the least demanding level of cooperation. Other forms, such as team teaching, which they classify as co-construction and thus the most complex form of cooperation, are often unknown or not understood as cooperation in the classical sense (Gräsel et al., 2006).

1.2. Aim of cooperation

The importance of teacher cooperation is due to the fact that it is associated with many school and teacher-related developments (Bush & Grotjohann, 2020).

From the outset, the issue of teacher cooperation plays an important role in development concepts related to teaching and school quality. There is a 'clear connection between [...] school quality and teacher cooperation' (Terhart & Klieme, 2006, p. 163). Schools rated as good and successful have a high degree of collaboration among teachers. The type of cooperation is also more demanding than in other schools (Terhart & Klieme, 2006).

In addition to the quality of the school and teaching, collaboration should also give each teacher an individual advantage by promoting his or her health. In 2004, Schaarschmidt conducted a detailed study on the subject of teacher health. They revealed that a decisive factor is the social climate at school. This explicitly refers to the relationships within the teaching staff, the interest in each other and the shared support. The best rated schools showed 'a high degree of agreement in the implementation of school rules and goals' (Schaarschmidt, 2005, p. 14).

In another study, Böhm-Kasper, Bos, Körner and Weishaupt (2001) found that the worse they rated communication and integration within the teaching staff, the more stressed they felt. A few years later, Bauer also found that 'cooperation problems in everyday working life, a negative school climate and an unfavourable teacher-teacher relationship' contribute to the stress experienced by teachers (Bauer, 2008, p. 850). On the contrary, it is assumed that increased cooperation will alleviate the burden on teachers.

On the other hand, it should be considered that 'the theoretical framework of the profession includes three levels: profession/occupation, professionalisation and professionalism' (Schicke, 2011, p. 72). Today, there are many different definitions and opinions on what makes an occupation a profession. Scientists agree that professional occupations deal with problems that have social relevance (Schicke, 2011). Therefore, the teaching profession is a profession, as education is considered a core social value and the associated service is of social importance (Peters, 2004).

Professionalisation is the process that leads to professionalism. Depending on the interaction and the situation, it is therefore about creating a state through appropriate action that is not constant due to the rapidly changing and diverse demands placed on professionalised occupations. This takes place on the basis of sound knowledge, based on theory and experience, and constant reflection of one's own actions. In practice, this means that knowledge gained from experience must be updated and recreated in every problem-solving process (Morange et al., 2022; OCDE, 2005; Schicke, 2011). The example of the school clearly shows that routines are only to a certain extent coherent for teachers and that

organisational action is only partially feasible, as the profession 'is determined by intuition, personal style and individual discretion' (Nittel, 2004, p. 350).

On the other hand, 'the amalgamation of theoretical knowledge and practical skills enables professionals [...] to make judgements and act in situations within their area of responsibility, even under high-risk conditions' (Kuper & Kapelle, 2012, p. 44). The decisive argument for the importance of cooperation in a professional community lies precisely in this expertise. Expertise is acquired in the context of demanding training and professional action in practice and therefore 'cannot be developed and evaluated outside the professional community' (Kuper and Kapelle, 2012, p. 44). Consequently, communication within this group of people is necessary to build knowledge in order to test and define new courses of action and thus improve professional practice. Bondorf (2013) also attributes great potential to an intensive exchange between teachers, as 'professionalisation [...] is more likely to be achieved through intensive communication and cooperation with other teachers' (Bondorf, 2013, p. 29).

1.3. Inhibiting factors for cooperation

Despite the positive connotation of cooperation, it has not yet occurred to a sufficient degree. Therefore, an attempt is made to identify factors that inhibit cooperation. Many teachers avoid cooperation in order not to be personally vulnerable. There is an endemic insecurity among teachers because it is difficult for them to determine how good they are at their job. There is fear of 'coming out' and reluctance to openly admit and discuss professional insecurities (Pröbstel and Soltau, 2012).

Kuper and Kapelle (2012) consider what they call the autonomy-parity pattern as an obstacle to cooperation: while this pattern is 'certainly compatible with the structure of professional work, it harbours considerable risks of isolation and avoidance of cooperative reflection and development' (p. 45). In view of the findings concerning authority, parity and protection mechanism, it is not surprising, therefore, that collaboration seems to become increasingly rare and difficult the closer the content gets to the real core activity of the teacher, i.e. teaching (Reh, 2008).

The organisational structure of the school, which Terhart and Klieme describe as 'cellular', is mentioned in several places as another main factor in the lack of cooperation (Terhart and Klieme, 2006, p. 164). Work processes are separated in such a way that teachers only perform their own tasks and the coordination of the elements is neglected. Teachers work in isolation from each other, reinforcing autonomy and parity, which in turn leads to further isolation of the individual. This is not compatible with cooperation (Pröbstel and Soltau, 2012).

Pröbstel and Soltau (2012) see real problems in agreeing on common goals and coordinating time. In the current school structure, there are often no shared free periods and a suitable workplace is often lacking. Another point mentioned was the synchronisation of teaching in terms of content and time as an obstacle to collaboration, which in turn could be related to a subjective restriction of autonomy and parity.

The importance of the personal attitude and intrinsic motivation of the teacher is also underlined, without which cooperation cannot take place, or at least not successfully (cf. *ibid.*, 70 ff.). This is already observed in student teachers: 'Information [...] shows that prospective teachers attach great importance to cooperation and collegial support', but at the same time they often do not include this point in the repertoire of actions in their own planned professional practice (Rothland, 2012, p. 197).

1.4. Basic conditions for cooperation and teacher training

Gräsel et al., (2006) identified three basic conditions without which cooperation does not work: common goals, mutual trust and preservation of individual autonomy.

From the outset, collaboration must be mutually beneficial and must not have any negative interdependence of goals, i.e. it must not lead to a competitive relationship between partners. Numerous studies show 'how essential common, transparent and clearly formulated goals are for effective cooperation' (Gräsel et al., 2006, p. 207). These goals must appear meaningful to all those involved, as cooperation only takes place 'if it serves to promote one's own interests' (Pröbstel and Soltau, 2012, p. 61).

Trust refers to the actions of the individual cooperation partners, whereby each individual must be able to rely on the reliability of the others. This refers not only to the reliable fulfilment of individual sub-tasks, but also to social interaction. The so-called feeling of security, which is closely linked to the concept of trust, is an important predictor of seeking help, discussing mistakes and experimenting with new ways of acting.

It is also important 'that each group member enjoys a certain freedom of action and decision' (Gräsel et al., 2006, p. 208). There is a consensus that too much, but also too little autonomy has a detrimental effect. In the first case, the group feeling is weakened and, consequently, the sense of responsibility for the group's end product is diminished. On the other hand, too little autonomy limits the individual motivation of the participants, so that the group work should not lack visibility of individual contributions either. The 'desire for autonomy and the rejection of control are important components of teachers' socialisation' and inhibit cooperation (Gräsel et al., 2006, p. 209).

1.4. Types of cooperation

The differentiation into three levels of collaboration has been used as a basis for most studies on teacher collaboration, especially in the German context where the present study was carried out (Gräsel et al., 2006). These are presented in the following sub-sections.

1.4.1. Exchange

The least complex form of cooperation is exchange. The aim of this form of cooperation is usually to do the same work and to synchronise the timing of activities. However, it also includes mutual support by seeking and offering advice in case of problems or uncertainties. In this form of cooperation, it is not necessary to agree on an interdependence of objectives, as this usually exists within the framework of an overall school objective.

In this form of exchange, the cooperating partners retain a high degree of autonomy, which makes it the 'low-cost' form of cooperation. This cooperation has an occasional character and is characterised by the fact that there are few possible negative consequences. At the same time, a condition for success is that the business partners trust each other to the extent that all parties involved can be sure that the 'support offered will be reciprocated when the opportunity arises and that the search for information will not be devalued as incompetence' (Gräsel et al., 2006, p. 210).

1.4.2. Division of tasks

As the name suggests, the work steps are divided between the individuals in the second phase of cooperation. A prerequisite is, inevitably, that the division of tasks is possible without expected losses in the final product.

Real collective work only takes place here in the agreement on the goal and the division according to the inclinations and abilities of the group members. 'This goes hand in hand with the fact that the autonomy of the members exists in the execution of the work, but the goal and the result must be coordinated with the partners' (Gräsel et al., 2006, p. 210). The function of this type of cooperation is to increase effectiveness and is an important prerequisite for trust.

1.4.3. Co-construction

'Co-construction occurs when partners intensively exchange information about a task and relate their individual knowledge to each other (co-construct) in such a way that they acquire knowledge or develop joint solutions to tasks or problems' (Gräsel et al., 2006, pp. 210-211).

This form of cooperation is described as the most developed, but at the same time studies show that it is the least common. As communication here is not only about the common goal, but the whole work process has to be coordinated, the autonomy of each partner is limited. Mutual trust is more important here than in the other two forms of cooperation, as there is stronger communication in which mistakes are addressed, criticism is voiced, questions are asked and weaknesses are admitted (Arnaiz Sánchez et al., 2023).

The benefit of this labour-intensive and time-consuming collaboration is the improvement of the quality of their own work through suggestions and reflections, as well as a further development of their own competences.

'Cooperation is supposed to be all the more valuable the more closely and directly related it is to lessons', which is why co-construction in the form of team teaching is rated as very good by researchers (Bondorf, 2013, p. 29). However, it can also take place in the form of joint lesson planning, creation of classroom tasks or reflection on lessons (Gräsel et al., 2006, p. 211).

1.5. The relevance of teacher training

Also, the importance of cooperation in teacher education needs to be emphasised. In this sense, 'teachers' abilities to cooperate [...] are central elements of competent teacher action which must be acquired, practised and implemented in the course of teacher education' (Gräsel and Gruber, 2000, p. 173). A call is made for cooperative structures to be applied and taught to students during their studies in order to ensure that they can successfully apply the learned methods in their later professional life. 'In teacher education, however, there is still not much evidence that this requirement is implemented' (Gräsel and Gruber, 2000, p. 173). This demonstrates the need to pay more attention to this aspect in the specific context of the study.

2. Method

The aim of the study is to obtain initial data on existing collaborations between

students and their fundamental attitudes towards cooperation during the placement semester. This data is important to ultimately make further considerations regarding the implementation of new structures to encourage further collaboration. This study examined to what extent, with whom and in what ways students already cooperate during their placement semester, and which advantages and disadvantages they can identify.

The guided interview method was chosen, which was subsequently analysed qualitatively by means of content analysis. For this study, seven interviews were conducted with students who completed their practical semester in the Master of Education programme at University X [anonymised]. Particularly in high schools there is the least cooperation among all types of schools (Gräsel et al., 2006), so students from these types of schools were surveyed. There was no deliberate choice of specific subject combinations or the predominance of a particular subject, but the emphasis was on ensuring a broad spectrum of subjects represented by the respondents, in order to obtain a picture of cooperation that was as subject-independent as possible.

The interview script was organised into three thematic units. Firstly, various types of cooperation based on theory were asked. The interviewees reported on the degree of exchange, division of tasks and co-construction they had carried out during the practical semester. The second section dealt with the advantages and disadvantages experienced in cooperation, and in the third and last part, the interviewees were asked whether they were satisfied with the level of cooperation they had experienced.

3. Results

Three areas were addressed in the interview. Firstly, it was examined what types of cooperation took place, how often and with whom. Next, the interviewees were able to mention the experienced advantages and disadvantages of cooperation. In the last step, it was asked whether the students were satisfied with the level of cooperation experienced.

3.1. Types of cooperation

The form of cooperation through exchange was the most frequently reported form of cooperation. All respondents exchanged both information and materials with different cooperation partners. However, in most cases the latter took place unilaterally: the respective supervising teachers often provided teaching material or referred to relevant book pages. Only one person passed on material to the tutor.

Surprisingly, co-construction was practised by more students than task division. In similar studies with trained teachers, the opposite was true: co-construction was least practised in all cases (Richter & Pant, 2016). First and foremost, this is probably due to the structure of the placement semester: since the trainees were always in the classroom with an accompanying teacher, team teaching lent itself more to organisation than with trained teachers, who usually teach alone. In this line of reasoning, however, it is not clear why there was relatively little division of tasks. Class division does not seem to be convenient or meaningful for those concerned, nor too restrictive in terms of authority. In the case of trained teachers, it is likely that this area of cooperation is also rarely observed in the execution of lessons, but presumably more in the extra-curricular areas of responsibility.

As collaborative partners, the teachers whose classes were attended were mentioned above all. If a designated mentor was available, cooperation mostly took place with them.

However, there was also exchange with teachers whom the respondents met, e.g. in the staff room, as well as with trainee teachers. In general, collaboration with fellow students was less frequent. Here almost exclusively information was shared, and only in one case materials were provided. As far as groups of people are concerned, both colleagues who also did the practical semester at the school and those at the university were mentioned, as well as, to a lesser extent, private contacts. It can be concluded that cooperation took place where there were adequate temporal and spatial alignments between the individuals involved. This means that meetings aimed at cooperation were not organised, but existing structures were used to exchange ideas, e.g. in seminars or at school.

The main reason for the lack of cooperation is, as already suspected in the literature and confirmed here, the absence of fixed times. Structures must be created that allow clearly defined times and spaces for joint actions. These should be anchored in schools, where the problem is most intensively observed, and in universities, where most of the partners meet.

It is quite clear that collaboration occurs most frequently at school, especially during breaks. Six out of seven respondents indicate that they collaborate more frequently with teachers or peers during this time. Only two indicated that cooperation also took place during free periods. Similarly, two students indicated that there were fixed times for exchange, division of labour and co-construction, and that these occurred regularly. The vast majority, however, only cooperated when necessary and, consequently, sporadically. This irregularity is seen as a critical factor. Cooperation should be established as a regular practice and not only sporadically during school breaks or a few minutes before university seminars.

At the level of the students, it is initially important to encourage cooperation between peers. In order for future teachers to be able to collaborate later in their profession, they must learn not only to call on apparently more experienced people, but also to work with the existing knowledge of their peers and not to underestimate them. Ultimately, these parallel experiences in their schools of practice could help each other, and joint planning of a sequence of lessons should not only be possible when it is subsequently carried out together in the same class.

3.1. Advantages and disadvantages of cooperation

All respondents have experienced cooperation and were able to identify the advantages or disadvantages that most struck them. Firstly, it can be seen that, in general, more advantages than disadvantages were mentioned. All were able to name at least one advantage of cooperation, while two people could not identify a single disadvantage.

3.1.1. Advantages mentioned

1. Benefit from the experiences of others: This usually refers to the experience of trained teachers, but also includes sharing experiences with fellow students.
2. Feedback/Professionalisation: The feedback that students received and found useful came mostly from teachers. It should be noted that it has obviously helped several students in their professional development.
3. Access to materials: Not only does it ease the workload (fourth point), but students also benefit when teachers have a variety of materials at their disposal, allowing them to create content-rich and differentiated lessons.
4. Facilitates work: Preparation time for one's own teaching is reduced and difficult

situations and proposed solutions can be discussed with others.

5. Synchronisation of teaching: It helps pupils when they have to repeat classes or change classes within the same level. They can follow lessons more easily if teachers have coordinated beforehand on the topics covered and methods used.
6. Mutual mental support: This can be especially fruitful among fellow students, as they are in the same situation and often face similar challenges.

3.1.2. Disadvantages mentioned

1. Dependence on the cooperation partner: The majority of respondents find the dependence on the cooperation partner annoying. If this person does not fulfil his or her task adequately or lacks motivation, successful cooperation is simply not possible.
2. Time expenditure: This and the following two points are also considered in the literature as obstacles to cooperation and are confirmed in this study.
3. Complications in time coordination.
4. It takes place in free time.
5. Problems with hierarchy: One person assessed as problematic that, as a trainee, one could hold back during the initial period due to the hierarchical structure and not express one's opinion directly to the supervising teacher. This leads to preparing things differently than if you were on your own. This is an aspect that is probably not uncommon in a mentor-mentee relationship, but should not occur in an equal partnership, and therefore re-emphasises the need to reinforce peer-to-peer collaboration.

4. Discussion

In general, there was more collaboration than expected, which can be seen as extremely positive. However, compared to other studies, there is a strikingly different distribution of the frequencies of the three types of cooperation. There is a consensus on the most common type of cooperation, which is exchange. Among the trained teachers, the exchange of information and experiences predominates (Aliaga Cruz et al., 2022). All trainees in the practical semester also exchanged materials, although this occurred less frequently than purely verbal exchanges. One of the reasons for the exchange of material among the students is undoubtedly the lack of professional experience and the resulting shortage of teaching materials, which is not, or at least not as pronounced, among teachers who have been in the profession for several years. Consequently, the latter feel less need to exchange materials.

Unexpectedly, the interviewees were more involved in co-construction than in task sharing. Empirical research has found that teachers do not seem to regard 'coconstruction [...] as beneficial for achieving the intended goals', despite the fact that the literature often emphasises that it is particularly important for generating new patterns of action and ideas (Pröbstel & Soltau, 2012). Team teaching is promoted by some as the highest form of cooperation (Reh, 2008), but has not yet established itself as a teaching method (Bauer, 2008). It is even more striking that two individuals have regularly taught together and simultaneously with the supervising teacher. Here, the potential of the practical semester becomes apparent: team teaching often fails due to the time coordination as well as the previously dominant structure of the individual teaching teacher (Pröbstel & Soltau, 2012). During the practical semester, it is necessary for students to be accompanied by a teacher for supervisory reasons.

This can and should be used by both to experiment with teaching methods that would otherwise be difficult to implement, such as team teaching. If students recognise the added value of this form of teaching, there is a good chance that they will also try to implement it later on.

As collaborative partners, mentors, supervising teachers, as well as other teachers and trainees at the school were mentioned. In addition, there are the colleagues from the shared school, the university and the private sector. The fact that there has been cooperation with many actors the students meet during their placement semester is to be assessed positively, even though information has only been exchanged with most of the partners.

Basically, communication with various groups of people does not seem to be a problem during the placement semester, so an extension of the collaboration beyond mere exchange could possibly be based on that. The most frequently mentioned advantage is that one can benefit from the experiences of others. In the interview, this mainly referred to the experience of trained teachers, but also included the exchange of experiences of other colleagues. One person referred to mutual, often mental, support and encouragement, which can be particularly fruitful among fellow students, as they are in the same situation and often face similar challenges. Exchange in general should certainly be encouraged, as the added value of cooperation with fellow students seems to be appreciated so far only to a limited extent. This also applies to the exchange of materials, which ranks third in the results: not only does it lead to a reduction in workload (fourth point), but pupils also benefit when teachers have access to a variety of materials, enabling them to create content-rich and differentiated lessons.

Another advantage of cooperation for learners is the synchronisation of lessons. It helps pupils when they have to repeat classes or change classes within the same level. They can follow the lessons more easily if the teachers have coordinated beforehand on the topics covered and the methods used. The feedback that the students received and found useful came mostly from the teachers. It is worth noting that it has obviously helped several students in their professional development. According to many scientists, the culture of feedback is associated with cooperation or at least should be linked to it, and is still too little represented in schools. These two factors - feedback and cooperation - are the two focal points of professionalisation and should therefore be brought to the fore again and again and implemented in schools.

Most of the interviewees consider the dependence on the cooperation partner to be annoying. If this person does not fulfil his or her task adequately or lacks motivation, a successful collaboration is simply not possible. This goes hand in hand with the first requirement for cooperation often mentioned in the literature: all participants must be motivated, preferably intrinsically. Time commitment as a second point of criticism is not surprising either, as this is another well-known obstacle, as is the scheduling of the collaborators. A further substantive point is the hierarchy mentioned. One student found it problematic that, as a trainee, one could initially hold back because of the hierarchical structure and not express one's opinion directly to the supervising teacher. This leads to preparing things differently than if one were on one's own. This is a point that is probably not uncommon in a mentor-mentee relationship, but should not occur in an equal partnership, and therefore re-emphasizes the need to reinforce peer collaboration.

On the basis of the data collected and the positive findings regarding the collaboration that has already taken place, the practical semester seems to be fundamentally suited to expanding existing models of cooperative action, consolidating them further and implementing new ones (Drossel et al., 2019; Imbernon, 2024). The exchange is already being carried out by all participating students, and more co-construction than expected is taking place. However,

these two areas, and in particular the sharing of tasks, still have significant potential for improvement. Above all, there is a lack of cooperation between peers. So far, students seem to be more oriented towards their mentors and other trained teachers to benefit from their experiences and adopt what has already been tried and tested, but there is also a lot to learn from peers in the same situation. Sharing experiences helps to collaboratively develop solutions to similar problems, and joint planning and, where possible, joint implementation of teaching projects broadens one's horizons.

As already mentioned, collaboration between colleagues should be encouraged in order to establish these long-term practices in each individual and to bring them into the school through the pupils. Of course, this projection into the school should not only take place during the internship semester, but should have a lasting impact extending into the preparatory service and beyond. It is not only the working methods of trainees that need to be changed. Rather, the final step should be to change the internal structure of work in schools and to form faculties in which cooperative actions are integrated into everyday life. Since this has not been achieved according to previous studies, attempts should be made to address the change of action routines even during teacher training. The practical semester seems, according to the analysis of the interviews, to be a suitable basis for stimulating new patterns of cooperation on the part of both the university and the school, as well as for reinforcing existing ones. However, more extensive studies are needed to develop initial methods to measure more precisely the level of existing cooperation and thus reveal more specific focal points.

5. Conclusions

Cooperation remains an important and topical research topic, not only in terms of collaboration between pupils, but also between teachers. Above all, it should improve the quality of schools and teaching, contribute to professionalisation through reflection as the main strategy and positively influence the well-being of teachers by reducing stress and thus reducing the risk of burnout.

The most important prerequisites for successful cooperation are, first of all, the motivation of the participants to collaborate and the generation of common goals. There must be trust between the participants and the autonomy of the individual must be valued so that the final product is satisfactory for all and meets the expectation of being better than the average of the possible individual products of all collaborators. Factors hindering cooperation include, in addition to the absence of these prerequisites, inadequate framework conditions such as suitable spaces and time slots for collaboration, the principle of autonomy-parity in connection with a form of self-protection among teachers, as well as the cellular organisational structure of schools.

Cooperation can be differentiated into exchange, task sharing and co-construction. Many researchers use this type of classification of forms of cooperation for their studies since 2006, which mainly reflect the collaboration of trainee teachers. Although there are several arguments in favour of the early introduction of cooperative structures and actions for trainee teachers, empirical studies on this topic are still rather limited.

The interview study shows to what extent students cooperate during the traineeship semester and where areas for improvement can be identified. The fixed assignment to a tutor or the need for a supervising teacher leads to cooperation, but the extent and intensity is determined by those involved. In principle, the existing level of cooperation can be assessed positively; however, it still has significant potential for improvement, especially in the areas of

task division, co-construction and peer collaboration.

It is clear that there is an urgent need to establish fixed times. The two most common problem areas can be identified as the cooperation partners not taking enough time and that cooperation - partly as a consequence of this issue - only occurs sporadically. In principle, pupils seem to be open to further cooperation, which is a good starting point for further work in this area.

The establishment of cooperative structures and actions among student teachers in the first phase of training is a promising option and should certainly be pursued, tested and evaluated further. The aim of the early establishment of cooperative structures is to change collegial patterns of action in faculties and to make them more cooperative. The internship semester can be a crucial time in this endeavour, as students have the opportunity to collaborate both with their peers and with professors already trained in the future field of education.

The study's methodological limitations are significant and multi-faceted. The extremely small sample size of seven interviews fundamentally constrains the research's statistical power and representativeness, rendering the findings difficult to generalize beyond this specific context. The qualitative approach, while providing rich insights, introduces potential subjective bias through self-reported interview data, which lacks the objectivity of quantitative methodologies. Moreover, the absence of quantitative validation means the qualitative findings cannot conclusively be validated, leaving the study's conclusions open to interpretation. It will be necessary to take into account the procedures carried out in other larger-scale studies using qualitative data, looking at collaborative relationships and applying validation and reliability criteria (Carrete-Marín et al., 2024). So, further studies are needed to adequately capture the status quo. These interview results serve as the basis for a larger-scale quantitative study that is currently underway. In order to verify the long-term effect of cooperation during the traineeship semester and the potential success of an early establishment of a corresponding traineeship, long-term studies are ultimately necessary, in which participants are accompanied from their studies to preparatory service and beyond.

Notes

Level of contribution:

Conceptualisation: A.B & N.C-M; Research, Resources & Data curation: A.B.; Writing, revision and editing: A.B & N.C-M.

Conflict of interests:

The authors declare that there is no conflict of interest.

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