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# **EDUCATION POLICY | RESEARCH ARTICLE**

# How teachers handle differentiation dilemmas in the context of a school's vision: A case study

Marijke van Vijfeijken<sup>1\*</sup>, Tamara van Schilt-Mol<sup>1</sup>, Linda van den Bergh<sup>2</sup>, Ron H.J. Scholte<sup>3</sup> and Eddie Denessen<sup>3,4</sup>

Abstract: Teachers need to make choices about how they distribute their time and support, and a school's vision may support teachers in making these choices. This study aimed to gain insight into how individual teachers-each with their own beliefs about fair classroom differentiation-handle differentiation dilemmas in the context of their school's vision. A case study was conducted at one primary school with a well-defined vision on classroom differentiation. In this school, quantitative and qualitative data were collected: 25 teachers filled in a questionnaire and four teachers sat for in-depth interviews. Teachers had varying beliefs about differentiation. Some beliefs were in line with the school's vision: these teachers preferred common learning goals and considered it fair to provide extra support to disadvantaged students. However, other teachers preferred individual learning goals and considered it fair to give every student an equal amount of support. Teachers whose vision was similar to that of the school perceived the differentiation dilemmas to be less problematic than teachers whose visions differed from the school's vision. A school vision on fair differentiation may help in making joint agreements, but it does not eliminate differentiation dilemmas. Teachers should discuss the differentiation dilemmas to achieve a shared vision on them.

Subjects: Educational Research; Education Studies; Inclusion and Special Educational Needs; Philosophy of Education; Primary/Elementary Education; Sociology of Education; Teachers &Teacher Education; Classroom Practice; Curriculum Studies; Education Policy & Politics

Keywords: school vision; classroom differentiation; fairness; distributive justice; differentiation beliefs

#### 1. Introduction

A school's vision on education is a moral concern because a vision has consequences for students' learning and may affect their future (Brighouse et al., 2018). A school's vision is meant to unite teachers through the direction and meaning it provides to achieve the school's goals (Geijsel, 2015). According to Gurley et al. (2015), many studies suggest a missing link between a school's vision and the reality in that school's daily classroom practice. However, little research has been conducted on school vision and how it can guide teachers' daily practice (Ransom & Vlachopoulos, 2021).

This study focuses on a school's vision on classroom differentiation because such a vision has great moral significance (Brighouse et al., 2018; Deunk et al., 2015) that can lead to ethical differentiation dilemmas when teachers make practical decisions about how to differentiate (Chen et al., 2017; Flett & Wallace, 2005; Godor, 2021; Van Vijfeijken et al., 2021). Ethical







differentiation dilemmas are especially evident in practical decisions regarding the distribution of instruction time and attention among students (Aftab, 2015; Campbell, 2004). A teacher might ask: "How much extra time should I allow myself to spend with disadvantaged students?" and "Should I compensate for a lack of parental support?" A well-considered answer to this type of question appeals to the teacher's beliefs about fairness (Brighton et al., 2005). However, fairness does not necessarily mean the same thing for different teachers, so teachers in the same school might hold different ideas about differentiation dilemmas.

A school's vision may support teachers in solving the differentiation dilemmas they face. To gain a better understanding of how a school's vision might play a role in the way teachers handle differentiation dilemmas and teachers' perspectives on fairness, a case study was conducted in a primary school. It focused on individual teachers, each with their own beliefs about differentiation and fairness. Before the study is described in more detail, the literature review will elaborate on the two key concepts of this study: ethical differentiation dilemmas and school vision.

#### 2. Literature review

#### 2.1. Ethical differentiation dilemmas

Teachers use classroom differentiation to address the diverse needs of all students in order to maximize the learning opportunities for each student in the classroom (Tomlinson, 2014). However, there are resource limitations in terms of time, attention, and support for addressing students' diverse needs. These limitations derive from the simple fact that teachers cannot do everything in a classroom of 20 to 30 students (Aftab, 2015; Marshall, 2016). Teachers, like other professionals, need to make choices about distributing their resources such as time, attention, and support (Godor, 2021). Choices about the distribution of scarce resources in education are morally important because they influence students' learning opportunities. Receiving fewer resources to learn can reduce a student's learning opportunities and vice versa. Resources affect how successful a student's school career will be. Hence, a decision on how to allocate resources may affect students' futures and may influence which students have better futures than others (Brighouse et al., 2018).

The fair distribution of educational resources among students is an ethical<sup>1</sup> matter for teachers. As Chen et al. (2017, p. 517) state:

Teaching is a moral practice, and the teacher is an ethical person, no matter which subject the teacher is specialized in. It is vital for teachers to have not only a conscious grasp of relevant ethical principles, but also adequate application of these principles to specific contexts with their practical knowledge.

Since there is no golden rule regarding fairness, teachers must find their own balance between a variety of interests. This often results in practical dilemmas (a keyword in *ethics*, see for example, Levinson et al., 2016) where no right choice is available and one has to make a compromise (Chen et al., 2017; Flett & Wallace, 2005). Differentiation dilemmas can therefore be considered ethical dilemmas.

In this study, differentiation dilemmas are related to fairness, also called justice. Fairness is often associated with principles of distributive justice like "equality in terms of equal resources," "equality in terms of equal outcomes," "equity" and "need" (Resh & Sabbagh, 2016). These principles are concerned with the distribution of the conditions and goods that affect individual well-being (Deutsch, 1975; Espinoza, 2007).

Each principle represents a value that a teacher may consider the fairest thing to do in a given situation (Resh & Sabbagh, 2009). For instance, equality in terms of equal resources can be considered fair in the context of dividing teachers' scarce time and attention among students in



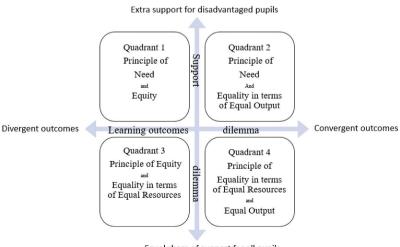
the classroom. But in the context of increasing equal learning opportunities, a teacher might believe it is fairer to provide extra support to meet the needs of disadvantaged students. In addition, each principle can be translated into several differentiation choices that can be contrasted (Resh & Sabbagh, 2016; Thorkildsen, 1994) and that in fact reveal the ethical differentiation dilemmas that teachers face and the different perspectives on fairness. Based on the principles of distributive justice, two ethical differentiation dilemmas can be described (see, Figure 1): a support dilemma and a learning outcome dilemma. Each dilemma represents different principles of distributive justice.

The y-axis in Figure 1 represents the *support dilemma*: how equally are students entitled to receive the teacher's support? On the one hand, a teacher might believe that all students, regardless of their backgrounds, are entitled to the same share of time and support at school. This belief fits the principle of equality, described in terms of *equal resources* (Cropanzano & Molina, 2017; Wright & Boese, 2015). However, this principle might harm disadvantaged students as there is no compensation for their disadvantaged circumstances. As a result, their educational growth and development may lag even further behind that of their more privileged peers (i.e., learning outcomes may diverge).

On the other hand, a teacher might believe that disadvantaged students are entitled to more time, attention and support of their teacher than their more privileged peers (Brighouse et al., 2018; Mijs, 2016; Thorkildsen, 1994). This belief fits the principle of need and justifies inequality based on needs (Wright & Boese, 2015). Students from families with a low socioeconomic status (SES) are more in need than students from families with a middle or high SES because they have less access to education-related financial, social, and cultural capital that could be used to prepare children for school and support them in their schooling. These disadvantaged circumstances of low SES students often influence the starting point of these students as well as the quality of home support and students' performance throughout their schooling (Bradbury et al., 2011; Francis et al., 2019). In education, the principle of need emphasizes students' different starting points and the need to compensate for disadvantaged social standing to provide a "real" equal opportunity for equal outcomes (Kellough, 2006; Resh & Sabbagh, 2016). This might mean that high-performing students from privileged backgrounds receive less time and attention, but the result may be that learning outcomes between students will grow closer together (i.e., learning outcomes may converge).

The x-axis in Figure 1 represents the *learning outcome dilemma*: How equal are the desired learning outcomes? On the one hand, a teacher might want to set personal goals for each student

Figure 1. Conceptual Framework.





or groups of students and expect learning outcomes to diverge (Deunk et al., 2015). This belief fits the equity principle. In line with this principle, teachers provide students with instruction and learning paths based on their individual learning needs and prior achievements. The fundamental idea underlying this principle is that fairness occurs when rewards are distributed in proportion to one's individual merits (e.g., effort, contribution, ability and outcomes) and not based on one's socioeconomic or ethnic background (Arrow et al., 2018; Wright & Boese, 2015). In the context of education, equity in its purest form means that the deeper a student's motivation—or the more outstanding his or her performance or results—the greater the rewards (Espinoza, 2007). With regard to differentiated instruction, this principle legitimizes the practice of giving additional challenging learning tasks to high-achieving students or investing resources to set up a separate class for gifted students as a kind of reward (Merry, 2008).

On the other hand, a teacher who wants to provide all students with an equal opportunity to achieve the learning goals might set common learning goals for all students and expect learning outcomes to converge (Condron, 2008; Deunk et al., 2015; Francis et al., 2019). This belief fits the equality principle in terms of equal output. In line with this principle, a teacher may believe that students who have mastered a topic should not continue with a new topic but should do other activities, such as helping fellow students. The learning pace should be the same for all students.

Combining the two dilemmas creates four quadrants (see, Figure 1). Each quadrant refers to two principles of distributive justice that teachers might prefer. In other words, each quadrant refers to a different perspective on fairness with regard to differentiation. Depending on the combination, classroom differentiation is shaped to contribute more or less to closing the achievement gap between students. For example, in Quadrant 2, both principles (need and equality in terms of equal output) lay the focus on narrowing the achievement gap between students (convergent learning outcomes). In Quadrant 3, both principles (equity and equality in terms of equal resources) focus on offering each student the most appropriate learning opportunities and divergent learning outcomes. Quadrant 1 assumes a focus on divergent learning outcomes combined with extra support for students' disadvantaged circumstances. This might lead to less divergent outcomes than Quadrant 2 represents. Quadrant 4 assumes a focus on convergent learning outcomes without giving extra support to disadvantaged students. This might lead to less convergent learning outcomes because some students need more support from their teacher to achieve the learning goals.

Each combination of principles translates into typical classroom differentiation practices, and it can be assumed that teachers who share the same principles have similar methods of distributing time, support, and attention among their students. In contrast, when teachers have different principles, they might also have different differentiation practices. This might negatively affect the pedagogical climate in a school and the consistency of pedagogical administration in different classrooms. It might also create disputes about shared ethical values within a school team.

## 2.2. School vision

A vision can give teachers meaning and direction that unites them in achieving a school's goals (Fullan, 2016). A school's vision can be defined as a mental image of the ideal future school that clarifies setting organizational goals and provides direction (Gurley et al., 2015; Kools, 2020). In essence, a vision can act as a motivating force for sustained action to achieve individual and school goals (Kools, 2020). A vision requires teaching and learning to be designed and oriented toward it (Hargreaves & Fullan, 2015). In other words, it requires alignment. To align vision and practice, teachers need to work together, know how to improve teaching, and believe it can be improved (Fullan, 2016).

According to Bosker et al. (2021), schools need to have a vision on classroom differentiation and be clear about the aim of it. This study focuses specifically on the school's vision of classroom differentiation. In line with the above, a vision on differentiation is defined as an ideal that a school



pursues through classroom differentiation for teaching and learning. That ideal gives meaning and direction to the goals of classroom differentiation and how teachers can achieve these goals. As illustrated before, schools and teachers can have different goals for classroom differentiation (Bosker et al., 2021; Deunk et al., 2015; Smale-Jacobse et al., 2019). Compensating for educational disadvantages so all students can achieve the minimum learning goals is a different goal than wanting to adapt teaching to each student's personal interests and level. Earlier, these goals were discussed in relation to the ethical dilemmas and principles of distributive justice (see, Figure 1). A school's vision on differentiation provides a context that has implications for teachers' differentiation practice.

## 2.3. Research questions

Teachers hold different beliefs about which aspect of the dilemmas is the fairest because fairness is rooted in and stems from teachers' personal beliefs systems (Brighton et al., 2005; Campbell, 2004; Godor, 2021). Research has shown that personal beliefs guide teachers' educational and pedagogical actions or decisions (Cross, 2009; Pajares, 1992). However, teachers' actions and decisions also might be guided by the school's vision that is acknowledged in the school. Most research into teachers' differentiation beliefs focuses on individual teachers without involving their school context. Little research has addressed schools' visions and how they may guide teachers' daily practice (Ransom & Vlachopoulos, 2021). The aim of this study is to enrich the understanding of the teaching profession by exploring the ethical dimension of how teachers reflect and act with regard to described differentiation dilemmas in the context of the school's vision. The findings may help to support school teams in developing shared frameworks for differentiation.

This research seeks to address the following questions:

- (1) What are teachers' beliefs about fair classroom differentiation?
- (2) How do the teachers' beliefs about fair classroom differentiation relate to the school's vision?
- (3) How does the school's vision on classroom differentiation play a role in handling the differentiation dilemmas?

#### 3. Methodology

A case study approach was used to address these research questions. Case studies are appropriate to address the "how" or "why" questions concerning a phenomenon or interest (Yin, 2009). The phenomenon of this study is the beliefs about differentiation and fairness held by individual teachers who work at a school with a vision on differentiation that might or might not be aligned with the teachers' vision. An essential component of a case study design is defining the case (Yin, 2009). Therefore, before the study began, the researchers gained a detailed understanding of the school's vision on classroom differentiation. Based on this initial exploration, they determined the position on the graph of the conceptual framework (see, Figure 1) where the school's vision on classroom differentiation could be placed.

# 3.1. Defining a school's vision on classroom differentiation

This particular school was invited to be the case study for this research because a previous survey of schools' visions on classroom differentiation showed that this school had a well-defined vision (Van den Bergh, 2020). To gain detailed insight into the school's vision on classroom differentiation, the researchers studied school documents and interviewed the headmaster. A relevant document was the "school support profile," a government-mandated document for every primary school in the Netherlands. In this document, the school described how it wanted to provide basic support for students at school and how additional support would be provided if needed. With regard to classroom differentiation, the school's support profile stated that it values convergent differentiation and the same basic instruction for all students. The goal was for all students to achieve at least the minimum objectives. The description said:



We practice convergent differentiation. In teaching the material in the subjects: language, spelling, technical reading and reading comprehension, and math, this means we instruct the students at three levels: shortened instruction/basic instruction/extended instruction. We intend to provide all students with at least the basic material of the method. In very exceptional cases, we may decide to let the students follow their own program.

The headmaster was interviewed about the school's vision on classroom differentiation and the implementation process. Three open questions were asked: What are the school's purposes for classroom differentiation? What is the current status of implementation? And how has the school's vision on differentiation been implemented? The headmaster confirmed that the school values convergent differentiation. Furthermore, the headmaster explained that the teachers had completed a joint training program over the last three years. The training addressed the use of instructional methodologies with a specific focus on direct instruction (DI) models. For instance, the training introduced teachers to DI models that have been proven effective (Stockard et al., 2018) and which offer good opportunities for convergent differentiation.

Research has regularly shown that using DI models reduces achievement gaps between more and less advantaged students (Stockard et al., 2018). The information from the training was a key factor in the teachers' decision to use DI models as much as possible for the basic subjects. Several variants of the DI model have been developed (Bosker et al., 2021; Stockard et al., 2018). At the heart of each DI model is an initial class-based and teacher-driven approach that emphasizes the quality of instruction. After whole class instruction, students who need it receive extra instruction or exercises while other students work independently (Bosker et al., 2021).

The headmaster told us that this school mainly uses Explicit Direct Instruction (EDI). The EDI model is a refinement of the traditional DI model because it offers concrete tools for differentiation. The explicit nature of EDI consists of the teacher setting clear common learning goals for the group and naming them at the beginning of the lesson (Bosker et al., 2021). Teachers discussed the options with each other before choosing EDI. The headmaster explained:

The team has followed a professionalization program for the past three years. In it, they have discussed a lot of theory about effective instructional principles and effective teacher behavior, and there has been a discussion about the role of knowledge in the curriculum, stereotypical images, inequality of opportunity, and level groups.

Teachers have started to put the theory into practice. They have also collaborated with each other in this effort: "The team has now really taken the step of translating all that theory into practice. They have worked with Lesson Study."

Based on the documents and the interview with the headmaster, the purpose of the school's vision on differentiation seemed to be reducing achievement gaps between students and improving the learning of all students by providing high-quality instruction. The school had chosen to adopt convergent differentiation with a focus on common goals and striving for convergent learning outcomes (equality in terms of equal output) and providing extra support for those students who need it to achieve the goals (principle of need). Therefore, the school's vision was placed in Quadrant 2, Principle of Need and Equality in terms of Equal Output, of the conceptual framework (Figure 1). By applying the EDI model, the teachers intended to align their practice with the school's vision on differentiation.

# 3.2. Participants

The case study was conducted at one primary school in a small town in the Netherlands. The school works with units consisting of two-year groups. Unit 1 houses students ages 4 to 6 (Years 1 and 2), Unit 2 ages 6 to 8 (Years 3 and 4), Unit 3 ages 8 to 10 (Years 5 and 6) and Unit 4 ages 10 to 12–13 (Years 7 and 8). Each class has an average of 26 students, and each unit has several parallel



Table 1. Characteristics of the participating teachers (N = 25)			
Characteristics	f		
Gender			
Female	21		
Male	4		
Age			
21 to 30 years	7		
30 to 40 years	11		
40 to 50 years	2		
50 to 60 years	3		
60 years and older	2		
Years of Service			
0 to 6 years	7		
6 to 11 years	5		
11 to 16 years	3		
16 to 21 years	4		
21 years or more	6		
Unit			
Unit 1 (Years 1 and 2; students ages 4 to 6)	9		
Unit 2 (Years 3 and 4; students ages 6 to 8)	4		
Unit 3 (Years 5 and 6; students ages 8 to 10)	5		
Unit 4 (Years 7 and 8; students ages 10 to 12–13)	6		
Student counselor for students with special needs	1		

classes. In total, the school has 16 classes and 27 teachers (some classes have two part-time teachers). Students are taught the basic subjects (such as language, spelling, and math) in their year group. Other subjects (such as music, physical education, and world orientation) are taught in the units.

Statistics Netherlands<sup>2</sup> determines the "school weighting" every year. This school weighting is a measure of the student population based on parents' background characteristics, such as education level and country of origin. The school weight of the case study school is characterized as average with slightly more than average differences between students' backgrounds. This means the school has a mixed student population.

The participating teachers were between 21 and 62 years old and had been employed by the school from 2 months to 42 years. Table 1 presents more detailed information about the teachers' characteristics.

#### 3.3. Research instruments

Two research instruments were developed for this study, both of which provided input for answering the three research questions. The questionnaire collected both quantitative and qualitative information.

#### 3.3.1. The questionnaire

The questionnaire (see Appendix A) was focused on identifying teachers' differentiation practices and their beliefs about classroom differentiation. It presented a brief description of the two differentiation dilemmas based on the conceptual framework (see, Figure 1). Teachers were asked to rate the extent to which they agreed with one or the other position on each dilemma by dragging a slider to the right or left (A scale of -5 to 5 was used). Furthermore, the teachers



were asked to indicate on a 7-point scale (1 = strongly disagree; 7 = strongly agree) the extent to which they recognized each dilemma in their own teaching practice. To examine teachers' beliefs about fair classroom differentiation in relation to the school's vision, the questionnaire included open-ended questions that asked the teachers to describe and justify their differentiation practice. A sample question was: "Why did you choose this differentiation strategy?" To gather information about how teachers deal with the differentiation dilemmas given the school's vision on differentiation, they were asked to give examples of how they deal with each dilemma in practice.

## 3.3.2. Interview guideline for in-depth interviews

Interviews were conducted to obtain more in-depth information about the three research questions. Based on an interview guideline (see Appendix B), teachers were asked to describe their own beliefs and values about classroom differentiation in relation to the school's vision. Sample questions were: "What is your position on this dilemma? What do you believe is the fairest thing to do?" Furthermore, teachers were asked to reflect on how they believe the school's vision plays a role in their handling of differentiation dilemmas. The teachers received a brief introduction to some quantitative results from the questionnaire (as shown in Figure 2). Sample questions were: "Does this result align with your image of the team with regard to their vision on differentiation? Which choices about classroom differentiation are made at the unit or school level? How are these choices discussed with colleagues at the unit or school level?"

#### 3.4. Data collection and analysis

In total, 25 of the 27 teachers completed the questionnaire. Two teachers did not complete the questionnaire due to personal circumstances. From each of the four units, one teacher was interviewed to obtain a complete picture of the school. Each in-depth interview lasted approximately one hour and was conducted online.

To analyze teachers' beliefs about fair classroom differentiation (Research Question 1) a four-quadrant graph was created based on the conceptual framework (see, Figure 2). Each teacher's answers about which side of each dilemma they preferred were plotted in this graph. Combining the answers about the two differentiation dilemmas gave each teacher their own position in the quadrant system. In addition, descriptive analyses were performed to show the extent to which the teachers recognized the dilemmas in their teaching practice. Teachers' beliefs about fair classroom differentiation were related to the school's vision (Research Question 2). Therefore, the beliefs, justifications for those beliefs, and differentiation practices of teachers who shared the school's beliefs were compared with those of the teachers whose beliefs differed from the school's on one or both dimensions.

Finally, to answer the third research question, an interpretive phenomenological analysis (IPA) technique (Pietkiewicz & Smith, 2014) was used to analyze the qualitative data from the questionnaire and the four interviews. The first two authors carefully read the interview transcripts. They highlighted informative statements and made notes about initial interpretive remarks, the content or context-relevant features, and the style in which the teachers wrote or spoke (e.g., "We have agreed" or "I believe"). Relevant fragments were selected and submitted for analysis to the entire research team. Through an iterative process of further modification and review, the authors were able to agree on a set of themes that could be applied across the data. Based on the IPA, the third research question was then answered in a narrative report, illustrated with quotes from the interviews and the questionnaires. The researchers' analytical commentary on the narrative report is discussed in the Results and Discussion sections.

# 4. Results

# 4.1. Teachers had varying beliefs about fair classroom differentiation

The teachers expressed varying beliefs about fair classroom differentiation. In terms of distributive justice, this means they expressed different personal values and beliefs about what constitutes



a fair distribution of resources (such as attention and support) and the outcomes to which differentiation should lead (Resh & Sabbagh, 2016; Thorkildsen, 1994) Figure 2.

Figure 2. Teachers' positions on the differentiation dilemmas (scale range -5-5; N = 25).

Note. The x-axis of this figure represents the learning outcomes dilemma. The y-axis represents the support dilemma. T1 to T10 refers to numbers of the teachers whose quotes are included in the results section.

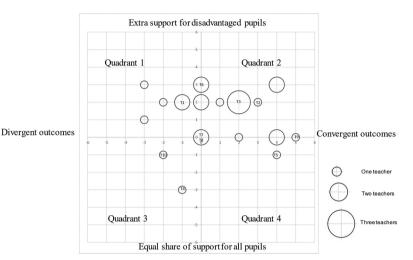


Figure 2 shows the varying beliefs of the teachers. Based on their views on the differentiation dilemmas, seven of the 25 teachers were positioned in Quadrant 2, Need and Equality in terms of Equal Output. This was also where the school's vision was located. There were also five teachers in Quadrant 1, Need and Equity, two teachers in Quadrant 3, Equity and Equality in terms of Equal Resources, and one teacher in Quadrant 4, Equality in terms of Equal Resources and Equal Output. The remaining ten teachers could not be placed in a quadrant because they did not take a clear stance on one or both dilemmas (they chose a score of 0). In Figure 2, they were placed on the dividing lines between the quadrants.

Most of the teachers rated the dilemmas as very recognizable in their teaching practice. On average, this applied to a greater extent to the support dilemma (M = 5.68; SD = 0.80) than to the learning outcome dilemma (M = 5.20; SD = 1.41). The teachers from Quadrants 1, 3, and 4 and the teachers on the dividing lines between the quadrants were grouped into "other positions". This group was called "other" because the teachers in this group were not part of the quadrant in which the school was located. Teachers in Quadrant 2, whose beliefs were most consistent with the school's vision, did not recognize the learning outcome dilemma (M = 4.43; SD = 1.13) as strongly as the teachers in the other quadrants (M = 5.86; SD = 0.38). This did not apply to the support dilemma; both groups of teachers recognized this dilemma to approximately the same extent (Teachers in Quadrant 2: M = 5.50; SD = 1.43) (Other positions M = 5.61; SD = 0.92).

# 4.2. Teachers with a different vision than the school's were less satisfied with the schoolwide agreements

Our analysis of the qualitative data found that teachers with a different vision on classroom differentiation than the school's vision were less positive about the joint agreements on instruction and differentiation than the teachers whose vision was more similar to the school's. Below is a description of how teachers relate to the school's vision for each position in the graph (see, Figure 2).

4.2.1. Quadrant 1: Extra support for disadvantaged students and divergent outcomes

The five teachers in Quadrant 1 valued divergent learning outcomes. This was in contrast to the school's vision (which focused on convergent learning outcomes). These teachers believed they could not adequately meet the diverse learning needs of students in the classroom due to the school's focus on convergent learning outcomes. In contrast to the school's vision, they believed that stronger students should progress faster through the material, as this quotation illustrated (T1):



I completely understand the dilemma because that's what I'm up against as well. Of course, there are children who want to or can progress faster. And in our working method, based on the EDI model, the idea is to keep the children together as long as possible because together they learn from each other. However, I believe that the children who can really do more need not be burdened with the extra repetition they receive, and they do need to be challenged.

4.2.2. Quadrant 2: Extra support for disadvantaged students and convergent outcomes
The beliefs of the seven teachers in Quadrant 2 were most in line with the school's vision. In keeping with that vision, they stressed the importance of comprehensive instruction for all students, so low-achieving students have their chance to achieve the learning objectives (T2):

I think it's good that we set high goals, also in the sense that we do so for the children who we assume will have difficulty meeting them. I believe it's a good thing to offer them that challenge instead of thinking "Oh, they don't have to participate because they can't do that anyway," so to speak.

In addition, the teachers in this quadrant repeatedly stated that they believe that giving joint instructions to all students helps them, as teachers, have more control over their students' learning process. They also thought it was important that students be able to help each other. An illustrative quotation (T3): "(Almost) all children need instruction. During instruction, we regularly verify that the students understand. That is followed by extended instruction. Children can also help each other because different levels sit together."

- 4.2.3. Quadrant 3: Divergent outcomes and equal share of support for all students

  Both teachers in Quadrant 3 had been employed at the school for a relatively short time (<1 year to 3 years). They deviated from the school's vision in two ways: they valued divergent learning outcomes (more than convergent) and dividing support equally (more than providing more support for disadvantaged students). As a teacher in Quadrant 3 illustrated (T4): "I'd love to be able to give each student his or her own learning goal." Like the teachers in Quadrant 1, this teacher believed that the current differentiation method (convergent differentiation) did not enable her to serve all students well (T4): "Sometimes I think it's a pity that I have to make such choices because sometimes it makes me feel that as a teacher, I'm doing too little for some children."
- 4.2.4. Quadrant 4: Convergent outcomes and equal share of support for all students
  The qualitative information about the teacher in Quadrant 4 showed that in terms of vision, this
  teacher was reasonably in line with Quadrant 2. This teacher indicated that unequal distribution of
  support may not be desirable, but it is necessary (T5):

Students who need more support require more of your time. You also want to help the average students to progress, but you don't want to let a weaker student drown either. So, you have to spend extra time with them.

#### 4.2.5. No clear stance on one or both dilemmas

The beliefs of ten teachers could not be placed in a quadrant. These teachers did not take a clear stance on one or both dilemmas. Instead, they emphasized the difficulty of the dilemmas and stated that they could not choose which side they preferred (T6):

I think there may be differences between students. I don't want to stop the kids who master the material either. But on the other hand, you need them in your classroom to keep up with the kids who have a harder time learning. They hear strategies and ways of thinking and can learn more from them. So yes, it's a dilemma.



#### 4.3. The role of the school's vision

Our analysis of the role the school's vision on classroom differentiation plays in handling the differentiation dilemmas resulted in five main findings: (1) a school vision helped in making joint decisions about handling differentiation dilemmas; (2) a school vision did not eliminate differentiation dilemmas; (3) a school vision contributed to an ongoing dialogue about differentiation; (4) teachers perceived space to deviate from the joint agreements about differentiation; and (5) new teachers participated less in the ideological discussion about differentiation.

4.3.1. A school vision helped in making joint decisions about handling differentiation dilemmas Regardless of where in the graph (see, Figure 2) the teachers placed themselves, they regularly justified their choice of differentiation methods in the classroom based on the joint agreements made at the school and unit levels. The questionnaire asked teachers to justify their own ways of differentiating in the classroom in basic subjects. The word "we" was regularly used in the answers. Some answers were phrased like: "We agreed that ..." Teachers also referred to the joint training program they had followed on instruction and differentiation. In line with the school's vision, this team training had a strong focus on convergent differentiation. For example, it paid a lot of attention to the importance of compensating for students from underprivileged families. A teacher explained this (T3):

We had a series of workshops several years ago that was mainly focused on reducing disparities and increasing equity. It was very much about the fact that some students have less prior knowledge than others, so they don't perform as well as they should.

Based on this team training, agreements were made within the units. These included *not* using homogeneous level groups, giving joint instructions to heterogeneous groups, and using a specific instructional model as much as possible (at the case study school, this is EDI). The 80% rule is a joint agreement that was often repeated in the descriptions of how teachers deal with the learning outcome dilemma. This means that teachers will not move on to new material until 80% of the students have mastered the current material. A teacher illustrated the joint agreements (T7):

Teaching in the EDI way means that all children take part in the basic instruction. I only start differentiating once the students have had the basic instruction. This prevents the good students from teaching themselves the wrong strategies. After the basic instruction, there is room for extended instruction. I only move on to the next lesson goal after approximately 80% of the students have mastered the current learning goal. If it seems that fewer than 80% of the students have mastered the goal, I offer the material again, but in a different way.

Teachers often mentioned that these agreements had been reached collectively. As one teacher illustrated (T8): "In our unit, we made this choice together. We work as much as possible according to EDI." It can be noted that the training has influenced the school's vision and simultaneously supported it. The team training gave teachers tools to align their vision with their practice. Even teachers with a (partly) different belief about differentiation could unite around decisions that fitted the school's vision by following a joint training program and feeling they had made a choice together. Joint decision-making was an important factor in this.

# 4.3.2. A school vision did not eliminate differentiation dilemmas

The quantitative data already showed that teachers perceived both the learning outcome dilemma and the support dilemma as very recognizable. The qualitative data confirmed that the school's vision and the joint agreements made about differentiation did not (completely) eliminate teachers' dilemmas. By focusing on convergent learning outcomes, teachers felt they did not do enough for students who need a greater challenge. As a teacher from Quadrant 2 explained (T2):

And the dilemma is that we feel like it's still not so easy to do nothing more for the children who really need more of a challenge, or who receive more at home than the other children.



For example, you still have to explain the sum to the children or get them working on it in some other way. We still feel that that's just not enough for that group.

Teachers also perceived the unequal distribution of attention and support in favor of disadvantaged students as a dilemma. On the one hand, teachers did not want students' backgrounds to play a role in distributing attention, based on the idea that everyone is equal at school. But teachers felt that some students need more support and they simply have to make choices. As one teacher illustrated (T4):

If you see school as a neutral space, then a student who receives a lot of support at home does not get equal opportunities there. At that moment it's not fair because you're going to take the environmental factors into account in your choices. And I don't think it's fair, but I do it anyway, and at the same time I support my doing it because you just can't do anything else. And you have to make choices. Then you do indeed look at what one child already receives and what the other child does not receive.

Several teachers indicated that, in practice, they distribute their attention unequally, but they do not consider the students' backgrounds in doing so. This was illustrated in the following quotation (T9):

You give support to the children who need it, regardless of their background. It's either more in-depth material since this is a bright student or extended instruction because that student needs it. There are also children who have an excellent home situation and get enough support, but still need support at school. So, I think you have to look at this on a student-by-student basis to see what help they need at school and not at whether these kids have the resources at home to provide extra support.

4.3.3. A school vision contributed to an ongoing dialogue about differentiation

The school's vision seemed to challenge teachers to engage in ongoing dialogue with each other about differentiation and to reflect on the effects of choosing convergent differentiation. As noted earlier, the school's vision did not eliminate teachers' dilemmas. This shared experience also makes it possible to have an open conversation about this with each other. That leads to the team's joint agreements being questioned. A teacher articulated this (T3):

But then after a while, it appears that people run up against certain points, such as the children who already have more knowledge being bored when they have to listen to that kind of teaching every time. And new discussions then arose, like "Yes, people said this, but we actually think that way."

The teachers' discussions about convergent differentiation focused on the high-achieving students. On the one hand, the teachers feared they would not adequately fulfill the learning needs of stronger students, but they also found it difficult to "let go" of those students and trust that they will learn adequately. The data showed that the teachers found it difficult to move on from this discussion. They would like to see more clarity on this at the school level (T2):

And that's what teachers still sometimes find difficult: if we equate those goals. Yes. Am I still serving all the children equally well? Should I offer a little more to the children who might be able to do more? In this respect, we are still sometimes struggling with the question: what works best? And I know that they also find this difficult in higher years. They say you often notice that children who are a bit smarter often don't understand the strategies if they figure it out on their own. So, they can do things easily in their own way at first, but then they don't know how to do things when it gets more difficult because they can't properly apply the strategy. It would be nice if we as a school also had more clarity in that respect: do we all offer the same instruction or not?



4.3.4. Teachers perceived space to deviate from the joint agreements about differentiation Teachers regularly discussed the bottlenecks they encounter in differentiating in the classroom. It is precisely because of the open dialogue about these issues and the acknowledgment of the problems that the teachers felt they have the space to deviate from the joint agreements at their own professional discretion. They seemed to use that space, especially with respect to high-achieving students. Some teachers suggested that high-achieving students no longer need to follow all instructions but may work independently. As this teacher put it (T1):

And in our working method, the idea is to keep the children together as long as possible because together they learn from each other. However, I believe that the children who can really do more need not be burdened with the extra repetition they receive, and they do need to be challenged. So, then you really do need to differentiate. And you can say: "Well – and you often know this yourself very well already – those five are going to get to work and they aren't going to join in repeating that objective one more time. They can just continue working independently."

Another teacher described why they stick to the 80% rule for each lesson. For this teacher, the starting point was still the agreement made about joint instruction and keeping the group together (convergence). However, they made an exception for stronger students (T8):

I don't want to inhibit the "stronger students." As far as I'm concerned, they can be released earlier. This makes me look at how I frame my lesson per lesson and lesson goal. Is it a review of the goal, and can I address these children more often during my instruction and show they have mastered it? Then I let them go earlier so they can get on with the processing. If they don't show this mastery during the instruction, I hold them back. It then makes sense that it's lesson-dependent which students I release and when.

4.3.5. New teachers participated less in the ideological discussion about differentiation New teachers (<1 year to 3 years' employment at the case study school) found it difficult to take a stance on the differentiation dilemmas. They had not (yet) thoroughly discussed the dilemmas with their fellow teachers (T10): "I've only been working at this school for a short time, and I haven't yet come across this dilemma here."

A teacher in Quadrant 3 found it difficult to discuss the agreements made about differentiation with colleagues. This can be inferred from the data because this teacher said to have suggested that the team work with homogeneous ability groups. But ultimately, this teacher resigned themselves to the fact that working with such groups did not correspond to the school's vision (T4):

For example, at the beginning of the year, I proposed creating ability groups for math because I had very positive experiences with this during my graduation internship, but the school's vision is that this should not be done. So, I accepted that, but it was a pity because I had seen great opportunities there.

Although this teacher would have liked to work with homogeneous ability groups, the teacher did not do this in order to allign with the school's vision (T4):

Yes, it's also just a vision from the school. They're certainly open to looking at all the things we come up with, but yes, sometimes we and the school just choose not to do them. They often appreciate the fact that there is a consistent approach to teaching.

#### 5. Discussion

The aim of this study was to gain a better understanding of how individual teachers—each with their own beliefs about fair classroom differentiation—handle differentiation dilemmas in the context of their school's vision on classroom differentiation. A case study was conducted at one primary school with a well-defined vision on classroom differentiation.



Quantitative and qualitative data were collected there: 25 teachers filled in a questionnaire and four teachers sat for in-depth interviews.

The results confirm those of earlier studies that found teachers can have different views on fairness (Campbell, 2004; Godor, 2021). Even more, despite a well-defined school vision on differentiation, the teachers in our study had varying beliefs about what constitutes a fair distribution of resources (such as attention and support) and the outcomes to which differentiation should lead. However, it does seem that a school vision helps teachers make joint decisions or agreements about classroom differentiation. In other words, in line with findings from earlier studies, it appears that a vision can give meaning and direction to achieving a school's goals (Fullan, 2016). On the other hand, the findings show that joint agreements can bring teachers into conflict with their own sense of fairness when the agreements are not in line with their own vision. This might imply a need for attention to be paid to developing a shared vision and creating professional space for teachers. These concepts are explained below and the practical implications are discussed.

#### 5.1. Shared vision

Although the teachers made shared agreements about classroom differentiation based on the school's vision, they kept questioning these agreements. In doing so, they used various principles of justice, including some that do not fit the school's vision. This raised questions such as: Are the teachers able to influence the school vision? Have ideological discussions been held about the "why" of this vision and the moral goals they want to pursue as a school before joint agreements have been made about the "how" of classroom differentiation?

Many studies have shown that it is not enough to formulate a school vision. Teachers also need to construct a *shared vision* because the vision manifests itself in the meaning that teachers give it (Fullan, 2016; Geijsel, 2015; Kools, 2020). If a vision is not carefully discussed and does not include teachers' views—both during the development processes and when it is being implemented—it will remain "a paper vision" (Geijsel, 2015). Therefore, it is important that teachers explicitly reflect on and discuss the purposes of classroom differentiation and equitable education, with the aim of achieving a shared vision. Neglecting this need might lead to teachers to be less engaged in the long run and may even engender resistance among teachers (Fullan, 2016; Geijsel, 2015; Kools, 2020). This can lead teachers to repeatedly adjust the differentiation choices with no shared vision on fair classroom differentiation.

This is not to say that the vision should not remain open to reflection and change. According to Fullan (2012), a shared vision also needs to remain fluid. That ensures that it is more than an outcome of a process involving all the teachers at a school; instead, it is a starting point and it entails an inclusive process to create ownership (Fullan, 2016; Geijsel, 2015; Kools, 2020). That is why it is essential that new or novice teachers also have the opportunity to contribute to the school's vision.

#### 5.2. Professional space

In the case study school, many concrete agreements had been made on the unit- and school levels about how to differentiate in the classroom and thus fulfill the school's vision. But having too many detailed agreements creates the risk that teachers will encounter a professional dilemma. On the one hand, teachers want the best for their students, some of whom may respond well to aspects of the agreements; on the other hand, teachers need more professional autonomy (Beatty, 2011).

In addition, teachers may perceive or interpret a lack of professional space related to the "amount of say" they have (or believe they have) in their own teaching practice (Oolbekkink-Marchand et al., 2017). But teachers are also members of a school organization with shared values and beliefs (Kelchtermans & Ballet, 2002) and it is not the intention that teachers act only according to their own values (Oolbekkink-Marchand, 2019). However, it is important



that teachers can do their work based on their personal motivations. The right balance must be found between schoolwide agreements on classroom differentiation in line with the school's vision and teachers' professional space to interpret those agreements.

#### 5.3. Practical implications

As argued before, it is essential that schools have a shared vision on classroom differentiation. The principles of distributive justice can be helpful in developing such a vision. The conceptual framework (see, Figure 1) can be used for an ideologic discussion within a school team. Teachers can discuss the impact of differentiation choices on equal opportunities and what values or principles may be at stake. What values do they want to pursue or promote in their school? What does that mean for classroom differentiation? Teachers can work together in professional learning communities to find solutions to the dilemmas and discover how they can align to work toward their differentiation practice to achieve the goals. This approach might contribute to the development of a shared vision on classroom differentiation.

#### 6. Limitations and direction of future studies

Despite the useful contributions described above, this study has limitations. It only examined one school team with a specific school vision and context. However, school teams and contexts differ, and those differences may influence teachers' beliefs and actions regarding differentiation dilemmas. Future research might focus on adding to the findings of this research by studying a school with a different vision on differentiation. Another interesting question would be whether researchers could use the conceptual framework of this study (see, Figure 1) in schools with other characteristics or school concepts.

Furthermore, this study did not explore the development of the school's vision on class-room differentiation and the extent to which the teachers were actively involved in this process. Future research might examine good practices of inclusive processes to create shared visions on classroom differentiation and ownership in school teams. Another interesting follow-up study would be to examine the dialogues between teachers when discussing differentiation dilemmas. This could provide more insight into how a school's vision is shaped during peer dialogues at a school. Finally, an interesting future study might be to examine teachers' professional space with regard to their own values and beliefs about classroom differentiation in relation to the school's vision.

# 7. Conclusion

The present study showed that despite a well-defined school vision on differentiation, teachers on a school team can have varying beliefs about fair classroom differentiation. This does not mean that a school vision does not help give meaning and direction to classroom differentiation. On the contrary, a school vision helps teachers make joint agreements about differentiation. However, the joint agreements can bring teachers into conflict with their own sense of fairness if those agreements are not in line with the teacher's own vision. Therefore, this study argues that more attention should be paid to developing a shared vision and finding the right balance between schoolwide agreements on teaching and the professional space of teachers. A school team can use the conceptual framework of this study (see, Figure 1) for an ideologic discussion of this topic.

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No potential conflict of interest was reported by the author(s).

#### Statements and Declarations

We thank all the participating teachers at the case study school for their contribution to the research.

#### **Ethics Approval**

The Ethical Committee of the HAN University of Applied Sciences have stated that our research complies with the criteria of applicable national laws (like the General Data Protection Regulation), and the Dutch code of conduct for Research Integrity.

#### **Data Availability Statement**

The data that support the findings of this study are available from the corresponding author upon reasonable request

#### Correction

This article has been corrected with minor changes. These changes do not impact the academic content of the article.

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#### Note

- There is overlap between "ethics" and "morality" in their connotation and denotation. Ethics (also known as "moral philosophy") is the branch of philosophy that addresses questions of morality such as duty, obligation or principles of conduct (Chen et al., 2017).
- Statistics Netherlands is a Dutch governmental institution that gathers statistical information about the Netherlands.

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## Appendix A: The questionnaire

#### Differentiation strategies

This part of the questionnaire is about differentiation strategies you might use for basic subjects (e.g., arithmetic, language, technical reading, comprehensive reading, or spelling). Differentiation strategies are methods for dealing with (cognitive) differences between students. We elicit such strategies by asking questions like "Do you work with homogeneous ability groups or heterogeneous groups?" or "Do you have an individual learning path for each student?"

For this questionnaire, we want to know which differentiation strategy you usually or most often use. Thus, we ask the following open-ended questions:

- (1) Which differentiation strategy do you use the most often?
- (2) Please describe that differentiation strategy.
- (3) Please explain why you chose this differentiation strategy.

#### Differentiation dilemmas

Teachers use various differentiation strategies in the classroom to deal with differences between students. Teachers apply a wide range of strategies and make choices about them every day. These choices can sometimes be difficult for the teachers, which is why we call these choices "dilemmas."

In this part of the questionnaire, two dilemmas are presented to you. Three questions are asked for each dilemma.

Learning outcome dilemma

The learning outcome dilemma is about setting learning goals.

On the one hand:

You might believe that differentiation should be aimed at meeting the students' individual learning needs. Each student has their own learning goals and works at their own pace and level. Differences between students are increasing.

On the other hand:

You might believe that differentiation should be aimed at ensuring that (almost) all students achieve the same learning goals. Thus, you might choose to only move on to new subject matter after most students have mastered the current subject matter. Differences between students are decreasing.

What is your position in this dilemma? Do you want to reduce differences in the learning outcomes between students by means of differentiation, or do you think differences between students should increase?



- (1) Move the bar further to the left the more you agree with the left side of the dilemma (- 5 = differences increase) and further to the right the more you agree with the right side (5 = differences decrease).
- (2) To what extent do you agree with the next statement?

The learning outcome dilemma is recognizable to me (1 = strongly disagree; 7 = strongly agree).

(3) Can you give an example of how you deal with the learning outcome dilemma in practice? (openended question)

Support dilemma

The support dilemma is about dividing your attention among students in your class from the perspective of providing equal educational opportunities for all students.

On the one hand:

You might believe that all students, regardless of the support they receive at home, are entitled to the same amount of support at school.

On the other hand:

You might believe that students who receive less support from their parents at home are entitled to more support at school.

What is your position on this dilemma? Do you believe that students who receive less support at home should receive more support at school, or should all students receive the same amount of support at school?

- (1) Move the bar further to the left the more you agree with the left side of the dilemma (-5 = equal amount of support) and further to the right the more you agree with the right side (5 = more support for disadvantaged students).
- (2) To what extent do you agree with the next statement?

The support dilemma is recognizable to me (1 = strongly disagree; 7 = strongly agree).

(3) Can you give an example of how you deal with the support dilemma in practice? (open-ended question)

# Appendix B: Interview guideline for the in-depth interviews

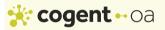
Ask the teacher about their own beliefs about each dilemma:

- (1) What is your position on this dilemma? What are your beliefs about this dilemma?
- (2) What do you believe is the fairest thing to do and why?
- (3) How difficult do you find this dilemma in relation to the school's vision?
- (4) Do you think your colleagues feel the same way about the dilemma?

Then ask for the teacher's perspective on the role of the school's vision in dealing with the dilemmas. After a brief introduction to some results of the questionnaire based on Figure 2, ask the following questions for each dilemma:



- (5) How would you interpret this result?
- (6) Does this result align with your image of the team with regard to their vision on differentiation?
- (7) Which differences in beliefs or vision with regard to classroom differentiation do you experience among your colleagues?
- (8) How do you experience this dilemma in your unit in relation to the school's vision?
- (9) Which choices about classroom differentiation are made at the unit or school level?
- (10) How are these choices discussed with colleagues at the unit or school level?
- (11) How is this dilemma discussed in relation to the school's vision with colleagues at the unit or school level?



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