

“(...) it sounds great, but one has to look
closer”: A Case Study of Multiage Classroom
in Germany

Jennifer Orozco-Möhl

Master's Thesis in Education

Master's Degree Programme in Teaching and Learning (TLearn)

Faculty of Education and Welfare Studies

Åbo Akademi University

Vaasa, 2023

Supervisor: Haiqin Liu

Abstract

Author: Jennifer Orozco-Möhl

Year: 2023

Title: "(...) it sounds great, but one has to look closer" -- A Case Study of Multiage Classroom in Germany

Unpublished Thesis for Master's Degree in Education

Pages: 57

Vaasa: Åbo Akademi University, Faculty for Education and Welfare Studies

Abstract:

The following thesis is a case study in a multiage classroom in Germany. There is a research gap in the study of such classrooms, creating a need for more research in the area. There were two main goals, one being to observe and analyze how teachers allow their students to be independent in such a setting with the focus on one classroom. The other focus was how students interact, help each other, and provide feedback through peer support. This class was observed over the course of 18 schooldays and two interviews with the main teachers were conducted. The data collected through the interviews and observations was then analyzed with thematic analysis. The main results found were remarkably interesting. Both teachers were not satisfied with how the students were working in their classroom. It was discovered that the setting in this classroom was not ideal for students' autonomy. There seemed to be a clear discrepancy between what the students could choose and how much knowledge they possessed regarding their own learning. Students had no overview regarding competences that they had to achieve or any clear goals and yet they were expected to decide what to work on. All students worked mostly on workbooks, and they only got to choose when to work in which one. The materials available to the students seemed unappealing and were rarely used, all classrooms had the same materials and workbooks, teachers did not choose which materials they wanted in their classroom. Regarding peer support, there is a lack of group work and students tend to work rather alone, leaving room for mostly negative interactions between the students. The amount of help and constructive feedback that students could give each other was lacking and less than expected. The teachers both mentioned the lack of social skills their students possessed, which could be still repercussions from the Covid-19 pandemic. The main findings of this research were the importance of the need for structure in multiage classrooms to provide more freedom. At the same time teachers need to be provided with more guidance and more freedom in what materials they use in their classroom.

Keywords: Multiage Classrooms, Autonomy, Individualization, Peer Support, Case Study.

Table of Contents

Abstract.....	2
1. Introduction	4
2. Literature Review	6
2.1. Multiage Classrooms.....	6
2.1.1. Two Types of Classrooms	6
2.1.2. Heterogeneity in Multiage Classrooms.....	8
2.1.2. Different Instruction and Assessment	9
2.1.3. Training for Teachers of Multiage Classes.....	10
2.2. Key Concepts	11
2.2.1. Individuality	11
2.2.2. Autonomy	12
2.2.3. Peer Support.....	13
3. Methods	14
3.1. Research Personality	14
3.2. Research Context.....	15
3.3. Measures and Procedures	16
3.4. Data Analysis	18
4. Results	19
4.1. The Student	19
4.1.1. Setting	19
4.1.2. Learning Materials	21
4.1.3. What Students Do	24
4.1.4. Individualization	28
4.1.5. Autonomy	31
4.1.6. Teachers' Perspective	34
4.2. The Class.....	37
4.2.1. Working Together.....	37
4.2.2. Peer Support.....	41
4.2.3. Feedback	45
4.2.4. Group Work	46
4.2.5. Teachers' Perspective	48
5. Discussion.....	49
6. Conclusion and Implications	52
7. References	54

1. Introduction

“Groß und Klein zusammen- fast wie in einer Familie “. [Big and small together- almost like a family].

(Christiani, 2010, p. 23).

Tim has been struggling with multiplications lately, he is not the only student in his class who has not fully understood how multiplications work. However, it seems like everybody else is just trying to keep up with what the rest of the class is doing, and the teacher just keeps on going to the next topic. Scenarios like these are common in some schools. Students are taught the same things at the same time and the information is understood at different paces. We all learn at different speeds and have different strengths and weaknesses; classrooms are heterogeneous, that is a fact. So why not lean into it and try to find some advantage from having heterogeneous students? In multiage classrooms, different grades are learning together in the same classroom. Is mixing different age groups and levels helpful for the students to go at their own pace? Does it make them more autonomous? Do students benefit from being with students in different ages or is it rather a disadvantage?

Starting with the title, which is a direct quote from one of the teacher interviews held for this research, which was translated from the original German: “(...) ich finde es klingt toll aber man muss genauer hinschauen”. The following research focuses on multiage classrooms and how they might benefit or hinder students. A closer look is needed to see if there are actual benefits, how they function and what is happening in those classrooms.

Literature on multiage classroom is quite limited. There is a gap regarding the research. Not only that, but there is no consensus on how to refer to such classrooms around the world. Some of the terms used are multiage classrooms, multigrade, split, cooperative and family classes. It presents a challenge to find all the names that researchers, schools and governments are using to describe such classroom settings. So not only is more research on the topic needed, but also there needs to be a consensus on what the name should be.

At the same time, in my experience, not many people know what multiage classrooms are, including teacher students. When not confronted with such a classroom, they might not

know what they are or how they function and regardless of this situation they might still end up teaching in a multiage classroom, without any previous knowledge.

Because of this lack of information and how unknown multiage classroom might be, I believe it is important for this topic to be researched further. Especially since there are many classrooms that claim benefits or setbacks because of working with such a setting. There needs to be more research in this area to be able to assess it better and create the optimal environment to justify the number of changes that parents, students and teachers go through in these classrooms.

The present thesis focuses on students' autonomy, as well as student cooperation and peer support, since these were the most interesting to me when I was first part of a multiage classroom as an intern. Autonomy is one of the main goals of education, so teachers are always looking for ways to make their students more autonomous. Similarly, peer support is a key concept since students are not learning alone. They have classmates surrounding them which can be a benefit or an obstacle. What is the situation in multiage classrooms? This research will try to answer the following research questions:

1. How do teachers in multiage classrooms involve students regarding their own learning?
2. How are students from multiage classrooms supporting each other in terms of:
 - Peer support?
 - Activities?
 - Feedback?

These classrooms are creating an environment in which students have much freedom and can make many decisions that affect their learning. At the same time, they are interacting with younger and older students with different knowledge levels in different areas. The interactions between this heterogenous students are also an interesting aspect to look at.

The first section following the introduction will highlight the important and existing literature that could be found regarding multiage classrooms followed by some of the key concepts for this research. The next section focuses on the methods chosen for the data collection as well as the data analyses. The discussion then follows, where the findings of the data collection are discussed and argued. Finishing the thesis with the conclusion, the implications as well as suggestions for future research.

2. Literature Review

In this section, the theoretical part of the thesis is presented. A variety of already existing research regarding multiage classrooms, individuality, autonomy, and peer support are presented and briefly discussed. First, literature regarding multiage classrooms is presented. This section, after some general information, is divided into subsections. The first one being two types of multiage classrooms, in which the two main reasons for the creation of such classrooms are addressed. Then the heterogeneity aspect of these classrooms will be investigated, followed by how assessment and instruction may be different in such classrooms. The multiage section concludes addressing the problem of lack of training for teachers in multiage classrooms. After this, the focus is on the key concepts, looking into individuality, autonomy, and peer support. These concepts are crucial since they are the main topics of the research.

2.1. Multiage Classrooms

For this study, it is essential to first explain what is understood under the term multiage classroom. Multiage or multigrade classrooms, according to Marshak (1994) “(...) include students with at least a two-year span in chronological age, who would previously have been placed in two different grades. Each student remains in the same classroom with the same teacher(s) for at least two school years, and often longer.” (p.4). While at the same time for Christiani (2010) the most common arrangements of multiage classrooms or family classes are in two main forms: One being a classroom with the grades that includes students from grade one through four and the other having only two grades combined, either first and second(1/2) or third and fourth grade (3/4) (pp. 54-55). In this classroom, students from different age groups can learn together and the grades they would normally belong to due to their age become less important.

2.1.1. *Two Types of Classrooms*

Multiage or multigrade classrooms have been around for a long time. However, they have been most often used as a solution to a problem: some rural schools do not have enough teachers or students. In these scenarios they decide to combine grades to create one or several multigrade classrooms with one teacher. This might be the only option, especially in remote areas. Since

multiage classrooms are forced upon them in this situation, schools operate without a plan, there is no clear vision and teachers might not be trained. That is why they are sometimes seen as negative and more challenging. (Nourayi, 2017). For these same reasons, when looking at the literature, there are many articles focusing on how these settings might not be ideal for learning and the challenges of the situation in those schools, highlighting the lack of funding and resources (Taole, 2020; Santos, 2019; Kivunja, 2014).

Multiage classrooms are commonly used in rural areas where there are not enough students to create same grade classrooms. However, it is believed that students benefit from this arrangement and some schools are creating multiage classrooms on purpose to achieve such benefits. I want to investigate multiage classrooms and see whether students are more independent and how they support and help each other.

In Ritland & Eighmy's, (2012). "Multiage Instruction: An Outdated Strategy, Or A Timeless Best Practice" with the help of experts in the subject, the authors highlight why multiage classrooms should still be happening and should be praised more instead of still being seen as just a solution to a problem in rural areas. For the same reasons Veenman (1996) argues that it is unfair to critique such a system when the necessary setting is not present in these classrooms for it to function properly. As will be discussed later in this paper, multiage classrooms might not function properly without certain important characteristics.

There are many multiage classrooms around the world that were created purely for their benefits rather than the necessity of it. We are presented with two main types of multiage classrooms then, the ones that were created out of necessity and the ones created for their benefits. Kasten (1998) states that there are affective, academic, and social benefits such as: the role model aspect, cross-age tutoring, decrease in aggressive and competitive behaviors, social development and self-esteem and the advantages for promotion and retention, meaning that students can easily skip or retake a grade level. While in a study conducted by Kucita et al. (2013) most of the teachers believed the quality of education in multiage classroom to be lower, even when the response was divided between finding such a system positive or negative between parents and teachers. An important finding however was that for such classrooms to function properly there is a need for parents and teachers to be in favor of it. This goes back to the idea that multiage classrooms require teachers, parents, and other school staff to want these classroom types to exist.

Juárez Bolaños and Lara Corro (2018) highlight some more challenges that multiage classrooms might face, such as lack of funding while Luschei and Zubaidah (2012) talk about how having a classroom size too big might also hinder the benefits and make it difficult for such a classroom to work. It is important to consider that the classroom dynamics in a multiage classroom are and should be different than in a one-grade classroom since the constellation is different.

2.1.2. Heterogeneity in Multiage Classrooms

As mentioned before, multiage classrooms consist of students from different age groups, and depending on how many grades are in one classroom the age difference might be quite big. This creates a very heterogenous environment which could bring benefits for the students such as how younger students can learn and benefit from observing older students (Oelhaf, 2008, p.13). As mentioned before, it can at the same time also bring challenges to the teachers.

By not being clearly defined into specific grades all the time, students learn to look at each other as individuals. The grade does no longer define students' abilities and interests and it gives more freedom to develop at their own pace (Marshak, 1994, p.5). Reed and Westberg, (2003) focused on how multiage classrooms in a school can foster gifted children and allow students from different ages to develop more in areas that they are interested in, regardless of their actual grade.

In such an environment, inclusion might be easier to achieve as well. A study by Sermier Dessemontet and Bless (2013) showed that having classmates with intellectual disabilities in the classroom has no negative impact on students' academic success. While a study by Adomat (2014) not only showed this as well, but also highlighted that students might benefit from being with other students that are different than they are. "As was seen in this study, children with and without disabilities developed compassion and understanding for one another."(Adomat, 2014, paragraph 8). Students can benefit from having classmates with different capabilities and different interests, which are the settings of multiage classrooms.

Focusing on how this affects classroom dynamics such as bullying, Rambaran et al. (2019) conducted a study on peer victimization in multiage classrooms compared to a one grade classroom. Their findings were that there were no differences regarding bullying. However, they studied a multiage classroom with just two grades mixed. This might mean that the

difference in ages was not that significant, so there were no apparent differences or that multiage classrooms do not influence bullying.

On the other hand, Marshak, (1994) through interviews with a variety of competent multiage teachers, uncovers not only the benefits for students, but also goes into the benefits for parents and teachers, highlighting how multiage classrooms allow teachers to have a longer relationship with their students, watching their development while creating a meaningful bond. Nouravi (2017) also found that teacher-student relationships are deeper and there is also a better connection to classmates.

Teacher student relationships are an important aspect in academical success, especially in elementary years. In a longitudinal study in which they followed the development of fourth graders for two years, they found that good teacher student relationships led to engagement not only in that grade but in the next two years as well, while negative relationships resulted in a lack of interest (De Laet et al., 2015).

2.1.2. Different Instruction and Assessment

As already mentioned, multiage classrooms require more than just having two or more grades in the same classroom for them to have any benefits. In multiage classrooms the expectations and the way teachers work changes. The teacher is no longer trying to teach all the students the same content but rather tries to support each student at their own individual level (Marshak, 1994, p. 6) (Nourayi, 2017) (Oelhaf, 2008, pp. 16-19). Hoffman, (2003) conducted a study in which he wanted to find out how teachers' work shifts in multiage classrooms. He made use of observations as well as interviews which found the importance of the use of differentiated instruction, social collaboration, flexible grouping, and student interest. Parents like this approach as well, where there are goals that must be reached or milestones, rather than focusing on grades. Arnold et al., (1998) shows types of assessment that focus on the individual students rather than on their grade, making use of a continuous assessment. This way not only students can see where they stand as well as parents, but they can also see where they want to go.

A case study conducted by Shareefa, (2021) focuses on differentiated instruction in a multiage classroom. This type of teaching was found to have benefits such as academic enhancement and positive psychological change. In differentiation of assessment, another commonly used strategy in multiage classrooms, students are presented with the same topic

but there are different expectations for each student or each grade regarding assessment as well. (Taole, 2020). This means that there is not only a change in the way of instruction but in the way of assessment as well. However, a study by Block et al. (2015), even though it shared similar views with the benefits of strategies teachers might use in multiage classrooms, also raised some concern, regarding how students might then become too dependent on the teacher and are in constant need of approval or praise.

As I learned while I was working on my bachelor's thesis, there are other aspects that are crucial for the effectiveness of such a classroom. The learning environment is particularly important for students to become comfortable in their learning. The fact that students spend more than just one year in the same classroom and with the same teacher already helps the students to feel more at home and know what to expect. Materials are also an important aspect, since students are meant to be more independent in multiage classrooms, they should have plenty of materials to choose from when working independently. The teacher must be flexible and understand that a multiage classroom is not teacher centered, but student centered. They are supposed to play the role of a supporter, rather than a regular teacher. Teachers should give students enough room for them to develop at their own pace. The classmates are another important aspect: if we have a classroom with different age groups together, they should have enough room to interact with each other, help each other but at the same time be independent.

2.1.3. Training for Teachers of Multiage Classes

To provide this individualized education, teachers need to understand and know how to achieve this effectively. There are many schools that might be working with multiage classrooms but are not utilizing multiage teaching strategies (Ritland & Eighmy, 2012). At the same time, it is particularly important that parents and teachers stand behind the idea and are willing to change their expectations regarding the way education was done before, it cannot be the same as in one-grade classrooms (Kucita et al., 2013). Teachers need to have support from parents and directors of their schools as well as acquire the knowledge necessary.

There are a few studies where the results highlight the importance of teacher training regarding teaching in multiage classrooms, how this presents a big challenge for their success (Raggl, 2015) (Luschei & Zubaidah, 2012) (Kucita et al., 2013). According to Ritland and Eighmy (2012) everyone involved should have some sort of training, not only the teachers. In Luschei and Zubaidah's study (2012) the teachers refused to mix the grades in their teaching.

They were trying to create two or more one-grade classes inside their classrooms, making planning and teaching more difficult. They believed that that was the easiest way to ensure that their students were learning the proper content according to the curriculum. But this only deprived their students of the collaboration benefits that they would have had if they had allowed their students to interact and learn together.

In general, teachers that have more experience teaching are more openminded and their look on multiage classrooms is more positive, as shown by the study by Broome (2014). In this study several art teachers were asked their views on multiage classrooms. The results showed that the more experienced a teacher was the more they approved or favored multiage classrooms, regardless of whether they had experienced such classes before or not.

2.2. Key Concepts

In this section some of the main key concepts and some literature regarding them will be presented. First, individuality, followed by autonomy and then peer support. All these are important to this research, given that the focus is on students' freedom and autonomy in the classroom at the same time as the study of the interactions between the students.

2.2.1. Individuality

As mentioned before, it is especially important in multiage classrooms that teachers start to see their students as individuals and are not focused on their age alone. The multiage setting provides an opportunity to look at education as an ongoing procedure rather than a fixed year achievement. Kasten (1998) for instance claims that multiage classrooms allow teachers and parents to look at the long-term education of the students. In a study by Shalom et al. (2021) in which two multiage models were compared between two different countries, the following was discovered: "The multi-age model allows for a child to develop at their own pace and promotes their individual talents and needs." (p.67). Both studies highlight what Cristiani (2010) also states in his book regarding the flexibility such classrooms allow. The idea is to allow the students to stay in primary school, only as long as they need to, without any pressure and avoiding them feeling unchallenged. This might not be the case in all the multiage classrooms, but this model makes it more flexible than one-grade classrooms.

So haben besonders leistungsschwache Kinder im Ausnahmefall bis zu 5 Jahre Zeit, ohne die Klasse wechseln zu müssen, und die besonders begabten und motivierten Kinder verlassen nach drei Jahren die Grundschule, ohne dass sie eine Klasse übersprungen haben. [This way, particularly underachieving children can, in exceptional cases, have up to five years without changing classes, and particularly gifted and motivated children leave primary school after three years without skipping a class.] (Christiani, 2010, pp. 19- 20).

Focusing now on the benefits or disadvantages of having the same teacher for more than one school year, this is called looping. According to findings by Tourignv et al. (2020) students that had looping performed better in many subjects such as mathematics, while there was no evidence of this affecting student-teacher relationships.

2.2.2. *Autonomy*

Since multiage classrooms try to provide students with the best environment to learn, the individualized learning and assessment, student autonomy is also an important aspect. For this paper student autonomy is defined as students being able to make decisions regarding their own learning.

According to Warnick (2012) one important aspect for student education is autonomy and independence. A longitudinal study by Wei et al. (2020) showed the effect that perceived autonomy could improve performance in mathematics. It also showed that student autonomy led to motivation and better academical achievement.

It has been proven that it is important for students to be more involved in the decision making regarding their education (Levinsen & Sørensen, 2019). They are more motivated and feel like they can take their studies in their own hands. When teachers allow students to have more autonomy in the classroom, the latter have higher interest and put more effort into what they are learning. They feel less pressured, have less self-doubts, and their relationship to the teacher is also better (Kaur et al., 2015).

A study by Juárez Bolaños and Lara Corro, (2018) which was conducted in Mexico in several multigrade schools, found a variety of benefits including students' independence and how collaboration helps the students' individual development. At the same time Mykkänen et

al. (2017) show how activities which allowed self-regulated learning in the classroom had a higher academic success. Similarly, Kaldi et al. (2011) found that project-based learning can be beneficial for academic performance, motivation, cooperative learning, and engagement in the learning process.

Nalipay et al. (2020) conducted a study to find out whether autonomy was only important in Western cultures since most of the literature found is based in these cultures. Their findings showed that autonomy support was also important in Eastern cultures and not only in Western cultures. (p.70). Going a bit further in another study (Waterschoot et al., 2019) in which they gave children a choice about what activity they wanted to take part in. The autonomy group did the activity they chose, while the other group did not. The first group had higher motivation, vitality, and persistence than the other group, this highlights not only the importance of giving the students a choice but also honoring their choice. Similarly, Chang et al. (2016) conducted a study in which they manipulated Physical Education lessons for them to have more opportunities for autonomy support. The results showed that the students in the manipulated group had higher intrinsic motivation in what they were doing.

2.2.3. Peer Support

It is quite common in multiage classrooms to have a helping system, in which students help each other in all sorts of ways (Oelhaf, 2008, pp. 13-16). Block et al. (2015) agree with this view in the sense that cooperation is a great tool in multiage classrooms. Merely by allowing students to learn together they see what other classmates are doing and can be inspired by that. The same study also highlighted how younger students can better mentally prepare for what is expected of them in the next steps of their studies, while older students can review things that they have already learned by explaining them or just being exposed to them.

There are many benefits that come from peer tutoring and helping other classmates. Ritland and Eighmy (2012) said that it helps with leadership skills as well as “nurturing qualities” (p.174). Shalom et al. (2021) stated that peer support will also help students to reach the zone of proximal development, allowing students to teach what they can and being taught what they do not know yet without looking at the actual age of the child. This allows weaker students to experience a higher sense of achievement (Nourayi, 2017), it also helps with their confidence and empowers them (Henry et al., 2012).

In addition to that, tutoring other students has benefits in general, not only for weaker students. "(...) being in the tutor role has a number of benefits for students, including deepening their understanding of concepts, strengthening their capacity to reason and explain their thinking to others, and improving social skills." (Russo, 2019, p.167). Peer tutoring provides a different perspective. Children share similar experiences with each other which might not apply to adults. Having another peer, tutor students might help them understand the subject matter better at the same time as they are strengthening their social skills (Russo, 2019).

Not only do students benefit from peer support but also from peer assessment and feedback. A study by Double et al. (2020) supports the use of peer assessment for improving academic performance and goes as far as recommending it to teachers to use in their classrooms.

Peer support and feedback play a significant role in multiage classrooms since the teacher cannot always be present due to the heterogeneity of the classrooms. Nevertheless, it is beneficial for all students alike, regardless of whether they are struggling with a particular topic or have already mastered it.

3. Methods

In this section I will first reflect on my position as a researcher and present why the topic was important to me and why it was chosen. I will highlight my experience with multiage classrooms. After that the research context where the data collection took place will be the focus. Then I will move on to the measures and procedures, where the chosen method is discussed followed by the data analysis.

3.1. Research Personality

The first time I was confronted with multiage classrooms, I was doing my one semester long internship in Germany. It was totally by chance that I ended up in that classroom. I must admit that at the beginning I was quite annoyed and thought I would not learn as much as students in a "regular" classroom would. I was very skeptical, and it took me at least three weeks to first understand how the classroom functioned at all. This also made me realize how little teacher students are exposed to different teaching methods and settings such as these.

Once I understood the system and started to see the outcomes and the knowledge that the students possessed, I could better understand the reasons for such a setting. I noticed how the students were very independent but also helped each other in a variety of ways, I started to be grateful that I experienced such a classroom.

For my bachelor's thesis, I wanted to write about such classrooms, because not many students and teachers have much knowledge about them. If you are not exposed to them, you will not know how they work or that they even exist. For my research, I went to 4 different elementary schools in my region in Germany to learn more about how different schools work with multiage settings. The results were very interesting. The importance of having the teachers' and parents' support in such a system became clear for it to work. There were different interpretations of multiage classrooms and different approaches by the different schools and teachers. The most striking result was that classrooms in which the most freedom was granted and the most classroom interaction between different grades was allowed were the ones that thrived the most.

This led me to this research, where the focus is on autonomy of the students as well as the interaction between them. To look more into depth, a case study was conducted at a school in Germany. The school is an elementary school with one first, one second, one third, two fourth grade classes, 8 "family classes" or multiage classes and an inclusive class. In schools in the region of Baden Württemberg, which is where the research was conducted, only the first four grades of elementary school belong to this category, 5th and 6th grade are part of the next academic cycle. The term family class is how this school refers to their multiage classrooms. It is a colloquial term since multiage classroom resemble a family with siblings belonging to different age groups. The multiage classrooms in this school consist of students from grade one through four.

3.2. Research Context

The research was conducted in one of the multiage classrooms. This classroom is in the process of being built, which means that the classroom does not have students from all four grades but will do so next year. Multiage classrooms in this school are built by adding a grade every school year. They start quite small with only first graders. Then each new school year new first graders join the class, creating in the end a classroom with all four grades. The classroom being

observed is almost complete, but it is still missing one grade. During the next school year new first graders will join the class, and as all the other students already in the classroom move to the next grade, they will have fourth graders for the first time, thus completing the class. The class at the time of observation consisted of 20 students in grades one, two, and three. Six of the students were third graders, ten were second graders and four were first graders. Half of the students are girls, and the other half are boys. During the observation period an exchange student from Colombia joined the class for a few weeks. There were two main teachers that co-teach the class, meaning that the responsibility lies with both. The way they worked was that either one or the other teacher would be teaching and be present in the classroom at the same time. They did not teach lessons together. It rarely happened that they were in the classroom at the same time; it should have happened more, but because of the number of teachers that needed substitution, this amount was reduced. One interesting point for this study is that the two co-teachers have very different views on multiage classrooms. One of them really likes it and has worked in such settings for longer while the other one does not particularly like it and does not have as much experience. Another important aspect is that the first teacher had been with these students already the past years, while the second one had just joined the classroom this year. This year there is also an intern in the classroom learning about the class, supporting the teachers, and teaching some lessons to practice.

A case study was the best approach for my research since it allowed me to look at one classroom and analyze the interactions between the different students and teachers. It also gave me the chance to witness how they worked and the environment they worked in. By focusing on just one classroom for a longer period, I was able to see how and if students helped each other in the classroom, as well as give feedback. At the same time, by being there longer, I was able to thoroughly assess how independent the students were and how much influence they had on their own learning.

3.3. Measures and Procedures

The observations were held from the 20th of June 2022 to the 13th of July 2022, with a total of 18 days of active observation. It was about a month of observation considering that the observations could only be held from Monday through Friday and there were some special days during the observation period where observation was not possible. Between four and five hours per day were observed, depending on the class's own schedule. They had two breaks as well,

the first one being 15 min long and the second one being 20 min long. There were also some lessons that were carried out by other teachers like religion or some physical education (PE) lessons that I did not observe, since I wanted to focus on the class environment and their interactions only when either or both main teachers were teaching. Teacher-student relations are an important part of my research so only focusing on the class when these teachers were present made it easier to understand the relationships.

One of the research methods chosen for this study is, as mentioned before, observation. Notes were taken during the whole observation period. Video recording is not normally allowed in German schools and permissions are not easily granted, so notes were taken on a notepad. These observations were then transcribed.

Apart from this, two semi-structured interviews with the main teachers of the classroom were conducted. With these interviews I wanted an insight into what the teachers thought about multiage classrooms and their perspectives. I also wanted to know about challenges they might have faced as well as aspects of such an arrangement that they might like. The interviews focused especially on the autonomy part of the research including the teacher-student relationship aspect but also shed some light on how they perceived peer support in their classroom. The interviews took place at the end of the observation period. The following questions created the framework of the interviews.

Starting with general questions:

1. How long have you worked as a teacher?
2. How many of these years in multiage classrooms?
3. Do you like multiage classrooms in general?
4. Have you ever had any sort of training in multiage classrooms?
5. How are multiage classrooms different than “regular” classrooms?

Focusing on the autonomy and independence of students:

6. When do students have the opportunity to choose what they want to work on?
7. How do students keep an overview of what they have worked on and what they still need to work on?
8. How do teachers do this?
9. How do students know all the possibilities that they have at their disposal?
10. What are Pros and Cons of the free working time?

11. Do you believe it is important that students get to make decisions about their own learning? That they are independent?
12. Do you think they make decisions about their own learning?
13. Do you believe students feel independent?

Working together:

14. During the free working time, do you believe students work better alone or in groups?
15. Do you believe students give each other feedback?
16. Do you believe they do this even when the teacher does not ask them to?
17. Do you think students help each other out of their own initiative?
18. Do you think students help each other more, less or the same in a multiage classroom compared to a one grade classroom?
19. Do you feel like there is a sense of belonging in your classroom?
20. Do you think your students benefit from the multiage setting?

The interviews were held in German, so that the teachers felt more comfortable and recorded with the help of a smartphone. Then they were transcribed. During the observation period, there were also informal conversations with both teachers that helped to understand the system and provide any necessary clarifications.

3.4. Data Analysis

The notes taken during the observation period together with the transcribed interviews constitute the data. To analyze the data collected, thematic analysis was used. The data was read several times before being printed. The data was then manually analyzed. The different emerging themes were highlighted with different colors, then cut and sorted into different piles. The most important aspects were then written down. The combination of the data from the observations together with the interviews served to answer the research questions. During the process of working with the data when writing the results section, new themes emerged and there were several reorganizations of the data until the results became clearer.

Thematic analysis allows the researcher to organize and reorganize data according to different themes and codes. While working on the analysis new patterns were discovered and the data was rearranged again. Codes and themes are key to working with this type of analyses

and they help give the data structure and direction towards finding results. This process led to reading the data multiple times, which made it easier to understand and analyze.

4. Results

In this section, the results of the analysis of both the interviews and the observations are presented. The data was divided into two main topics: the student and the class. In the first section the focus is on the student itself, how the classroom setting and layout, the teacher and materials play a role in students' individualization and how they can be autonomous. In the second section the interaction between the students is explored, focusing on how they work, help, and give each other feedback. Both sections are completed with teachers' perspectives at the end of each section. The results are not divided in interviews and observations, since it was sorted by themes, and it was more complementary to combine the observations with the interviews to compare what teachers' views are with what is happening in the classroom. All the quotations and translations presented come from either the observations or the interviews with the teachers. Both the teachers and the students spoke German, so these were translated by the researcher when necessary. The translations were double checked by a native English speaker. Additionally in each observation a different student took the name of Student 1 or Student 2 in turn. When Student 1 is presented, it is not always the same student. The names for the teachers (teacher 1 and teacher 2) were consistent throughout and do always represent the same teacher.

4.1. The Student

4.1.1. *Setting*

First, exploring the classroom setting, students have access to two to three classrooms while they are working, as well as the hallway where they are also allowed to work when the teachers allow it. The seating is an important aspect of this classroom, there are no sitting arrangements, they can even take tables outside as well as also choose who they want to sit with and where. The floor is also an option. "Teacher 1: Wo möchtest du sitzen? Grossen Tisch, kleinen Tisch, auf den Boden? [where do you want to sit? Big table, small table, on the floor?]." Only during interaction in the carpet do teachers sometimes use clothespins to set a sitting arrangement. In the hallway there are movable walls that students can move to create some privacy to be able to work without distractions.

In the main classroom on the board there is the daily schedule represented by cards for each phase in the day. This is reset every day and students can look at it anytime of the day to know what is planned to happen next. There is also a “I need help” section on the board where students can write their names to let teachers know that they need help without disturbing the teacher. This did not seem to be particularly effective, since teachers kept forgetting to look at it, so students would just end up going to the teacher anyway. Students have their own shelves where they can keep material, workbooks, and products on which they have worked. There are lined papers and other similar materials at the disposal of the students, they know where to find everything. At least they are supposed to know, since I saw them ask the teachers where to find something many times. Another useful tool that students have access to in the classroom are noise cancelling headphones in case they find the learning environment too distracting or loud.

The library is student friendly in the sense that there are symbols all over the library shelves representing the age group of the books as well as the genre. There are some rules on the wall that were written by the students themselves. Each student also has a self-made bookmark where they can keep track of what they are reading and what they have read.

Teachers and the intern walk around during individual work, pair group or group work to support students when its needed. There is no frontal teaching taking place at all, the teachers take the role of supporters and mentors. The students tend to not come to class on time and this seems to be normal since the first hour every morning is intended for arrival time. A teacher is always there from the start and helps individual students to start working on something. The proper greeting happens an hour after when students are all present.

There are different phases in the student’s day as mentioned by teacher 1 during the interview: “Ankommenszeit” (arriving time) at the beginning of the day provides students with much freedom where they can work on whatever they want and just slowly have a start on the day. “Freie Stillarbeit” (free quiet time) is a bit more directed by the teacher, limiting the use of certain materials or providing options on what to work on. “Freiarbeit” (free work) where students can make use of materials and games as well and normally have complete freedom. This supposed freedom will be explored deeper later in the discussion section. They make use of the carpet a lot at the beginning of a new phase or after breakfast or a break, where they meet and discuss as a group, more about this later as well. Apart from these phases there are also some subject lessons like PE, arts, and religion.

Regarding the schedule, it is very flexible, and it can change from day to day. There are some lessons that cannot be moved like the time assigned to go to the library or the PE lessons. There are also certain lessons that are saved for only certain grade levels, so this are also not movable. But the other lessons can be moved to fit the students' needs. They normally decide when to have breakfast together and it was at a different time each day.

Every classroom in this school is assigned an animal to represent them. This class has the kangaroo. They have a little kangaroo stuffed animal that students can take home in turns together with the kangaroo book, which is like a diary of the kangaroo. Students are supposed to write what the kangaroo experienced during its adventures with the student. During breakfast the teacher present, or the intern, read a book to the students.

4.1.2. Learning Materials

All teachers have the same materials and same workbooks. The idea is that students can then help each other. Teacher 1 does not like this as much since she believes that teachers have different preferences and approaches and work differently, so they should be able to choose with what material they want to work. However, she does like that by having material from all the different grades in the same classroom, students from different grades have access to materials from lower and higher grades than their own. Similarly, Teacher 2 finds the selection limiting and she feels like she can't use nice games and ideas that she knows.

At the beginning of each workbook students have a page with stars that represent each page, students can then color the star once they have finished the page. They have workbooks, games, and different materials at their disposal. However, Teacher 1 finds that they have too many workbooks. She does not like these workbooks and that she does not really have a say. The students normally go for what they already know, and, in most cases, it is the workbooks. Teacher 1 believes working on workbooks is not the best way to learn.

With that much material I was interested in finding out how students have an overview and are introduced to the materials. One way which was observed was the students just seeing another student make use of something and being curious about it, like in the following interaction. "Student 1: Hey was ist das für ein Heft? [Hey, what kind of workbook is that?]."

Another way is by the teacher laying out materials on the carpet and introducing students to them. They also have a plan for some of the math material as mentioned by teacher

1. In that plan, students can see what material is for what grade. Teacher 1 also likes to introduce students to materials once she feels it is the right time to do so. Other students in turn, as mentioned before, might see the material, and want to use it too. Students also sometimes share what they have worked on during the lesson at the end of the lesson and this is also a way for students to learn about new materials, workbooks, and games. This was not always effective or properly addressed, as seen in the following interaction. There was no addressing how the game is played, so students that might not have known did not benefit from this interaction.

Student 1: Ich habe mal logico gemacht. [I played “logico”]

Teacher 1: Wer kann sich noch erinnern wie das “logico” funktioniert? [Who can remember how to play with the “logico”?].

A few students raise their hand. But that is the end of it, they moved on to what another student was doing.

Teacher 2 finds the use of these workbooks also not ideal. She finds them to not be free enough, students just fill out the workbook and there are too many of them. “Teacher 2: aber halt auch viele viele viele hefte die abgearbeitet werden [but also many, many, many workbooks that have to be completed]”. She also does not like that the materials are just tons of cards, which are not interesting for the students. She believes all of them look the same and she has rarely seen students make use of them without the teacher telling them to, even though they are in the back of the classroom easily accessible for the students. When students do make use of the material, they only take the same things over and over, which are ones they might already know. “Teacher 2: ich finde das material (...) mich nerven inzwischen auch diese tausende kärtchen da es sind immer kärtchen kärtchen kärtchen [I find the material (...) I am really annoyed with all these cards, it is always cards, cards, cards]”. She clearly does not like the material provided.

Meanwhile Teacher 1 wishes students would come with their ideas already in the morning of projects that they would like to work on. In previous years, students would work more freely not making use of material or workbooks, but rather create their own projects. These projects will also be discussed in more detail later. I asked her if this might be because students are not aware of this possibility. She believes, however, that students are only working in their workbooks, even though she believes students know that they can create their own projects. Teacher 1 thinks they work on their workbooks too much and nothing much else

happens. She feels like she would like to give the students more freedom and responsibility, but she sometimes feels like students are not understanding what she wants them to do or where she wants them to be. She feels like the class is not the way she would wish it to be, and she does not exactly know why that is. When she asks students what they have worked on and what they have learned, she feels like they never go in depth.

Teacher 1: um wirklich voran zu kommen da glaube ich nicht das es die masse machen würde das sie schnell mehr machen damit sie mehr können am ende es ist manchmal glaube ich auch für uns so der druck schluss das wir denken so wenn wir jetzt das heft an das heft gehts dann hast viel heft gearbeitet danach weisst du viel [to really move forward I do not believe that a large amount helps, that they quickly do more to know more. In the end it is sometimes I believe also for us the fallacy that we think that if you the workbook work a lot on the workbooks then you know a lot afterwards.]

Another important aspect regarding student autonomy which teacher 2 highlighted, is that she believes that the materials and workbooks that the students are using are very limiting. The materials are not flexible, and the topics are not often chosen. This might also be the reason why during the observations students spent most of the time when they were working, working on their workbooks, and not making that much use of the material or the games. There were only a handful of games that students made use of, and it was always the same ones.

Teacher 2: und ich glaub das is das der nachteil von der freiarbeit und deshalb diese materialien die wir hier haben die die die sprechen ja nicht diese die sprech sind nicht ansprechen und die sprechen auch nicht unbedingt die interessen der kinder an [and I also believe that the downfall of the free working time is that because the material that we have here they they they do not appeal are not and do not necessarily appeal to the students and they also does not necessarily appeal to the students interest].

From the teacher's perspective, Teacher 2 said that as a new teacher it is hard to have an overview of all the materials and how they work. She sometimes brings materials to the carpet but says this takes too long to decide who works on what. She does not have a clear overview of every single material and game, and this makes it hard for her to implement them and suggest them to students to use. This teacher would choose different materials and games if she could. From what was observed, many times the material is used for alternative reasons, they are used to play with in a way that the material was not intended. When games are being

played, it seems like they are not the focus of the students, since they spend most of their time chatting about something and often forget whose turn it is.

4.1.3. *What Students Do*

Normally in this school, multiage classrooms work with projects. First graders have a free pass but can observe what the older grades are doing. Second graders create a scene in a shoebox about a book of their choosing, they need to read the book and present it with the use of the shoebox to their classmates. Third graders make a poster with facts and pictures about their favorite animal or any animal that they want and present it to their classmates. Fourth graders choose any topic they want, and they explore the subject in different tasks. They must write a facts sheet about the most important information of their topic, write a story related to the subject, create some sort of art piece for the presentation and create a quiz for the observer of the presentation with questions regarding their topic. This takes place once a year and I saw it during my internship, however this time around this project phase had already concluded so I did not see it. According to Teacher 2, however, this phase was not that productive. She mentioned the lack of motivation in students and the difficulty they had in choosing a topic, this surprised me, since this was not the case with the students in my internship. With this class there were only poster and book presentations, since there are no fourth graders yet.

Teacher 1 did not mention these projects much, other than telling me that she wished I had been there for that, since then I would have had a better picture of students working individually and together. She also wishes that this project work would not be limited to this short phase. Overall, she stated the idea that she wishes students would come in the morning already with an idea on a project that they would like to work on for the day. The project idea has been done before, but not as much as she wishes it would. Her vision is that students work on a topic of their own choosing and link it to different subject areas, like math, German and arts for example. She described it as follows.

Teacher 1: Ja da wäre immer so mein Wunsch das die eigentlich schon mit ihrem project morgens kommen mit ihrem was was sie auch die überhaupt die ganze zeit beschäftigt und das die dran weiterarbeiten also ja was auch immer was auch immer das ist ja ob das jetzt harry potter ist und die machen zauberstäbe und dann fangen sie an eh die ganzen ähm zaubersprüche aufzuschreiben und damit eben die rechtschreibung und in deutsch was machen oder sie rechnen die längen der zauberstäbe aus und überlegen wie

lang ist das was was ist jetzt ein inch und wie rechne ich das um oder wie auch immer das das steht. [Yes that would be my wish that they would already come in the morning with a project with their that that they are invested in all the time anyways and they just continue working on it be that what it may be whatever it may be may it be harry potter and they make their own wands and then they can write the spells in their notebooks and work on their spelling and do something in German or they measure how long the wands are and think about how long it is what is an inch and how do I calculate that or however it says there.]

This sort of projects did not happen at all during the observation period. Teacher 1 told me she had two students in total during this school year take on a project like that. But she wishes it would be more. During the observation period this was clearly noticed, students would mostly be working on their workbooks, it was rare to see students make use of the materials or the games unless prone by the teacher.

Teacher 1: Ich finde die arbeiten wahnsinnig viel einfach an ihren heften frei da passiert gar nicht so viel anderes und die entscheiden in ihren heften schon auch aber ich finde es könnte noch mehr [I find they work way too much on their workbooks and not much else happens and they do choose in their workbooks but I feel like it could be more].

Now looking into how students are working. The teacher's presence has an impact on how productive students are. When a teacher is present or nearby, they try to work more (or at least pretend) and on occasion students proudly share what they have accomplished so far. For the same reason, some students always keep track of the teacher and adjust how much they are working accordingly. Both teachers agree that they must sometimes argue with students for them to work at all. I also observed students asking for help just in search of the answer.

Earlier Student 1 came to me to ask for help, but she just wanted me to give her the answer.

Student 1: ist das 46? [is it 46?]

Researcher: macht die Kehraufgabe [calculate the opposite to check if that's the answer]

Student 1: ne, sagt mir einfach ob es höher oder niedriger ist [no, just tell me if it is higher or lower]

Researcher: Ne, das schaffst du alleine [no, you can get there on your own].

Later she got the intern to help her, and she smirked at me.

This sort of interaction did not happen that often with me, since I learned quite quickly that I had to ignore the students for them to be more themselves and do things they would normally not do in front of another teacher. This interaction is unique, since the student was really interested in my response and was pleased with herself that she could go the easy way out in the end. Similarly, there are many scenarios, which will be analyzed in more depth in the help section of the results, where students ask for help from their classmates and receiving the answers to the exercises.

Both teachers are aware that the amount of work done by the students is not the amount they wish they would do. Teacher 1 said that there are times where she thinks that nothing is happening, and the students are doing nothing, while teacher 2 said they always do the same things, or they just wait and pretend to do stuff. This is happening, students in this classroom are particularly good at pretending they are very busy, at pretending they are working and being productive. They make it look like they are working on something they are supposed to be working on, but that is not the case. They color pages in their workbooks so that it seems like they are writing on it from the distance, for example.

Teacher 2: der nachteil hier ist es eben für mich das die halt nur gleiche machen also das sie dann immer in ihren geschichtenheften auch viel malen und ähm in in mathe immer das tuwas spiel sich da nehmen würden wenn sie es frei entscheiden könnten das heisst sie werden nicht herausgefordert sie nehmen sich tendenziell leichte sachen die sie gut können [the downside here is simply for me that they only do the same that they always work on their stories also they draw a lot and in in math they would only take the “tuwas” game if they could choose freely this means they are not being challenged they tend to take easy things that they are familiar with].

Teacher 2: (...) ganz beschäftigt tun und das ist auch ne studenlang so tun kann als ob ich sehr beschäftigt bin und sehr viel zu tun habe und äh ich natürlich mich da gut durchwurschteln kann. [(...) pretend they are very busy and that I can also pretend for a whole hour as if I am very busy and I have a lot to do and ah I can of course muddle my way through].

There are many activities that were taking place during the observation period that would be considered not appropriate in a classroom or not allowed, such as: A student painting on his leg, a girl doing another girl a hairdo, moving furniture around for no reason, making all sorts of noises like farting noises or using something else to make loud sounds. These are only some examples of what students do during the times assigned for them to be more independent and choose what they want to work on. This is an extreme example of how sometimes the class was chaotic and almost no students were working.

Around then there is chaos happening, students are running, screaming and being loud.

Exchange student: ¿y a esto le llaman clase? Es un circo! [and this is what they call a class? It is a circus!]

Slowly one by another two students join in the chaos. Teacher 2 shows up to scream at them.

In less drastic examples, students tend to talk to each other a lot while they work, however almost every single time it is about unrelated topics. They also walk around the classrooms and switch where they want to sit a lot. Students go fill their water bottles repeatedly and tend to go to the bathroom again even after they just came back from there. Teachers' orders and rules are sometimes taken lightly and not followed and there is a tendency to constantly ask for the time or look at the clock on the wall. Some of them just seem to want to waste time and let the time pass. This is an example on how students sometimes spend whole lessons.

A student is now sitting at a table alone, but not for long. He goes out to get his water bottle, drinks a bit then plays with the cap, goes to the front of the classroom. Goes to the back again and provokes another student who was working. They kick each other. He then sits down again on the table, for like 2 seconds. He stands up again and gets another stool, brings it over and sits down again on the stool he already had.

They seem to also be not challenged enough like Teacher 2 was saying. Since they tend to constantly choose activities that are too easy for them and then they just do not do them. They tend to color a lot. There are some students who play dumb a lot and pretend like they do not know what they are supposed to do, while others just pretend to not hear the teacher. In general, I did not see many students doing a reasonable amount of progress during the times that they were working. This obviously frustrates both teachers.

Teacher 1: X du hast wieder nichts gemacht! Langsam reicht es mir auch. Du sagst mir jeden Tag, dass du nichts zum arbeiten hast keine Hefte und du hast doch ganz viel zu tun und machst es halt nicht! [X you did nothing again! I have slowly had enough. You tell me every day that you do not have anything to work on, no workbooks and you do have lots of things to work on you just don't do them!]

Teacher was checking what students were doing during this lesson and discovered one that was not doing much. I thought that he was working on something.

This only happens when teachers notice that the students are not working. They seem to have developed many skills regarding knowing how to appease the teachers and make it look like they are working. This is also just one of the many examples on how students practically cheat the teacher into thinking that they have been working all lesson long.

The student that keeps avoiding work worked with the intern for like 5 min of the 40 min. When the teacher came to her to ask if she had been working on something, she said she had been doing math with the intern, which is true, but it was not the entire time. The teacher was pleased, because neither of them specified how long that took place.

This does not mean, however, that all the students are not always working. There are some students that spend all the time working and being productive. Sadly, there are too many just not doing what they are supposed to do, and they have become very good at pretending otherwise.

4.1.4. Individualization

Regarding individualization, teacher 1 said that all her students are at various levels, not only because they are in different grades but in between the same grades as well. She said for example that not all the first graders are on the same level and that sometimes a first grader might be on a higher level than a second grader. She is aware that her class is very heterogenous and highlighted how sometimes the students just having access to materials and content from other grades might be beneficial. Younger students are also allowed to take part in activities meant for older students if they choose to. There are certain lessons where only specific grades are meant to be there, but all students are welcome to participate.

The idea is that teachers look through student work regularly and provide them with specific individualized feedback, however, I was not able to see much of these happening, since it was mostly through direct notes to the students or quick conversations. Teachers use certain times to look at students' progress. They either work sometimes with students individually or take their workbooks and look through them.

In the same manner teacher 1 says that she needs to assess each student's level and skills to provide them with what they need. Sometimes she allows students to skip certain exercises or do alternative ones because it is what she believes to be the best for that student. This occasionally, however, leads to discussions with other students since some of them see this as unfair. Regarding the feeling of unfairness, the teachers do try to explain to the students why certain students need to do certain things and others do not. As can be seen this applies to more than just what students work on, but also how they work something.

Teacher calls one girl to sit next to her. Another student sits down next to me. Teacher told him to stand up again. He does, but then he sits down again.

Teacher 1: warum sitzt du schon wieder? x, ich habe dir doch gesagt, dass du stehen sollst! [why are you sitting down again x? I told you that you are supposed to stand]

Student 1: Aber die x sitzt doch, warum darf sie? [but x is sitting, why can she?]

Teacher 1: Ja, weil ich sie gebeten habe sich neben mir zu sitzen, weil sie ganz zappelig war, das war für sie die beste Lösung im Moment. Das ist aber für dich nicht die beste Lösung [yes, because I asked her to sit down next to me because she was very hyper, that was the best solution for her at the moment, but this is not the best solution for you].

She also provides suggestions on what students could work on next. Similarly, every student has different homework, and it is a combination of what teachers suggest and what students decide to have as homework. Teacher 1 also mentioned how the free working time is not always completely free, because that time is also used to guide students and work with them individually or in small groups in which the teacher decides what is being done. So, students do not always end up doing what they want or what they choose. The teacher also guides students in a different direction than where students want to go to. Sometimes the teacher gives only suggestions, but other times she tells them exactly what they should do. When students have been working on something for too long teacher tries to make them work

on something else as well. If a student is not working and the teacher has time, she intervenes. However, as already mentioned, many students are good at pretending to be working, so it is hard for the teacher to spot all the students that are not working. Similarly, if many students are not working at the same time, it presents a challenging situation for the teacher.

The only aspect about individualized work mentioned by teacher 2 was how it allows students to work at their own pace and gives them the opportunity to see what older students are working on. Teacher 1 agrees with this view, observing what other students are working on and having the opportunity to work at their own level at their own pace, regardless of their actual grade, is valuable. An interesting comment by teacher 2, however was that the director told her that the students should not be allowed to use materials from other grades or work on workbooks that are not for their grade. This surprised me, since both teachers highlighted this as being a big benefit of their classroom. When asking for more details on why the director might have said something like that, teacher 2 dodged the question and changed the subject.

On the other hand, teacher 1 believes that there are certain students that need a bit more support to work. She says that there are students that would not work at all if she were not constantly telling them to work on something. This is another individualized way of supporting students in their own individual way. These students she must constantly take away from the free working time and give them something to work on.

Another example of individualization is when students are too hyper, and the teacher considers that they need a break they are allowed to go outside for a few minutes or to even go for a short run. Sometimes teachers send students to do this, other times students have the freedom to just go out. “Student gets sent out “Teacher 1: Du brauchst wieder eine Pause geh mal kurz wieder raus und dann kannst du wieder reinkommen [You need another break go outside for a bit again and then come back in again].” This is a great solution for students that are distracted and need a change of air. Another example of individualization in this classroom was how the teacher allowed the exchange student to say the math problems during a game. It is a speedy game where they have to answer math problems quickly and for the international student it was nearly impossible to achieve any points, since he not only had to solve the math problem like all the other students, but he had to also translate his answer as well as the question. The teacher allowed him then to be the one saying the math problems, so that he could be a part of the game.

4.1.5. *Autonomy*

Students are responsible for their own material and for cleaning up and organizing their space, however since there are no sitting arrangements, it is sometimes hard to find the responsible student if one place is not clean after a lesson. Occasionally the teacher will not send letters to the parents with valuable information since she wants the students to have the responsibility. Homework, as mentioned before, is normally a combination of what the teacher suggests and what students decide to do. They make some decisions like choosing if they want to do sports with sneakers or barefoot and what they want to read when at the library or at the reading corner. They always have some free time during the sports lessons, where they can choose what to do.

Teacher 1 shared that even though it is important for her that students are independent, she also said that students do not have an overview of their goals and what they have done so far. It seems students are not aware of the competences they must achieve. The teacher keeps an eye on what students are doing and guides them, but the students themselves do not have clear goals other than finishing workbooks. She mentioned how it is difficult now since there is not much student involvement in this area. There are normally talks with the students and the parents in the middle of the school year to talk about performance and future goals, these are not taking place regularly, like they should.

As teacher 1, teacher 2 believes that it is important that students are independent, and she even stated that in her opinion it is one of education's biggest goals. However, she believes that keeping track of students work and their achievements and future goals are ultimately the teacher's responsibility. It seems like teacher 1 acknowledges the need for more student involvement in this area, while teacher 2 believes it is only the teachers' responsibility and students do not need to take part in this aspect. Teacher 1 said that it is very important to her that students know that what they are doing is for their own personal gain and not to please the teacher.

Researcher: wie behalten schülerinnen und schüler den überblick über über was sie ähm noch schaffen müssen und was sie schon geschafft haben? [how do students keep track of of what they ah need to do and what they have done so far?].

Teacher 2: genau das ist natürlich da letztlich die Aufgabe von uns Lehrkräften das ist das was ähm ja [exactly that is of course ultimately our teachers' responsibility that is what ah yeah].

The teachers encourage students to decide what they want to work on during the lesson, even though sometimes they tell the students what they are allowed to work on and what they are not allowed to work on. At times they give them options to choose from, sometimes they give them specific tasks and sometimes it is relatively free. The teacher constantly asks students questions such as "how much did you work?" "What worked well during this lesson/ game?" etc. During this activity students show with their fingers their answer, teacher tries to not pay attention to what number students are showing since it is supposed to be just for themselves. This is a way for them to reflect on their own productivity.

Teacher 2 believes there is a divide in the classroom between students that work wonderfully on their own and students that need more support. She linked this to the family and the environment students are subject to. If a student comes from a rather supportive family, where they have resources and help, they will thrive more in the multiage classroom, while a student that might come from a rather difficult family, meaning financially or because of lack of support might struggle more, in her opinion. In a similar way Teacher 1, when asked about how students deal with this freedom, she said that there are students that deal very well with the freedom and have a plan on how to move forward, they are independent and work on their own. On the other hand, there are students that have not fully understood what the freedom is for and how to deal with it. Teacher 2 thinks that sometimes it is better for the teacher to take the lead more. Some students require a bit more direction and would not succeed otherwise.

Teacher 2: ich glaube auch das andere Kindern wenn ich den nicht mal sage so jetzt gehst du das die überhaupt nicht produktiv wären nur weil sie den ganzen morgen irgendwelche Zeichnungen von was auch immer machen [I also believe that other students when I do not tell them now you go that they would not be productive at all only because they would draw any sort of drawings or whatever they do].

Teacher 2 believes that because of this, students might not be able to take their learning on their own hands, it is in her hands to decide when students choose what to work on. She also mentioned that the director of the school wishes that students would always be free to choose what to work on. She, however, disagrees with this view and believes that sometimes you need

to tell a student what to do and make them do it. Teacher 1 somewhat agrees with this view. She also feels like there are students that would just play the same game over and over if they had complete freedom.

Teacher 1: also genau aber es gibt einfach ne gruppe die würden eigentlich immer tuwas spielen was ja nach Montessori so ist, dass die sagt so lange es ihnen nicht langweilig ist machen sie das eben und dann suchen sies was neues weiss ich ich ich weiss es nicht ich glaube das ihnen dann irgendwie nichts bringt und sie doch doch auch tatsächlich manche kinder dann ihre zeit da einfach absetzen [so exactly but there are just a group that would actually always play “tuwas” which according to Montessori she says that as long as they are not bored they should do it and then they will search for something else I don’t I I don’t know I believe that this is not something where they are gaining anything and that there are kids who are just actually wasting time like that].

Both teachers find that many students tend to choose things that are too easy for them, and they do not know how to deal with that problem. Teacher 2 states a very important aspect of the autonomy in this classroom. She says students can choose where, when and with whom to work but they cannot choose what to work on. The material itself is not that open and does not allow for much autonomy. This is a very strong observation from teacher 2. She does not believe that students are making decisions about their own learning in this classroom.

Teacher 2: man muss dan auch die materialien angucken und die inhalte wenn die fur alle gleich sind dann ist für mich die frage was hat das kind hier noch im endefekt entschieden also wo ist es wo ist das interesse des kindes und wo hats wirklich sich selbständig nen thema gesucht und das habe ich ganz wenig hier gesehen vorgefunden also das heisst man muss immer gleich ein bisschen schauen sieht das nur so aus als ob ich mit selber entscheiden kann oder ich muss es aber eigentlich ja machen und ähm kann mir zwar den arbeitsplatz, den arbeitspartner und ähm die zeit wann ich das mache aussuchen aber letztendlich machen dann doch alle das gleiche halt in ihren individuellen tempo aber aber wo sie dann wirklich entscheiden und das ist für mich halt die frage wann entscheiden sie hier wirklich” [one has to also look at the materials and the content when they are all the same then there is the question for me what did the kid decide in the end so where is where is the interest of the child and where has he or she independently chosen a topic and that is something that I have seen very little here so this means one has to at the same time look at does it only look as if I can

independently choose what to do or do I need to do it anyways and I can for example choose where I sit, with whom I work and when I work on what but in the end everyone is doing the same but at their individual paces but but where do they really choose and that is for me makes me question when do they really choose].

At the same time teacher 2 believes students might be overwhelmed and are not motivated to make their own choices. She mentioned how giving students this much responsibility in allowing them so much freedom might not be beneficial. She believes it is too much responsibility and does not believe students have enough knowledge to be able to make appropriate decision about their own learning. She thinks that they might be pushing the heterogeneity too far and it might be too individualistic.

Similarly, teacher 1 fears that the individualization is leading to selfish students, which is the opposite of what the multiage classrooms are supposed to be. This last aspect is quite important, since most of the students spend their time working in their own work at their own speed and do not seem to take their classmates into consideration much. But more about this in the working together section.

Teacher 1: und dann überlege ich wieder ob das vielleicht doch tatsächlich durch dieses individuelle arbeiten wo ich immer bei jedem sein will und jedem auf seiner stelle helfe ob das vielleicht auch zu individualisten und egoisten führt anstatt zu dem was wir eigentlich wollen nämlich das eigentlich die familienklasse eher ein wie eine familie ist und sich gegenseitig unterstützt wann immer es nötig ist" [and then I think again whether maybe this individualized working where I always want to be at every students side and where I help everyone whether it maybe its creating individualized and selfish students instead of what we actually want which is students in a multiage classroom are supposed to be like in a family where everyone helps each other when needed].

4.1.6. Teachers' Perspective

Focusing now on the two teachers, teacher 1 clearly said that she likes the multiage classroom. She has also been working with it for longer and sees benefits in it. This class has been her class already a year longer than teacher 2. Teacher 2 on the other hand, danced around the question if she likes multiage classrooms a lot, trying to compliment the theory, to in the end finally admit that she does not like it. She has never really worked in multiage classrooms before and just joined the class this year.

Both teachers did not have any sort of training to be able to work in multiage classroom, which ties together negatively with what the research has shown that teachers should have some sort of training. Teacher 2 is frustrated, since she studied to become a teacher for a “normal” class, nothing in her studies gave her any sort of idea on what to expect in such a classroom and she finds it very difficult to navigate. Teacher 1 and teacher 2 did not seem to work a lot as a team and there seemed to not be much support between the two, but neither of them touched the subject much.

Student 1: Es ist pause [it is the break]

Teacher 2: Nein, es ist Pause wenn der Lehrer sagt es ist Pause [no, it is the break when the teacher says it is the break]

Student 1: Warum must du immer so genau auf die Zeit schauen? [why do you always have to look so closely at the time]

Teacher 2: weil ich möchte, dass ihr arbeitet [because I want you to work].

It seems like students have less respect for teacher 2 and she has less authority. She seems to struggle with classroom management, and she has tried lots of approaches. During our interview and talks, it was clear that she was frustrated and lost. Teacher 1 has been in the classroom for much longer and seems not as pessimistic, however she is also not satisfied with how things are in the classroom at the moment.

They have been trying different things throughout the year to make the class work better. Teacher 2 tried making several different plans, some weekly, some monthly, but they all seemed to fail. However, there seems to be a discrepancy between the two teachers regarding the reason why they failed. Teacher 1 said that it was because they proved to be too much work and students were not that interested in them. Teacher 2 said that the reason was that the director of the school contacted her and told her that she did not want them to work with any plans. However, teacher 2 later in the interview mentioned how other classrooms work with plans and there it seemed to not be a problem.

Teacher 1 has tried other plans as well, not only in this classroom but throughout her whole teaching career, she says that they still have not found the right plan. She wants a plan that depicts what students have worked on, what they are working on, what they want to work

on and everything that they have learned but for them to go into depth about it and it not taking that long for the students to fill. More about this in the discussion section.

They also normally have the “Kindersprechstunde” (children consultation time). This is a very important meeting, where students talk to the teachers and vice versa about goals and progress. However, this has not been taking place. The teachers blamed time management and the number of substitutions they had to take over this school year.

As mentioned in the previous section, teacher 2 believes that students should have less freedom and the teacher should guide them more. This will also be gone into more detail in the discussion section. At the same time, she believes that the expectations are too low as well. Students do not really have to do anything and there are no consequences according to her.

Teacher 2: und aber kinder müssen ja auch wissen was und woher soll ein kind wissen welches spiel zu welche kompetenz hat das wir also wir bemegeln das dann manchmal das die kinder sich zu leichte sachen nehmen aber woher soll den ein kind wissen was jetzt gut wäre als nächstes spiel [and also children need to also know what and how should a kid know what game belongs to what competence since we sometimes complain that students take things that are too easy but how should a kid know what game would be good to play next].

Teacher 2: weil sie eigentlich es gut schaffen ein jahrlang auch sich rum zudrücken und auch mal ein ganzen tag nichts zu machen und ich glaube, eben das was ich hier oft erlebt habe so ne ich habe kein bock drauf also so dieses freie und offene führt halt auch dazu dass sich sachen vorbei das manche kinder nicht alle sachen dann einfach nicht gemacht haben es passiert ja nichts weil ich darfs mir quasi frei aussuchen und wählen und dann passiert ja nix also mache ichs halt nicht [because they are able to just pretend for a whole year and just not work for a whole day and I believe that that what I have often seen here is no I don't want to do that so this freedom and openness leads also to students being able to just not do things students not doing everything nothing happens if they don't because I can choose it freely so then nothing happens so I don't do it].

This aspect was also discussed previously and seems to be a noticeably big problem in this classroom. There seems to be no pressure but also no direction. Teacher 2 believes that what this classroom needs is more structure. The idea of a better structure seems to me to be

pointing in the right direction and they tried with all the different plans, but they still have not found something that works well.

Teacher 2: man müsste erstmal generell ne struktur schaffen und die einüben und am anfang wirklich als ich glaube für diese offenheit brauchst auch viel struktur [one should first create a general structure and learn it and at the beginning really, I believe for this openness there is a need for a lot of structure].

4.2. The Class

4.2.1. Working Together

Teacher 1 believes that there are students that are productive and motivated, but they are very quiet and rather in the background and there are other students that are easily distracted or are very loud which disrupts the whole class environment. She also believes that there are many students that are individualistic, others that are a bit meticulous about who they want to work with or spend their time with. There are also students that have their territory and do not want to let others in. She does not know why this is, but she believes that this class is filled with students that work alone.

There are three main working scenarios in this classroom. All students working on their own or in very small groups of like two to four people, group work created by one of the teachers or whole class interactions. While students work individually teachers tend to use to opportunity to work with individual students or with a small group of students.

Regarding the whole class interactions, they are always quite similar. They mostly take place with the students sitting in a circle on the carpet. Every Monday morning for example, students meet on the carpet and tell the other students about their weekend. Before lessons they sometimes also meet in a circle to brainstorm about ideas on what to work on, for the teacher to tell the students what they are allowed to work on or to discuss something with the teacher.

This does not happen that often, but when there is a whole lesson intended for the whole class to work on the same topic, students also meet in the circle, are introduced to the new topic, and discuss it, before working on the assignment. It is also a place the teachers to review topics with small groups. A big part of these meetings is the “Klassenrat” (class council). This is a student led activity where students discuss problems in the classroom and where they try

to find solutions together. An example of this was when they were discussing where the students leave their backpacks.

Student 1: die stehen überall rum [they are spread all over the place].

Some students agree and name more problems.

Student 2: die reservieren sich die plätze mit den schulrängen [they reserve places with the backpacks].

Others try to suggest solutions.

Student 3: die könnte man die unten den tisch schieben [one could just put them under the table].

This is an interesting meeting, where solutions are not always found, but it makes the students talk to each other and try to find solutions together. Another aspect that is always a topic during the school council is the distribution of the different class duties, like cleaning the board or putting the chairs up. Students decide who does what and this seems to work quite well. However, after observing the class for a few weeks, the class duties seem to not be important, since almost none of them were being done.

After a lesson, they also sometimes meet on the carpet to discuss how the lesson went or to share what they have been working on. This is one of the opportunities where materials could be introduced, but there were not many materials or games being introduced, as discussed before. In general, during the time on the carpet, the teachers try to encourage students to correct each other, to find solutions and give each other feedback. This is, however, not always effective.

Another two whole class interactions which foster the feeling of belonging attempted by the teachers were the whisper message and the birthday candle wishes. The first one being a way to foster friendship in which the teacher whispered something nice to one of the students at the end of the day, this student then had to go to another student and whisper something nice in their ear before they went home, and this went on until all the students were allowed to go home. I think this is a nice idea, however it is dangerous because neither I nor the teacher knew what was whispered in the end and there is no guarantee that what was being said was something nice. On the other hand, the birthday candle wishes are as simple as it sounds. When a student had a birthday, there was a birthday candle that would go around the class and each

student said a wish aloud of what they wished the birthday girl or boy. An interesting aspect about this is that one of the most common wishes was for them to have helpful friends, which is interesting, considering that it was observed that these students do not help each other that much.

According to teacher 1 multiage classrooms provides the opportunity for students to pair up with students from different grades. This could be beneficial for students if said interactions are positive and productive. An example of this is how older students can teach younger students something that they might not know yet. This sort of interaction is one of the goals of multiage classrooms, however, these sorts of interactions are not as common.

Students holding two cubes in his hand.

Student 1: schau mal der ist doch viel schwerer [look this one is way heavier]

Student 2: ja weil der eine aus holz ist und der andere aus plastik. Der eine ist auch voll und das andere hohl [yes because one is made out of wood and the other one out of plastic. One is full and the other one is hollow].

Moving on to how students interact with each other and work during free working time. Students have an impact on each other's progress since they compare how far they have worked, and this makes them want to work more. They also are inspired from each other when they see other students working on something they would also like to work on. They talk about their level of concentration out loud as well as compare how far along they are with other student, by also checking other students' workbooks. They comment on drawings, calling them pretty and give each other suggestions. Students tend to think out loud once there are students that are prone to help sitting nearby. Students sometimes create similar products when they are sitting close to each other, this is especially apparent when there is drawing or coloring involved.

When they are sent to retrieve something or ask something somewhere else, they ask to take a friend. There are some signs of friendships, but not as many as I thought, and students do not seem to mix that much in between grades. Students do normally sit near the same students most of the time, but the interactions they have are not always productive ones. They are normally very loud. They cheat during games. Students often start talking about school related stuff but quickly lose focus and divert in a different direction.

Students were supposed to be talking about what to do to help with global warming, this group started to talk about using the bike more but then.

Student 1: Ich bin schonmal mit dem Fahrrad 15 km gefahren [I have already biked for 15km]

Student 2: Was? [what?]

Student 3: Ich schon 15 meter [me 15 meters]

Student 1: milimeter? [milimeters?]

Student 2: km

And now they are talking about something else.

The students do work rather independently and there are not many crossovers between grades. Students seem to work mostly on their workbooks alone and there is not much help or talks happening other than about topics regarding something other than school. I also observed the use of bad language and some bullying. Students screaming at each other. They distract each other by moving object and calling each other's names for no reason. They seem to constantly be searching for things to be distracted with. As an example, one time they were distracted by me, but after I ignored them for a bit they were distracted by a pen. Students try to distract each other not on purpose and on purpose. It seems like they kind of sabotage each other. There are students that it seems like they make it their hour goal to distract as many students as possible. Some examples of things that distract the students: fights, loud talks, watching what other students are doing, what is happening outside, people passing by, materials, pens, noises like fart noises made with their mouths singing etc., bullying, drawing something on themselves or someone else.

When they play a game together, they argue about the rules. When helping each other they sometimes encourage each other to find the right answer on their own, but most times they are just given the answer. Students sometimes are ignored by other students when they say something or ask for something. The language they use with each other is sometimes not appropriate at all: "Student 1: Halte mal die Fresse du! [shut your gob]. Student 2: Ich habe keine Fresse, ich habe ein Mund. [I don't have a gob; I have a mouth!] Student 1: dann halt den Mund [then shut your mouth!] Student 2: poppelnasse [booger nose!]. Student 1: arshloch [asshole!]" There were many scenarios which were witnessed like this during the observation

period, where students instead of empowering each other, they were hindering each other. But the biggest one was the following one:

They were fighting outside about what one girl wrote and then threw it in the garbage then another girl proceeded to take it out of the garbage since she thought it was about her. The first girl says it is not about her and she should put it back in the garbage. This continues for a while. This distracts at least 10 students.

However, you can clearly hear the fight that is happening outside.

Student 1: da ist es ganz schön laut da draußen [it is quite loud out there]

Student 2: ja, die x hat x was geklaut [yes, x stole something from x]

Student 1: was den [what?]

Student 2: ein zettel oder sowas [a piece of paper or something].

This fight ended up affecting the entire class. It ended with the teacher having to stop the class and have a meeting with all the students. The teacher was angry and frustrated since the whole lesson, students were not working and just distracting each other until this fight happened and then nobody could concentrate anymore. There seems to be real classroom management issues, especially when teacher 2 is the one in the classroom.

4.2.2. Peer Support

Teacher 1 highlights how students could benefit from helping each other, since they can understand the subject matter better by explaining it to someone else. However, she feels like students in this classroom do not help each other that much from their own initiative. She does believe there are some students that do help other students.

Similarly, teacher 2 also agrees that there are a few students that help, but it is not a big amount. She believes there are students that always work together and therefore help each other by default. She does not see the bigger students helping the younger ones, which is what you would expect in a multiage classroom. Teacher 1 also thinks that the students that help each other are the independent ones that already know what they are doing. Meaning that students that need help do not receive or provide it.

Teacher 2: weil ich auchs gefühl hab die grossen haben kein bock den kleinen es zu erklären die kleinen trauen sich nicht teilweise die grossen zu fragen also also die erstklässler würden nie zu nem zu nem anderen hingehen und sich das trauen [because I also have the feeling that the older students do not feel like explaining it to the younger students the younger ones do not dare to ask the older ones so so the firstgraders would never go to another student and dare to].

Both teachers were also asked if they believed students help each other more in multiage classrooms or in “normal” classrooms. This question was of course referring to this specific multiage classroom and how it is functioning at the moment. Teacher 1 started by first saying that in general, if the conditions are right, why would a “normal” class have any less help provided between students than any multiage classroom. Regarding this class, she believes they do not help each other more than what would be expected in a “regular” classroom, she even said it would be a nice goal to strive towards.

Teacher 1: ich finde im moment helfen sie sich nicht mehr als in der regelklasse es wäre ein schönes ziel (...) ich finde sie könnten sich mehr helfen die grossen könnten mehr gucken wem helfe ich [I think at the moment they do not help each other more than a “regular” classroom it would be a nice goal (...) I think they could help each other more the older ones could look more who can I help].

Meanwhile teacher 2 believes that they do help each other more than a “regular” classroom, but that it is not worth all the extra work.

Teacher 2: ich glaube tendenziell vielleicht schon nen bisschen mehr (in Familienklassen) weil sie mehr schon bisschen mehr aber jetzt nicht so wie ichs mir vorstellen würde von der ja da nicht so wie ichs für schön empfinden würde oder wie ich denken würde dass es mehr wert hat also ähm mir fehlt so ein bisschen der hier so dem mehrwert das ich denke das rechtfertigt den aufwand sage ich mal für für alle [I think tending more towards a little bit more (in multiage classrooms) because they a little bit more but not as much as I would have thought yes not as much as I would have found nice or as much as I would have thought that it was more I am missing the value in order to make it worth the extra effort from everybody].

Most of what was seen of students helping each other was them borrowing each other utensils and materials as well as helping each other find things. They sometimes support each

other and teach each other tricks like how to color better. Teachers do their best in promoting students helping each other. When there are actual interactions of help however, from one of the students that does like to help the other students, it is quite inspirational.

One of the students drawing his strap work makes a mistake and gets frustrated.

Student 1: warte doch mal wo ist das Weiss [wait where is the white]

Says the girl sitting next to him she proceeds to color the mistake with white and beige colors.

Student 1: ist das gut so? [is it good like this?]

Student 2: ja [yes]

Student 1: Das ähnelt die Farbe schon oder? [This is close to the color, right?]

Student 2: ja [yes]

Student 1: ich zeige dir einfach wie ich das mache [I will show you how I do it]

Student 2: ich habe echt panick bekommen [I was really freaking out]

Student 1: das kriegen wir zusammen hin, ich helfe dir [We will make it together I will help you]

Student 2: ja [yes]

Student 1: ist das so besser? [is it better like this?]

Student 2: sieht richtig gut aus! [looks really good!].

However, this girl believes that helping is something good, but it is a waste of time for her. In multiple accounts when she spent most of the hour helping other students, she then proceeded to either tell the teacher or a friend of hers that she did not do much in that hour and that she was not productive at all. Some students also react negatively to help, being annoyed and shoving students away.

Student 1: jetzt lass mich [now leave me alone!]

A student trying to help another student.

Student 2: ich kann euch helfen [I can help you]

Student 1: nein, nein, nein [no, no no]

Student 2: aber so habe ich es gemacht [but this is how I did it]

Student 1: ja, so hast DU es gemacht [yes this is how YOU did it].

They sometimes also openly share that they have no intention of helping each other. “Teacher 2: wir wollen und doch unterstützen [we want to support each other]. Student 1: mein Typ ist nicht unterstützen [my typ is to not support]. Student 2: mein typ ist mich selbst zu unterstützen [my typ is to support myself]”. There were many situations in which students seemed to be helping each other, but in the end, they were just giving each other the answers to the questions or the math problems. They also lied to the teacher in multiple accounts regarding this.

She then proceeds to copy the answers from there. Teacher 2 shows up.

Teacher 1: du sagst es aber ich nicht vor, oder? [you are not telling her the answers, right?]

Student 1: nein, ich helfe ihr nur [no, I am just helping her].

A student shows another one how to use some math material. But the teacher created this scenario and asks the first student to show him tricks and how to use it. As soon as the teacher leaves, he tells him some of the answer and they do solve some of them together. After a few minutes, the first student stops telling him the answer even though the second is asking him to tell it to him. They go to the teacher when they finish the page together.

Teacher 1: super, dann kannst du ja die nächste weitermachen. [great then you can continue with the next one].

Student 1 looks at student 2: wie dumm kann man den sein! [how dumb can one be].

Student 1 noticed that if they finished faster, it does not necessarily mean that they get free time, which is why they were trying to finish quickly, and he was telling student 2 the answers.

4.2.3. Feedback

Teacher 1 said that she thinks that most students give each other feedback. When the teacher asks for feedback, they try to focus on positive feedback. There are phases during the school day where the teacher requires students to give feedback to each other. A typical feedback situation is when a student reads the kangaroo book. Feedback on regards of the content, the penmanship and the drawings are being shared by the classmates after every time the book is brought back to the classroom. Similarly, every time there is the student council, one student oversees moderating it. At the end of the student council, the rest of the classmates give feedback on how well of a job this student did moderating.

Apart from this, as mentioned by teacher 1, when they write their stories they are constantly talking and exchanging ideas. Especially when drawing and coloring, students give each other much feedback. They ask for their classmates' opinion and ideas. They also give each other encouragements, especially between friends.

Student 1: ich kapiere es nicht, bin dumm [I do not understand this, I'm dumb]

Student 2: du bist nicht dumm [you are not dumb]

Student 1: das kapiere ich nicht [I don't understand this]

Student 2: dann probiere erstmal was anderes, was hast du als nächstes? [then try something else first what do you have to do next?]

There is also nonverbal feedback, like a smile or a pat in the back. Students sometimes give suggestions on how to perfect something, most times it is when teacher encouraged the interaction. Students give each other feedback on how things look.

One student looks at what another wrote in her notebook.

Student 1: also, das kann man gar nicht lesen, must du nochmal schreiben [so you cannot read that at all, you have to write that again].

She does.

Student 2: so jetzt könntest du es besser lesen? [so can you read it better now?]

Student 1: ja, jetzt kann man es lesen [yes now one can read it].

This is an example of such feedback being well received, even though the student did not ask the other one for their opinion. This is not always the case. Sometimes the feedback might be unwanted and not well received. “Student 1: du sollts das jetzt wegpacken, du darfts da jetzt nicht arbeiten [you should put that away, you are not supposed to have that out now]. Student 2: von dir lasse ich mir nichts sagen [you can’t tell me anything]” There were also examples of how sometimes the feedback did not seem necessary or helpful. “A younger student drew three suns, and an older student told him that he shouldn’t have drawn the rays, because suns don’t have visible rays like that.” “Two students coloring a mandala. Student 1: du must es doch genau malen, du malst es doch nicht genau [you are supposed to color it properly, you are not coloring properly]. He was going a bit outside the lines.” Interactions like this make the use of feedback not beneficial but rather harmful and creates insecurities between the students.

Teacher 1 is unsure if the feedback they give each other is genuine when teachers ask them to give each other feedback. I had asked her that question after noticing feedback sentences that would be repeated a lot and it seemed like students were just repeating sentences. She had never thought about it before, but I made her start questioning it, since the feedback does not always fit the presented work. However, there are examples where students feedback has led to improvement.

Teacher 2 believes that real feedback is something else, that students are learning what feedback is and how to give it, but she thinks students are not capable of giving each other feedback yet.

4.2.4. Group Work

Students tend to work mostly alone, but sometimes they work on the same thing at the same time. Work in bigger groups is normally the result of the teacher creating this situation. They also sometimes work in small groups, but from what I have observed this leads to not much work being done.

Teacher 1 also mentioned that there is not much group work at the moment, but that she finds it very important. She believes students need all three work constellations. Teacher 2 agreed with this, but she made the generalization that there is not much group work in multiage classrooms in general. In this classroom however, she said that not only group work, but every form of cooperation is not happening enough in this classroom. Are they working together or

just sitting next to each other? It is important to be able to work concentrated and alone, but pair and group work are also important. Teacher 2 also believes that she must force the students to mix. Since I found it hard to keep track on what grade students were I can neither confirm nor deny this statement. However, I did notice that most students work on their own and that when they work in pairs or sit next to each other it is always the same students. There are not many changes in who interacts with who.

Teacher 2: wenn ich sage wie wie letzte woche gruppenarbeit da ist in jeder gruppe ein einser ein zweier ein dreier wenn ich das nicht mache dann sehe ich das nur selten das jetzt habe noch nie jetzt ein drittklässler mit nem erstklässler von sich auch arbeiten sehen [If I say like like last week the groupwork there was in every group a first grader, a second grader and a third grader if I don't do that then I don't see it that often I have never seen a third grader with a first grader working together out of their own initiative].

When students do work in groups, there seems to be a tendency to where students end up working alone anyways and then, they try to combine what they have each worked in individually, which leads to fights and disagreements. They also do not agree on how to work together.

A student is coloring the group name on the poster they were making.

Student 1: du ruinierst das uns [you are ruining it for us].

Student 2: was mache ich jetzt gerade schlimmes? [what am I doing now that is so bad?]

Student 1: lass doch [leave it]

Student 2: wir probieren das gerade schön zu malen aber es klappt nicht [we are trying to color it prettily, but it is not working].

They fight over who does what. Some groups take a while to find solutions on how to work together, other resort to basics like rock paper scissors or girls vs boys. In one example they had to draw a picture together, they had to divide the paper into quadrants so that they would not fight anymore and even then, there were arguments. "They keep saying things like. Student 1: nicht in meins rein [not in mine]. Student 2: hey das ist doch mein Bild [hey that is my picture]".

4.2.5. Teachers' Perspective

Teacher 1 believes that there is a lack of social skills in this classroom. There is sometimes a feeling of belonging, but it is not always there. They had a short excursion as a class to a lake and she felt during that day that they had finally reached a point of belonging, but after the holidays it went back to how it was. Normally a class like this allows students to interact with other students that they would not normally interact with in a normal class, which allows for different social skills, but in this classroom, this has not happened much.

Teacher 2 believes that students do not usually mix, they spend most of their time either alone or with students of their own grade. She thinks if they do not have more students in their own grade, the number of friends they can have, is limited. She said the example of the two first grader girls, that they only have each other and when one is sick or they have a fight, they are alone. She feels that some students would be better in a normal classroom with more students of their own age.

She sees the potential for unique interactions and how the older ones could help the younger ones, but she has been told by some parents that the younger ones are rather scared of the older ones. The older ones do not want to be bothered by the younger ones and these in return are not brave enough to ask for help.

Teacher 1 mentioned how Covid is a big part of all this, students did not see each other's faces, they were not allowed to meet and there was not a chance to create a bond. Parents also had different opinions on how to deal with the situation and this led to students being in between disagreements and fights. Teacher 2 said that there were tons of activities that could not be carried out because of covid, activities that would normally bond a group like singing or baking, could not take place.

Teachers 2 wonders if there is a feeling of belonging in the classroom since they all work alone in different things. Teacher 1 is leaving at the end of the school year and parents seem to not be happy about that so there seems to be some tension there as well. "Student 1: Meine mama findet es unverschämmt, dass die Lehrer wieder getauscht werden [My mom finds it outrageous that the teachers will be changed again]".

Teacher 1 told me that in the future there will be more work in the hallways and more interactions with other classes. The whole school will have the same materials again and the same schedules so that they can interact with each other more and help each other more. They

will also place more importance on the children consultation time, where the students meet regularly with the teachers individually and talk about their progress and their goals. They will no longer have grades, so it is essential that this takes place. There has been some talk about a competence plan, so they are planning to try that out.

Overall, teacher 1 reminded me that after all the class dynamics will change during the next school year. Students will take new roles and there will be new students joining the classroom. So, there is a possibility that the classroom interaction will improve and the possibility for group work will increase. We finished teacher 1's interview with a very fitting sentence. "Teacher 1: neues Jahr neue chance [new year new chance]."

5. Discussion

The analysis of the observations and teacher interviews shows that there are some discrepancies that are causing trouble.

First, I find it very interesting that both teachers highlight how important it is for them that students are independent and make their own decisions. However, the students have no real overview or idea on where they are headed. Students do not have access to the competences which they are trying to achieve, so under what basis are they going to make decisions. Normally they would have the regular talks with the teachers, but these did not take place regularly during this school year as mentioned before.

Looking at the material, there seem to be many workbooks, which both teachers did not like. Working with those is not a way of individualized work in the sense of content; while teachers may allow students to skip parts of it or repeat something else, the content is technically still the same for every student. Therefore, as mentioned by teacher 2, all students can choose is where to sit, with whom to sit and when to work on something, but not so much the content. I have not seen the students making decisions based on their interests, hence not being really motivated with what they are doing. They are free to use other materials in the classroom, but they seem to not do so. There are not enough introductions to materials, and this could be due to the following reason. Teacher 1 is used to materials being introduced organically, in which her students learn the material well and introduce it to each other. In teachers 2's case, she is simply overwhelmed by the material, apart from her not necessarily liking the existing material. In addition to that, the material that teacher 1 has worked with before, was material she had chosen and selected, so she was very familiar with it. However

here, as mentioned before, all the materials and workbooks are the same in all the classrooms, which means the teachers did not specifically select them. Teacher 2 mentioned that the material does not seem to be attractive enough and my observations also confirm that students are not interested in them. So, students are mostly working on their workbooks.

Teacher 1 mentioned that she wanted the students to be more independent and come to class already with a project that they would like to work on. This would mean complete freedom. However, students do not take that offer. I think there are two reasons why this could be. One being that students have no idea what they are doing or for what they are doing it. Teacher 2 believes that this much freedom is too much, and that it is overwhelming the students. I believe it is the lack of direction that is overwhelming, this being the second reason. Staying with their workbooks brings a sense of security to the students and attempting a project in the way teacher 1 is expecting might be too high of an expectation. It also seems like students might see it as unnecessary extra work, instead of an opportunity for them. The only secure goal that students are receiving is to finish their workbooks, so why would they “waste” their time attempting a project like that?

Students working on their workbooks all the time, seems to be something they are not choosing, and it seems like many of the students are not motivated or interested in these workbooks. Thanks to the observations, it could be seen that a considerable number of the students are not working, they are easily distracted and try to wiggle their way around to just let time pass. In a sense I believe students are at the same time overburdened and unchallenged.

In addition to that, all this work with the workbooks leads to mostly individual work. Leading to students not interacting that much regarding content, but rather regarding distracting each other. They are bored. Even though there is also other work that students do, like writing stories, copying texts, and working on worksheets, but these are rather similar tasks to the workbooks. There is not that much group work, which both teachers deemed as important, unless the teachers make the students do it. But at the same time, teachers highlighted that group work was a challenge, since students seem to have a lack of social skills. This, as mentioned before, might still be repercussions from the Covid pandemic.

Regarding collaboration, students interact with each other mostly for things unrelated to what they are supposed to be working on. They chat with each other, they distract each other, annoy each other. They do help each other and give each other feedback, but it is not to the level I would have expected. As mentioned by teacher 2, it is not worth the effort at this point.

Additionally, the way students are working seems to guide them to work mostly independent, which then leads to them seeking interactions, but since the workbook does not need them, they just do not work. There are not that many possibilities for organic group work and when there is group work, it normally does not go all too well.

I think Covid played a major part in the social skills of these children and the way they have been working for the last few school years did not help with that. Both teachers mentioned the lack of social skills and the need for students that would provide role models for the others. It seems like most interactions are negative.

Comparing this classroom with the classroom I was in during my internship is also quite interesting, because I think teacher 1 did not change her approach much, and yet the outcome is different. This highlights that there are many factors that play a role on the effectiveness of such classrooms. The materials and workbooks seem to be one of the major differences between these classrooms. All these workbooks seem to have had a negative impact on the classroom and students' motivation. At the same time, I believe that teacher 1 relies a lot on using students as role models and to introduce materials. When there are positive role models in the classroom, students strive towards those, but when there are not any, then there is no direction or motivation to strive towards.

Regarding help, students do help each other, but in things like borrowing each other materials or helping to find something. There are only a handful of students that are putting time and effort into explaining to other students how to do something and then interestingly enough they see this as a negative thing, a waste of time. This shows that the lack of goals or the lack of knowledge about social skills being an important goal is a problem. As well the students not knowing that explaining content to someone else makes you understand it better and is in turn also beneficial for you.

There is much apparent freedom in this classroom. Students seem to be making decisions about their learning and choosing what and when to work on different topics. However, this is only the case if one does not look closer into what the students are doing and what they are working on. There is a big lack of structure. Students are lacking a sense of direction, clear goals, they lack the motivation because they are only working in their workbooks. When given the freedom to work on whatever they want but no direction, students might be overwhelmed like teacher 2 mentioned. They do not know many of the materials, they have no ideas on what projects they could create like teacher 1 wants them to and they end up

going back to their workbooks. These provide the students with a sense of security, but at the same time are quite boring for them. They come to school every day and work on their workbooks for around 4 hours a day every day, of course with exceptions sometimes. This classroom needs structure regarding providing more information to their students about their learning and regarding the material and proper use of them. But at the same time the teachers need more flexibility regarding the material and approaches they can have in their classrooms.

6. Conclusion and Implications

To conclude, teachers in this study have lots of time in the schedule where students can make their own decisions and be autonomous. However, the lack of transparency and openness with the students makes it hard for them to be able to know what they should do. The use of all those similar workbooks, which only provide some sense of false security to the students is not the right move in a class like this. The materials are not well known by the students either and are not interesting enough for the students to even bother to consider them. Students are not being independent or autonomous regarding their own learning, they are just deciding when to work and when not to, which in many cases is rather the second option. In this scenario, providing the students with no guidance and this much freedom without any set structure or clear goals does not benefit the students learning or feelings of accomplishment.

Regarding peer support, students would be open to provide more feedback and would be open to help each other more if there was more motivation involved. Since all the students are working independently all the time, there is no room or need for interactions. Students are allowed to help each other and provide feedback, but there is no need, since in the end they are not really working anyway. So having this much freedom and no direction, leads to students' interactions to have a negative effect, rather than a positive one, which is the goal of multiage classrooms. There was no difference between being in a normal class or a multiage classroom in the sense that they did not benefit from each other as much as it was expected.

Multiage classrooms require much structure and a clear plan. Students should be able to view and understand the expected outcomes and the goals that they will go through during their studies. Giving students freedom without direction is not a successful method. There should also be different paths that students can take to achieve their goals, the materials should be easily accessible and understandable, and students should receive enough support from the teachers guiding them through this process without explicitly telling them what to do. There

should be flexibility in the paths taken by different students and materials should be individualized to meet students' diverse needs.

There were not many benefits observed, like the ones highlighted in previous research. Which also shows the importance of the system working effectively to have said benefits. The lack of teacher training is also a big issue, which became clear with some of the comments shared by teacher 2. It is important for teachers to have training on how to implement a clear structure which helps their students to be autonomous and not be overwhelmed. This was also important in some of the research found about multiage classrooms and how this is key for their success.

Both teachers seemed to struggle in finding an appropriate structure and they tried different approaches without finding one that worked for the class. A good approach for future research would be to try to find and compare different approaches to multiage classrooms to find which ones are the most effective and create the most benefits for students, parents, and teachers. In this research it became clear that there is lack of guidance not only for students, but also for teachers. There needs to be more research done in multiage classrooms in general, there is a definite gap there and it should be researched more. With this thesis I hope to have made the gap a little bit smaller, introduce the topic to people that might not be familiar with the subject at all and spark interest in investigating it further.

7. References

- Adomat, D. S. (2014). Exploring Issues of Disability in Children's Literature Discussions. *Disability Studies Quarterly*, 34(3).
- Arnold, S. B. (1998). Multiage assessment: One school's plan. *Primary Voices K-6*, 6(2), 36-.
- Block, D. (2015). LAS AYUDAS PERSONALIZADAS COMO RECURSO DE ENSEÑANZA DE LAS MATEMÁTICAS EN UN AULA MULTIGRADO: Un estudio de caso. *Revista Mexicana de Investigación Educativa*, 20(66), 711–735.
- Block, D. (2015). LAS AYUDAS PERSONALIZADAS COMO RECURSO DE ENSEÑANZA DE LAS MATEMÁTICAS EN UN AULA MULTIGRADO: Un estudio de caso. *Revista Mexicana de Investigación Educativa*, 20(66), 711–735.
- Broome, J. (2014). Factors Influencing Art Teachers' Perceptions of Multiage Classes. *Visual Arts Research*, 40(2), 79–89. <https://doi.org/10.5406/VISUARTSRESE.40.2.0079>
- Chang, Y. K., Chen, S., Tu, K. W., & Chi, L. K. (2016). Effect of autonomy support on self-determined motivation in elementary physical education. *Journal of Sports Science & Medicine*, 15(3), 460–466.
- Christiani, R. (2010). *Jahrgangübergreifend unterrichten: Ziele, Erfahrungen - Organisieren, Informieren - Differenzieren, Beurteilen*. Cornelsen Scriptor.
- De Laet, S., Colpin, H., Vervoort, E., Doumen, S., van Leeuwen, K., Goossens, L., & Verschueren, K. (2015). Developmental trajectories of children's behavioral engagement in late elementary school: Both teachers and peers matter. *Developmental Psychology*, 51(9), 1292–1306. <https://doi.org/10.1037/A0039478>
- Double, K. S., McGrane, J. A., & Hopfenbeck, T. N. (2020). The Impact of Peer Assessment on Academic Performance: A Meta-analysis of Control Group Studies. *Educational Psychology Review*, 32(2), 481–509. <https://doi.org/10.1007/S10648-019-09510-3>
- Henry, L. A., Castek, J., O'Byrne, W. I., & Zawilinski, L. (2012). Using peer collaboration to support online reading, writing, and communication: An empowerment model for Struggling readers. *Reading and Writing Quarterly*, 28(3), 279–306. <https://doi.org/10.1080/10573569.2012.676431>

- Hoffman, J. (2003). Multiage teachers' beliefs and practices. *Journal of Research in Childhood Education, 18*(1), 5–17. <https://doi.org/10.1080/02568540309595019>
- Juárez Bolaños, D., & Lara Corro, E. S. (2018). Procesos de enseñanza en escuelas rurales multigrado de México mediante Comunidades de Aprendizaje. *Tendencias Pedagógicas, 31*(2018). <https://doi.org/10.15366/TP2018.31.009>
- Kaldi, S., Filippatou, D., & Govaris, C. (2011). Project-based learning in primary schools: Effects on pupils' learning and attitudes. *Education 3-13, 39*(1), 35–47. <https://doi.org/10.1080/03004270903179538>
- Kasten, W. C. (1998). Why does multiage make sense? Compelling arguments for educational change. *Primary Voices K-6, 6*(2).
- Kaur, A., Hashim, R. A., & Noman, M. (2015). Teacher autonomy support intervention as a classroom practice in a Thai school: A self-determination theory perspective. *Journal for Multicultural Education, 9*(1), 10–27. <https://doi.org/10.1108/JME-07-2014-0033>
- Kivunja, C. (2014). The Urgent Need to Train Teachers for Multigrade Pedagogy in African Schooling Contexts: Lessons from Uganda and Zambia. *International Journal of Higher Education, 3*(2).
- Kucita, P., Kivunja, C., Maxwell, T. W., & Kuyini, B. (2013). Bhutanese stakeholders' perceptions about multi-grade teaching as a strategy for achieving quality universal primary education. *International Journal of Educational Development, 33*(2), 206–212. <https://doi.org/10.1016/J.IJEDUDEV.2012.05.009>
- Levinsen, K. T., & Sørensen, B. H. (2019). Teachers' Designs for Learning Practices when Designing for Students as Learning Designers. *Designs for Learning, 11*(1), 30–39. <https://doi.org/10.16993/DFL.111>
- Luschei, T. F., & Zubaidah, I. (2012). Teacher training and transitions in rural Indonesian schools: A case study of Bogor, West Java. *Asia Pacific Journal of Education, 32*(3), 333–350. <https://doi.org/10.1080/02188791.2012.711241>
- Marshak, D. (1994). *From Teachers' Perspectives: The Social and Psychological Benefits of Multiage Elementary Classrooms*.

- Mykkänen, A., Perry, N., & Järvelä, S. (2017). Finnish students' reasons for their achievement in classroom activities: focus on features that support self-regulated learning. *Education 3-13*, 45(1), 1–16. <https://doi.org/10.1080/03004279.2015.1025802>
- Nalipay, M. J. N., King, R. B., & Cai, Y. (2020). Autonomy is equally important across East and West: Testing the cross-cultural universality of self-determination theory. *Journal of Adolescence (London, England.)*, 78(1), 67–72. <https://doi.org/10.1016/j.adolescence.2019.12.009>
- Nourayi, K. (2017). The specific obstructions and implications of multi-grade classes. *Journal of Fundamental and Applied Sciences*, 9(1S), 525. <https://doi.org/10.4314/JFAS.V9I1S.710>
- Oelhaf, J. (2008). *Die Mischung machts! ein Handbuch für Lehrkräfte und Eltern über den jahrgangübergreifenden Unterricht*. Westermann.
- Raggl, A. (2015). Teaching and learning in small rural primary schools in Austria and Switzerland-Opportunities and challenges from teachers' and students' perspectives. *International Journal of Educational Research*, 74, 127–135. <https://doi.org/10.1016/J.IJER.2015.09.007>
- Rambaran, J. A., van Duijn, M. A. J., Dijkstra, J. K., & Veenstra, R. (2019). Peer victimization in single-grade and multigrade classrooms. *Aggressive Behavior*, 45(5), 561–570. <https://doi.org/10.1002/ab.21851>
- Reed, S. E., & Westberg, K. L. (2003). Implementing Enrichment Clusters in a Multiage School: Perspectives from a Principal and Consultant. *Gifted Child Today*, 26(4), 26–29. <https://doi.org/10.4219/GCT-2003-118>
- Ritland, V., & Eighmy, M. (2012a). Multiage Instruction: An Outdated Strategy, Or A Timeless Best Practice. *The European Journal of Social & Behavioural Sciences*, 2(2), 169–177. [https://doi.org/10.15405/FUTUREACADEMY/EJSBS\(2301-2218\).2012.2.4](https://doi.org/10.15405/FUTUREACADEMY/EJSBS(2301-2218).2012.2.4)
- Russo, J. A. (2019). PEER TUTORING IN THE ELEMENTARY CLASSROOM: PUTTING (A) THEORY INTO PRACTICE. *McGill Journal of Education*, 53(3). <https://doi.org/10.7202/1058419AR>
- Santos, J. R. dos. (2019). Education in rural areas, Multigrade classrooms and Teacher Training. *Revista Brasileira de Educação Do Campo*, 4, e3834-26.

- Sermier Dessemontet, R., & Bless, G. (2013). The impact of including children with intellectual disability in general education classrooms on the academic achievement of their low-, average-, and high-achieving peers. *Journal of Intellectual & Developmental Disability*, 38(1), 23–30. <https://doi.org/10.3109/13668250.2012.757589>
- Shalom, Dr. M. (2021). Vision versus reality in a multiage class from an international perspective. *JETEN (Journal of the European Teacher Education Network)*, 16(2021), 46–71.
- Shareefa, M. (2021). Using differentiated instruction in multigrade classes: a case of a small school. *Asia Pacific Journal of Education*, 41(1), 167–181. <https://doi.org/10.1080/02188791.2020.1749559>
- Taole, M. J. (2020a). Diversity and inclusion in rural South African multigrade classrooms. *International Journal of Inclusive Education*, 24(12), 1268–1284. <https://doi.org/10.1080/13603116.2018.1520310>
- Tourigny, R., Plante, I., & Raby, C. (2020). Do students in a looping classroom get higher grades and report a better teacher-student relationship than those in a traditional setting? *Educational Studies*, 46(6), 744–759. <https://doi.org/10.1080/03055698.2019.1663152>
- Veenman, S. (1996). Effects of Multigrade and Multi-Age Classes Reconsidered. *Review of Educational Research*, 66(3), 323. <https://doi.org/10.2307/1170526>
- Warnick, B. R. (2012). Rethinking education for autonomy in pluralistic societies. *Educational Theory*, 62(4), 411–426. <https://doi.org/10.1111/J.1741-5446.2012.00454.X>
- Waterschoot, J., Vansteenkiste, M., & Soenens, B. (2019). The effects of experimentally induced choice on elementary school children’s intrinsic motivation: The moderating role of indecisiveness and teacher–student relatedness. *Journal of Experimental Child Psychology*, 188, 104692–104692. <https://doi.org/10.1016/j.jecp.2019.104692>
- Wei, D., Zhang, D., He, J., & Bobis, J. (2020). The impact of perceived teachers’ autonomy support on students’ mathematics achievement: evidences based on latent growth curve modelling. *European Journal of Psychology of Education*, 35(3), 703–725. <https://doi.org/10.1007/S10212-019-00437-5>