



An exploratory study into teachers' beliefs and experiences about allocating students



Janneke P.W. Sleenhof^{a, b, *}, Maaïke Koopman^a, Marieke C.G. Thurlings^a,
Douwe Beijaard^a

^a Eindhoven University of Technology, Eindhoven School of Education, Postbus 513, 5600, MB, Eindhoven, the Netherlands

^b Sint-Joriscollege, Eindhoven, Roostenlaan 296, 5644, BS, Eindhoven, the Netherlands

HIGHLIGHTS

- The current allocation process by teacher teams causes frustration among teachers.
- Variety in decision-making raises doubts on quality of the decisions made.
- Group interaction is believed to influence the allocation decision.
- Teachers use a variety of arguments to support expectations on student capacities.
- Professional development will help to structure and substantiate allocation decisions.

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ABSTRACT

This study explores teachers' beliefs and experiences regarding the decisions they make about students during so-called allocation meetings, including the role of a number of influencing factors. Semi-structured interviews were held with 22 teachers from four schools. Teachers' perceptions indicate that allocation decisions are often unstructured and variable due to differences within and between schools in group processes, in decision-making and in argumentation used to substantiate teacher expectations. This variety raises doubts about the fairness and quality of allocation decisions. Professional development is suggested to improve these decisions, with a focus on group processes and individual teacher expectations.

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1. Introduction

This study focuses on transition decisions in Dutch secondary education. By these decisions, teachers collectively allocate students to a given track and year, corresponding to students' capacities. Decisions made in education are often complex, involving multiple factors in changing situations (Vanlommel, Van Gasse, Vanhoof, & Van Petegem, 2018); so are allocation decisions. Teachers and school boards are known to struggle with allocation

decisions due to several reasons. First, teachers' personal perceptions of the student influence the interpretation of information about the student (Sneyers, Vanhoof, & Mahieu, 2017). Every teacher sees students in the light of their own perspectives and beliefs and decides accordingly. Second, allocation decisions raise questions about which data and arguments, such as grades or background, teachers should use to base their decisions on. Specific data use influences decisions; for example, it may challenge fixed beliefs but also confirm assumptions and increase inequity (Datnow & Park, 2018; Park, St. John, Datnow, & Choi, 2017). Third, allocation decisions request group decision-making. Generally, multiple teachers are involved in this process which increases the complexity of the allocation process, because interactions within a group influence both the process of decision-making and its outcome (Horn & Little, 2010). Finally, making this decision is

* Corresponding author. Eindhoven University of Technology, Eindhoven School of Education, Postbus 513, 5600, MB, Eindhoven, the Netherlands.

E-mail addresses: j.p.w.sleenhof@tue.nl (J.P.W. Sleenhof), m.koopman@tue.nl (M. Koopman), m.c.g.thurlings@tue.nl (M.C.G. Thurlings), d.beijaard@tue.nl (D. Beijaard).

difficult, because teachers have to predict future student performance based on prior achievements and behaviour. The complexity of the transition process thus is influenced by multiple variables both on individual level (e.g., argumentation, teacher expectations) and on group level (e.g., group decision-making, interaction).

Mistakes in the transition process can have profound consequences for students (Benner, 2011). Major transitions in education, like the transition from lower to upper grades or track-placement, may lead to dropping out, study delay, lack of motivation, and more frequently, underperformance (Dutch Inspectorate of Education, 2016; Elffers, 2012). Students who have been retained at least once and students who are allocated to a too high or low track are more likely to drop out (Korpershoek et al., 2016; Van Houtte & Demanet, 2016). In addition to the authors' own experiences in practice, literature shows that teachers make mistakes in allocating students to a suitable track or year: 10%–33% of the students in secondary education are underperforming, mainly because of incorrect teacher perceptions and being allocated to the wrong track (Brouwer, Dirksen, & Hogeboom, 2013).

These reasons together show that allocating students to a specific track and year is a complex and profound decision with far-reaching consequences and therefore should be done with due consideration. Nevertheless, in the Netherlands there supposedly are great differences between schools regarding allocation decisions, because there are no national regulations that prescribe whether a student should pass or retain in a certain year. Apart from the national final examinations, schools are free to define their own regulations with regard to allocation criteria. Specific allocation regulations and subsequent decisions may thus vary between schools, a claim confirmed by related research on how teachers use data and intuition in the decision process regarding transitions (Vanlommel et al., 2018): teachers' intuitive expertise appeared to be more important than data or regulations when making these decisions, resulting in differences in decision-making. This creates a broad 'grey area' including students that do not score the required grades to pass to a next year, nor show results that require them to retain without any doubt. The width of this grey area differs per school. These students are discussed in a teacher meeting at the end of a school year ('allocation meeting') in which teachers discuss the best decision regarding student allocation: retain a year, make the transition to a next year, or change school track or level. The purpose of these allocation meetings is twofold: teachers first create a complete picture of a student's capacities and possible areas of concern and second decide whether the student should retake the year or change tracks (Dutch Inspectorate of Education, 2016). Generally, the teacher team is responsible for this decision, often supported by the team manager who leads or structures the meeting. The procedures and roles regarding group decision-making might also vary between schools.

This study explores allocation decisions in the context of these allocation meetings. In the Netherlands, allocation to a different track can be advised at any point during students' school periods (Tieben & Wolbers, 2010), but is specifically relevant at the transition moments from primary to secondary school and after the first phase of secondary education. The focus of this study is the transition from the first (grades 1 to 3) to the second phase in secondary education (grade 4 and up) of *havo* and *vwo*.¹ An important allocation decision is made at this point, because students make the transition from a general to a more specific curriculum by choosing a study profile consisting of a specific combination of subjects (either Culture and Society, Economics and

Society, Science and Health, or Science and Technology). Each profile provides access to different programs in higher education. We stress the importance of this decision, because teachers decide about students' transition to the second stage of secondary education and thus about their future school careers as well.

Although we discuss the allocation process in the Dutch educational system, similar decisions for students are made worldwide (Benner, 2011). Difficulties in decisions regarding transitions in education are well known and possible (negative) consequences in this process have been focus of studies in several countries (Bol, Witschge, Van de Werfhorst, & Dronkers, 2014; Elffers, 2012). Multiple studies support the existence of similar problems regarding major transitions across international contexts. These studies also report on inaccurate allocation resulting in dropping out, underperformance and inequity between schools and teachers in the decision-making process (Park, St John, Datnow, & Choi, 2017; Roderick & Camburn, 1999; Rubin, 2008).

Research has generally overlooked the decision-making process by teachers regarding allocating students in secondary education. Many factors play a role in the allocation process, as follows from the above, yet unknown is how these influence the collective decision (Korpershoek et al., 2016). We have observed that problems are mainly influenced by the complexity of the allocation decision which is enhanced by the difficulties of group decision-making and the individual input and perspectives of teachers. The large 'grey area' enhances the importance of making a substantiated and deliberate decision, because of possible negative consequences of being allocated to the wrong track. An extensive literature search, using various search terms and data bases, showed that research on group processes and individual factors in relation to allocation transitions is scarce. Previous research regarding teacher expectations, for example, has mainly focused on teachers' decision-making in the context of a classroom instead of (allocation) meetings (e.g., De Boer, Bosker, & Van der Werf, 2010; Jonasson, Mäkitalo, & Nielsen, 2015; Trouilloud, Sarrazin, & Martinek, 2002). Also little research was found on group processes in the context of allocation decisions; most research on group processes among teachers predominantly focuses on teachers' learning from each other instead of on group decision-making (e.g., Havnes, 2009; Willis & Todorov, 2006). Literature on similar processes in related research areas can however inform this work, for example studies on teachers' decisions regarding student placement in a group (Oakes, Wells, Jones, & Datnow, 1997).

This exploratory study aims to fill this gap in the literature by enhancing our understanding of group decision-making in transition decisions from the perspective of teachers by using interviews. We explore their beliefs and experiences regarding different factors that are involved in allocation decisions, with a focus on transitions to the second phase in secondary education and track to be followed. Teachers are considered as the most important participants in allocation processes and their experiences can help us to gain a clearer picture of all the factors that are involved in the allocation decision. The research question of this study is: *What are teachers' beliefs and experiences regarding group decision-making when allocating students?* The answer to this question will contribute to our understanding of the dynamics and complexity of allocation decisions as perceived by teachers. In turn, these insights can be used to reflect on and improve the decision-making process in allocating students.

2. Theoretical background

The following sections provide a review of the literature related to allocation decisions. Several variables are intertwined in this process of collective decision-making, yet how these influence this

¹ *havo* = senior general secondary education, *vwo* = pre-university education; both tracks prepare students for higher education.

allocation process remains unexplored. When allocating students, teachers discuss their opinions about students' capacities and select the optimal decision regarding students' allocation; this process can be compared to group decision-making. Therefore this section begins with a discussion of group decision-making. Group decision-making is a complex process because it involves various individual factors and group processes, such as individual expectations and group interaction (Herrera-Viedma, Herrera, & Chiclana, 2002; Keeney, 2015).

2.1. Group decision-making

Teachers collectively make a decision in allocation meetings about whether to pass students that do not meet the formal requirements to pass. Research on collective decision-making distinguishes two general phases in all decision-making situations that lead to a final solution: the consensus phase and the selection phase (Herrera-Viedma et al., 2002; Keeney, 2015). The consensus phase refers to forming opinions by evaluating alternatives from individual perspectives and reaching agreement among the participants involved. Within the context of an allocation meeting, this phase applies to the arguments that support teachers' opinions about students and the degree of agreement they reach on different alternatives during the meeting.

The selection phase consists of selecting the optimal decision from the alternatives formulated in the consensus phase (Herrera-Viedma et al., 2002). In the context of an allocation meeting, the teachers together decide on students' transitions to a next year: they may proceed to the following year, retake the past year, or change school tracks. A team may use different procedures to collectively select a decision (Keeney, 2015). When allocating students, teachers can, for example, make a decision by voting, by using serial turns to express opinions, or by having an open discussion.

During these two phases in group decision-making, teachers aim to reach agreement on their students and collectively construct a picture of each student by combining their (different) individual perspectives. Consensus and selection seem to be two separate phases in group decision-making; in reality, however, making a collective decision such as an allocation decision, is not well-structured and straightforward. Decision-making includes both individual perspectives and group interaction and is guided by intuitive and rational 'systems' (Kahneman & Frederick, 2005). Rationally, people may process information actively and systematically (e.g., test results, reports), yet intuitively they may rely on prior experiences, 'gut feelings' and observations during daily practices. These systems intertwine and make decision-making processes and argumentation subject to change, depending on the formation of the group and input from the different group members (Schildkamp & Ehren, 2013). This combination of influencing factors makes reaching an agreement a complex and unpredictable process.

2.2. Individual factors

Group decision-making includes different group members each having their own objectives and ideas. They do not necessarily consider the same factors to be important (Keeney, 2015). Teachers differ in the way they use data to support their opinions and decisions (Van Gasse, Vanlommel, Vanhoof, & Van Petegem, 2017; Vanlommel et al., 2018), which can profoundly affect students' trajectories (Datnow & Park, 2018). Teachers participate in an allocation meeting with their own goals and individually formed opinions and may have formed (completely) different views of one student's capacities during a school year (Van de Kant & Van

Stralen, 2009). Their individual expectations about students' capacities play a major part in the allocation process and thus have a profound impact on the students' educational career (Van Houtte & Demanet, 2016). Intuitive information also plays an important role within the decision-making process (Vanlommel et al., 2018). Research shows, for example, that teachers often rely on anecdotal information, their experience, or gut feelings rather than on systematically collected information (Ingram, Louis, & Schroeder, 2004).

Although hardly any research has been done on allocation decisions within secondary education, it is known from the literature on the transitions from primary to secondary education that teachers form their own expectations based on various data sources and combinations of student qualities and characteristics, both cognitive and non-cognitive (Boone & Van Houtte, 2013; Südkamp, Praetorius, & Spinath, 2017).

Cognitive factors teachers rely on to form an opinion about students' capacities, for example, are prior performances, grades, and higher-order thinking skills. Teachers develop lasting expectations already on students' first school days and assume that students' performance corresponds to shown capabilities (Good, 1987). Teachers often expect students to continue to perform according to previously established patterns, even to the point at which teachers ignore evidence of change in students' performances (Jussim, Eccles, & Madon, 1996; Kohut, 2014). These fixed expectations prevent them from developing more accurate understanding of students' educational development and needs (Van de Kant & Van Stralen, 2009). Furthermore, teachers regularly use students' grades as indicators of their cognitive level (Airasian & Miranda, 2002; Anderson & Krathwohl, 2001). Grades in themselves, however, have shown to be unreliable when it comes to determining a student's adequate level of competence (Van der Lans, Van de Grift, & Van Veen, 2015). The quality and implications of the grades and therefore the role these grades should play in an allocation meeting is questionable, because teachers use different standards and tests to grade their students. Research on teachers' grading practices even demonstrates that teachers use a "hodgepodge of factors" when grading students (McMillan, Myran, & Workman, 2002, p. 211). Cognitive factors also include higher-order thinking skills (Airasian & Miranda, 2002). These skills indicate to what extent students can recognize structures in new situations and develop conceptual knowledge. Students, for example, develop skills to find relations between different theories and apply strategies to solve given problems in a new context (Drost & Verra, 2013). When students do not possess these skills, according to teachers, this may be a reason to doubt their capacities.

Non-cognitive factors such as students' characteristics, motivation, and background can also influence teacher expectations. Teachers' track recommendations were found to be influenced by various student characteristics, such as their socio-economic status, gender, and personality (Boone & Van Houtte, 2013; Luyten & Bosker, 2004). Opinions about these characteristics are easily formed: it only takes seconds to form an impression of one's personality. This impression may be modified over time, but rarely changes completely (Willis & Todorov, 2006). Personality traits, such as self-confidence and optimism, can influence school performance (Chemers et al., 2001) and can therefore be used to substantiate an argument in the allocation process. Students' (lack of) motivation is also a frequently heard non-cognitive argument in allocation meetings. According to Hattie (2012), students' motivation shows the willingness to learn and has a direct effect on learning results. Motivation can vary per subject and may be based on students' attitudes towards and interest in a certain subject (Den Brok, Levy, Brekelmans, & Wubbels, 2005). Finally, a student's personal background, for example having parents who are

divorced, can influence teacher recommendations and perceptions of future performances (Bakker, Denessen, & Brus-Laeven, 2007; Farkas, 2003).

2.3. Group processes

Individual expectations and opinions are part of the allocation process. The decision is discussed and made by a group of teachers in allocation meetings, but simply bringing teachers together in a meeting does not ensure successful decision-making (Van Es, 2012). Since literature shows a gap in research on the role of group processes in allocating students, we describe relevant studies on team meetings, leadership and team learning and connect these to our current research. Similar group processes occur in these fields, such as group discussions, structuring and leading meetings, sharing opinions, and turn-taking. Results from studies in these fields are expected to be applicable to our study.

Two main factors regarding group processes are involved in allocation meetings: *interaction* and *participation*. *Interaction* generally relates to those statements that are responses to others, implicitly or explicitly (De Wever, Schellens, Valcke, & Van Keer, 2006; Schrire, 2006). Group interaction can vary within schools, since the composition of teachers changes each meeting. Through positive or negative statements that are expressed during a meeting, the interaction within a group influences decisions that are made (Horn & Little, 2010; Kauffeld & Lehmann–Willenbrock, 2012). Teachers' individual views on student data (test scores, reports) and their beliefs and perspectives about relevant information sources play a significant role in interactions within a teacher group (Nelson, Slavit, & Deuel, 2012), and can determine the course of a meeting. Teachers often tend to align with like-minded colleagues and in a group situation they generally seek to confirm their own convictions (Doppenberg, 2012). We expect that teachers also seek confirmation of their opinions about students in allocation meetings (Schildkamp & Ehren, 2013) and therefore we expect to find a significant effect of interaction on the allocation decision.

Interaction among teachers is related to feelings of satisfaction with the meeting: teams that show more functional interaction, such as problem-solving interaction and expressing proactive statements (for example, that a suggested idea seems worthwhile), are significantly more satisfied with the meeting and outcomes (Kauffeld & Lehmann–Willenbrock, 2012). Dysfunctional interaction and communication, such as criticizing others or complaining, leads to negative relationships and discontent with the outcomes of a meeting (Kauffeld & Lehmann–Willenbrock, 2012; Main, 2012). Although teacher meetings are a regular and recurrent component of a teacher's job, attitudes towards meeting procedures and results are often negative (Kauffeld & Lehmann–Willenbrock, 2012). We expect teachers to be more satisfied in allocation meetings when interaction is positive and focuses on opportunities for students.

Participation refers to who participates in a discussion and to what extent the participants contribute to the discourse (De Wever et al., 2006; Orland-Barak, 2006). Different characteristics and contributions of participants may affect the discussion and thus the decisions that are made in a meeting. Research on meetings both inside and outside educational settings indicates that people are often hesitant to express contrasting ideas in a group (Hauer et al., 2016; Marra, 2012). Due to a tendency to conform to the group, teachers may find it difficult to influence the group's opinions with diverging ideas (Hauer et al., 2016). Research by Dobie and Anderson (2015) on teacher meetings, using conversation analysis, shows that the number and length of statements in a discussion depend on the form of the discussion. In discussions involving serial turns, when teachers were asked to respond one by one, only half of the teachers participated. The teachers that did participate

only spoke once and felt limited in sharing ideas. In an open discussion, on the other hand, teachers experienced more room for expressing (contrasting) ideas. These results indicate that an open discussion offers greater opportunities for teachers to participate in a meeting and share their opinion than making use of serial turns. Who participates in a meeting and the structure of a meeting may thus influence the outcome.

Leadership styles can have a great impact on teacher interaction and participation in a (allocation) meeting (Bouwman, Runhaar, Wesselink, & Mulder, 2017; Scribner, Sawyer, Watson, & Myers, 2007). Transformational leadership, which enhances teachers' involvement in group processes, offers the opportunity for all team members to participate in decision-making. Research on leadership in relation to team learning shows that teachers who experience more opportunities to participate in a decision-making process report higher levels of participation in their team meetings (Bouwman et al., 2017). Good leaders combine transformational and relational strategies and focus on both participation and positive collegial relations (Holmes & Marra, 2004). They are able to structure the meeting, in such a way that they invite diverse opinions from all members in order to avoid potential conflicts and lead the team to a collective decision (Hauer et al., 2016; Holmes & Marra, 2004).

To answer the research question we explored (positive and negative) beliefs and experiences of teachers regarding the current situation of allocation decisions. Beliefs are based on experiences and, as such, powerful indicators of behaviour; they guide teachers' behaviour in practice (Calderhead, 1996; Van der Schaaf, Stokking, & Verloop, 2008). Therefore, through examining teachers' beliefs, we can find indicators for their behaviour in group decision-making, which can help explain how an allocation decision is made. This contributes to our understanding of the largely under-explored process of allocating students in secondary schools, particularly with regard to a very important transition moment in secondary education having great impact on students' future career in education and work.

3. Method

3.1. Participants

Four schools participated in this study. These schools responded to a request distributed among 34 schools that are part of a large school board in the Netherlands. Seven school managers expressed interest in improving the current allocation process of their schools and wanted to participate. The selection of the final four schools was based on striving for diversity in school profiles and visions on teaching and learning. Subsequently, teachers who teach third and fourth year *havo* and *vwo* students with allocation experience were invited to participate. 22 teachers agreed to share their opinions in individual interviews. Several participants fulfilled the role of mentor² of a group of students in addition to their role as teachers.

The participating schools differ in size, results, allocation process, and vision on teaching and learning. School A is a medium-sized school (1500 + students) and shows constant, high exam results and graduation rates. The school offers students several innovative opportunities to differentiate in study time and path, for example by allowing the possibility to complete several subjects faster than officially required. School B is a large school

² The term *mentor* refers to the additional task of teachers to coach and guide a group of students. A mentor has specific responsibilities, such as monitoring students' study progress and ensuring their personal wellbeing. Mentors are student's primary contact person to talk to in case of personal or school-related problems.

(2200 + students) and has seen a decrease in exam results over the years, resulting in a focus on grades with the aim to improve students' performances. This school follows a more traditional approach to teaching with for instance whole-class instruction. School C is also medium-sized (1200 + students) and aims to be a creative school offering a range of (cultural) activities to enhance personal development. Innovations, such as extra-curricular projects, are initiated to evolve from a traditional to a more innovative teaching approach. Over the last years, the percentage of graduates without delay has decreased and the school is searching for a way to improve these results. School D is a relatively small school (700 + students) with an innovative vision on teaching: teacher support and involvement are considered important elements of guiding students through their school careers. Coaches play a major role for their students and fulfill a different role compared to the conventional mentor. Coaches do not have a teaching qualification in a specific subject, but are usually qualified to teach in primary education or have a degree as teaching assistant. As a coach, they guide their students on a fulltime basis. They focus on students' personal learning processes and help them to develop specific competencies, such as autonomy and self-regulation. These different school profiles together may create a diverse picture of (opinions on) allocation decisions.

Table 1 contains an overview of the participants per school. Several participants were both teacher and mentor at the time of the interview, two were fulltime coach (in school D). This could be relevant for the interviews, since mentors usually open the discussion in an allocation meeting by outlining the situation of their students and providing the arguments they consider most relevant. Because of their mentor role, their views on the current and desired allocation process could differ from the other participants.

3.2. Instrument: semi-structured interview

Semi-structured in-depth interviews were held in order to explore and understand teachers' views on decision-making in the allocation process. Inquiries were made about the participants' beliefs and experiences regarding each of the different variables involved in this process:

- (a) individual factors, for example by asking: How do you prepare for an allocation meeting? What are your expectations regarding students' capacities based on? What role does intuition play in comparison to 'hard data'? Through these questions we explored individual teacher expectations and argumentation when allocating students.
- (b) group processes, for example by asking: Do all teachers participate actively in the meeting? To what extent are colleagues open for different opinions? Does the composition of the team influence the course of the meeting? Answers to these questions provided insight into perceptions and beliefs about interaction, participation, and leadership.
- (c) group decision-making, for example by asking: How are decisions made and who decides? Do you believe similar decisions are made in similar cases? How do you experience the decision-making process? These questions provided insight into how group decisions are made and indicate the perceived quality of the decisions.

Next, participants were asked about their attitudes regarding the meetings in general (for example: When do you leave a meeting (dis)satisfied? What can be done to improve the group processes that are part of the allocation process?) to further explore positive and negative experiences. When necessary, the interviewer asked additional questions to receive clear answers to all relevant questions and interrupted respondents when a point was made or no further elaboration was needed. At the end of the interview, participants were asked to add topics they considered relevant, but were not asked for in the interview. This resulted in extra information on related topics such as the role of parents and in opinions that teachers wanted to emphasize. The interviews took approximately 45 min per teacher and were audio-recorded and transcribed.

3.3. Data analysis

The following steps have been taken for the analysis of the data:

1. The transcripts were read several times and statements were selected that reflected teachers' opinions about the main

Table 1
Characteristics of the participants per school.

School	Names	Mentor yes/no	Years of teaching experience	Subject
School A	Sven	Y	4	Physics
	Max	N	19	Mathematics
	Lynn	N	12	Geography
	Dora	Y	5	English
	Martha	Y	15	German
School B	Matt	Y	5	Geography
	Steve	Y	6	Physics
	Walt	Y	6	Economics
	Claire	N	14	Economics
	Marco	N	10	History
	Ruben	Y	20	Dutch
School C	Eva	N	20	Mathematics
	Bill	Y	40	Biology
	Adam	Y	13	Physical education
	Ben	Y	25	Physical education
	Quinten	Y	2	French
School D	Mike	N	3	German
	Michael	Y	10	None (coach)
	Hannah	Y	2	None (coach)
	Charlotte	N	2	Humanics ^a
	Philippe	N	9	English
	Marie	N	5	Spanish

^a Humanics is a specific subject in School D and entails history, geography, economics, and social studies.

- variables (individual factors, group processes, and decision-making) involved in the current allocation process.
2. The statements were summarized and categorized in a matrix for each school in order to create an overview of all the answers given. These matrices consisted of the names of the individual teachers on the horizontal axis and the interview questions per variable on the vertical axis.
 3. A preliminary category system was constructed, consisting of labels in order to analyse and interpret the data. The main categories, subcategories and labels were initially theory driven, based on literature as described in the Theoretical Background (e.g.: *Category Teacher expectations* = ‘The argumentation used by teachers and mentors to substantiate opinions on students and their capacities when preparing the allocation meetings’).
 4. In order to refine and optimize the category system, we applied the constant comparative analysis method (Corbin, Strauss, & Strauss, 2014) by going back and forth between theory and the matrices aiming at a category system with which all the data in the matrices could be labeled. This resulted in main categories that better fitted the data in the matrices, the formulation of more specified subcategories, and labels adapted to these subcategories. For instance, within the subcategory *Arguments* we first indicated prior performances and grades to be two distinct arguments that should be labeled separately. In interviews, however, we found that teachers used these terms interchangeable. The labels were therefore adapted and combined into one, namely grades. The main categories that evolved from these analyses are: *Teacher expectations* and *Argumentation* (individual factors), *Leadership* and *Interaction* (group processes) and *Decision-making*. To investigate teachers' opinions about the current and desired situation we defined the main category *Attitudes* towards the allocation meetings in general, which includes suggestions for improvements.
 5. The refined (sub)categories and labels were discussed with the other authors to check whether definitions were clear and to ensure all statements could be labeled by the developed category system. This discussion led to a further refinement of (names of) labels and a final category system (see Table 2).
 6. The first author conducted the labeling of the original transcripts with the final category system, using Atlas.ti.
 7. A researcher not involved in this study independently labeled three interviews (>10% of the data) by using the final category system in order to establish reliability. Full agreement was reached on the main categories and subcategories, while agreement on the labels was insufficient at first. Adjustments were made on the level of labels by specifying formulations and providing more detailed examples, which led to a satisfying consensus on the labels as well. The result was, given the large number of labels, a satisfactory inter-rater reliability of the complete category system (Cohen's Kappa = .76).

Labeling and categorization of all transcripts was followed by a frequency analysis in terms of how often specific labels occurred and to compare frequencies across schools and teachers. Frequencies are reported in the results section: the tables show the total numbers of statements regarding labels mentioned by all participants. These statements do not add up to 22, because teachers mentioned certain topics more than once in an interview. In addition, co-occurrence analysis was used to investigate which labels occurred simultaneously. This provided the opportunity to combine different variables such as years of experience, role of the participant (mentor or teacher), and their argumentation. This analysis enabled us to explore whether certain opinions about the allocation process were related to specific teacher characterizations.

4. Results

The results are structured according to the variables and categories as formulated in Table 2. First, we report on teachers' beliefs and experiences regarding individual factors, group processes and decision-making. Next, we report on teachers' attitudes as well as their beliefs and experiences regarding allocation decisions in the context of allocation meetings and their suggestions for improvements.

4.1. Factors that characterize the group decision-making process in allocation meetings: individual factors, group processes and decision-making

4.1.1. Teacher expectations

In preparation of allocating students, teachers use different types of information sources and data to form expectations of students' capacities. Over half of the teachers in all four schools rely (at least partly) on their intuition to base decisions on. “Intuition? Always. It starts with your own gut feeling” (Lynn). Teachers who rely on intuition often consider students' social-emotional characteristics and wellbeing as important arguments to substantiate their opinion. “Unconsciously you might think -and maybe you shouldn't, but it does influence your decision-she worked so hard and is such a nice girl, I want to grant her to pass to next year” (Matt).

Almost half of the teachers indicated that they do not actively prepare for an allocation meeting by consulting available information sources. They observe their students' behaviour in class to form an idea of their motivation, work attitude, and skills. Extra preparation is often not considered to be necessary. “I tend to enter a meeting unprepared and open to whatever argument my colleagues bring into the meeting” (Adam). The other half of the teachers indicated that they check previous grades of the students that will be discussed in the meeting. In three of the schools, teachers are asked by the school managers to enter their advice for the student's allocation (positive or negative) in a digital system. This advice is, according to teachers, strongly related to students' grades lists. Most teachers considered filling in their advice to be a sufficient preparation for the meeting.

Ten out of the thirteen mentors indicated to prepare actively for an allocation meeting in which their students are discussed. They talk to the students, review their grades and/or observe them in class. In preparation of a meeting it is common practice that the mentor discusses all or part of the students with the team manager, especially to formulate advice about which subjects or profile to choose. Mentors differ in preparing for a meeting. Some prepare an action plan per student and share their argumentation with the teachers prior to the meeting, while others enter the meeting openly and let the majority decide. “Some students are lucky to have a passionate and persuasive mentor, who is well prepared and tells a convincing story” (Bill).

4.1.2. Argumentation

Table 3 shows the distribution of arguments used to form opinions regarding student allocation. In general, most teachers base their expectations initially on cognitive arguments. Students' current grades are an important reason for deciding whether students can pass to the next school year. “Students who fail to perform at the required level, cannot pass to next year” (Mike). Although most teachers believe that grades are often decisive in allocation decisions, we observed great differences between schools and teachers in substantiating their decisions. School A is mainly focused on grades and achieving basic cognitive capacities needed to pass to the next year and a specific study profile. “I like to

Table 2
Final category system including subcategories and labels.

Variable	Main category	Sub category	Description and labels per subcategory	Examples
Individual Factors	Teacher expectations	1 Preparation 2 Differences in expectation	The indicators that teachers use to form an opinion on students' capacities, in preparation of the meeting. <i>Labels: cognitive; data; observations; background; talks with students; no preparation; intuition</i> Differences among teachers in the use of indicators per student to base expectations on. <i>Labels: same indicators; different indicators</i>	1 "Grades are decisive, so I evaluate the student's grades list." (Matt) 2 "Each teacher uses different arguments and sees different student characteristics." (Steve)
	Argumentation	1 Arguments 2 Comparison of arguments	The argumentation that is used by teachers and mentors in the allocation meetings to substantiate opinions on students. <i>Labels: grades, higher-order thinking skills, motivation, behaviour, wellbeing, background</i> Differences among teachers in the use of argumentation in allocation meetings to substantiate their opinions. <i>Labels: same arguments; different arguments</i>	1 "Grades are not as important as work attitude and motivation." (Claire) 2 "Some teachers only look at their own subject, while others have the complete picture in mind." (Marco)
Group processes	Leadership	1 Objective 2 Communication 3 Leader	The objective of the allocation meeting. <i>Labels: make a decision; discuss students' opportunities; exchange information</i> The communication of the objective of the meeting. <i>Labels: explicit; implicit</i> Who opens and leads the meeting. <i>Labels: mentor; team leader</i>	1 "The objective is deciding what is best for the student." (Bill) 2 "Objectives are rarely shared prior to a meeting." (Eva) 3 "Usually the team manager leads but this differs per team." (Quinten)
	Interaction	1 Listening 2 Composition	The extent to which teachers listen to each other and give each other room to share ideas, and why. <i>Labels: yes; no, due to structure; no, due to formation; no, due to teachers' attitudes</i> To what extent and how the composition of the teacher team influences the outcome of the meeting. <i>Labels: none; management or team leader; formation or combination of teachers; mentor's input; context of meeting</i>	1 "We don't listen to each other well enough." (Adam) 2 "I experience big differences in argumentation between teams." (Philippe)
Decision - making	Decision-making	1 Consensus 2 Selection	Participants and factors involved in the consensus process. <i>Labels: mentor; advice profile; grades; failing subjects; dominant teachers; all teachers</i> How the allocation decision is selected. <i>Labels: voting; open discussion; management decides</i>	1 "We all get one vote, and each subject counts equally." (Matt) 2 "When agreement is not reached, we use a voting system." (Hannah)
Teachers' attitudes	Attitudes	1 Positive 2 Negative 3 Improvement 4 Future meetings	The factors that contribute to a positive or negative attitude towards the allocation meeting. <i>Labels (positive + negative): confirmation of own idea; student's wellbeing; selected decision; argumentation; agreement among teachers; interaction; formulated action plan; structure; never</i> Improvement suggestions for allocation meetings. <i>Labels: clear objective; management vision; structure; focus on student wellbeing; preparation; time management; argumentation; interaction</i> Opinions on keeping or adapting meetings in the future. <i>Labels: keep; abolish; keep in adapted manner</i>	1 "When my own idea is confirmed in the meeting." (Mike) 2 "When I feel I have to rush, and not all students are discussed." (Michael) 3 "We should put the students first, not the goals of the school." (Sven) 4 "Keep the meetings, but change the course of the meeting." (Martha)

base my ideas on hard data" (Sven). The results demonstrate a main focus on grades in School C as well. Teachers from school B, in contrast to the other schools, showed a remarkable focus on students' higher-order thinking skills and motivation. Four teachers emphasised the importance of these skills for their students: "It's a matter of logical thinking. If students do not show analytical skills in my course, they will fail in the final years before graduation" (Walt). Motivation to succeed in school can be an argument to

decide to let students pass to the next year and/or to a specific profile, even if the grades are questionable. Non-cognitive arguments, such as behaviour, personal background and wellbeing, also play a role in the allocation process, especially in School D. Some of the teachers emphasised the importance of social-emotional characteristics of the students: "We have to ask ourselves: where would they be most happy and what is a safe environment for their wellbeing?" (Martha). Although teachers seem to rely on certain

Table 3
Frequencies of statements regarding arguments that are used to substantiate teacher expectations.

Arguments:	School A	School B	School C	School D	Total Frequencies	Example
Cognitive:						
Grades	10	7	6	7	30	"Grades provide the most important information on the student's capacities." (Lynn)
Higher-order thinking Skills	2	6	2	1	11	"Not just reproduction, but problem solving skills indicate capacities." (Steve)
Non-Cognitive:						
Motivation	1	4	0	0	5	"If a student is interested in my subject, he is likely to work harder and pass." (Claire)
Behaviour	2	1	4	7	14	"A student needs the right attitude and behaviour in class to succeed." (Michael)
Wellbeing	3	1	3	3	10	"Some students first have to grow as a person and become more confident." (Eva)
Background	2	1	1	4	8	"A difficult personal situation can make me change ideas on allocating a student." (Hannah)

arguments or data, they can deviate from these depending on the specific student that is discussed.

When asked whether different teachers in a meeting consider similar or different arguments to form an opinion about a students' capacities, 20 teachers responded that each teacher uses different arguments. "We all have our own norms and values and see our students differently: some look at capacities, some at personalities" (Bill). Years of experience (>5 years vs. <5 years of teaching experience) and use of argumentation appear to be related. Relatively unexperienced teachers indicated that they generally rely more on hard data, such as grades, than their more experienced colleagues, who use their intuition more often. "The younger generation looks at the allocation process very straight-forward; does a student meet the requirements? Experienced teachers have a more nuanced image of students and are more involved" (Bill).

4.1.3. Leadership

The vast majority of the teachers believe leadership of the mentor or team manager is a major factor that influences the allocation decision. The approach to opening an allocation meeting, for example, is indicated to be decisive for the decision-making process, because it determines the structure of the meeting. Some managers let the mentors lead the meeting, some take decisions into their own hands. "The managers' leadership style and personal characteristics can be very influential. Some have a dominant presence, others let teachers decide themselves" (Max).

When a manager plays a less dominant role, the mentor leads the meeting and discussions about the students that do not meet the requirements to pass to a next year. Individual mentors approach this process differently. Some mentors plea passionately for their students, while others are less convincing or do not aim to bring their arguments across. Three mentors expressed being proud when they are able to let all their students pass to the next year. "It has happened that I have achieved to let a student pass, while colleagues told me that student would never make it. (...) I think that proves I do something right as a mentor" (Ruben). Visions on retaining can differ per mentor and therefore influence the decisions that are made. Retaining students can be experienced as a failure to a mentor; some even stated that it may damage their ego. On the other hand, a few mentors believed that retaining a year is a right that students should deserve and should not be seen as a

failure or punishment.

Individual teachers seemed to differ in understanding the objective of an allocation meeting. The majority of the teachers (N = 16) believed deciding whether the student should pass to the next year is the main objective. The other six teachers stated that discussing what is best for the student in the long term is the purpose of these meetings. A few added that exchanging information and gaining insights into student's characteristics and capacities is an additional objective. The interviews demonstrated that objectives for the meeting are rarely shared or discussed by school managers. "The objective? Oh ... I never thought about that. I think most of us haven't. [pause] That might be the problem!" (Claire).

4.1.4. Interaction

The course of the meeting seems strongly related to the interaction among teachers. Table 4 shows that the composition of teachers, mentors, and managers in meetings can influence the allocation process in each school. The majority of the teachers (N = 14) indicated that the allocation decision is mainly influenced by which teachers are present and who gets or takes the opportunity to respond to others. When asked who participates in the decision-making process, we received divergent answers: in School A, for instance, generally all teachers are heard, while in School B, according to four teachers, teachers with the loudest voice mostly get a say in the meeting. "It really is survival of the fittest: the one with the loudest voice is heard. Colleagues who wait patiently to say something, can be ignored" (Steve). Some teachers are worried about the impact of group interaction on students' school careers. As a consequence, decisions may seem arbitrary: "Group dynamics can determine the fate of a student. That scares me" (Claire).

The course of the meeting and interaction among teachers also depend on the leadership style of the team manager, according to almost half of the teachers. Some managers let the participants speak freely without interfering, while others ask individual teachers for their input or let teachers raise their hands when they want to share their opinions. The mentor or team manager can therefore influence interaction. "Sometimes a strict manager is needed to lead a meeting and let everyone participate, not everyone can do that. This causes differences between departments" (Eva).

Table 4
Frequencies of statements regarding influence of the team formation on group interaction.

Process influenced by:	Frequency	Example
Teachers	14	"A discussion can completely change directions when specific colleagues interfere." (Eva)
Management	10	"A strict manager can ensure participation of all the teachers that are present." (Bill)
Mentor	9	"The image that is initially drawn by the mentor is of great influence on the contributions of different teachers." (Marco)
No influence	4	"The course of the meetings is similar in different teams." (Michael)

School management can also influence the course of a meeting according to the teachers. For example, graduation rates may be negative, which stimulates the management to allocate more strictly in a certain year. In order to prevent bad graduation rates, students who form a risk will not be given a chance to pass but are required to retain a school year.

4.1.5. Decision-making

Regulations for making allocation decisions vary between schools. School B handles a strict voting mechanism by raising hands simultaneously when there is disagreement about the allocation decision. School A mostly uses discussions involving serial turns after which the mentor and/or manager makes a decision based on the arguments presented by the teachers. The other two schools try to reach consensus in an open discussion and only use a voting system to select a decision when agreement is not reached. These discussions can lead to heated debates between teachers who hold on to their points of view. "Discussions can be intense. (...) Some colleagues stick to their own ideas and do not listen to other opinions. They only have their subject in mind and don't oversee the complete picture" (Adam). Teachers seem to perceive these forms of discussion as standard within each school, but they may vary depending on who leads the meeting and which teachers are present.

4.2. Attitudes

4.2.1. Positive and negative attitudes

Teachers generally are satisfied with a meeting when they feel all students have been discussed sufficiently and agreement has been reached on the majority of the decisions. Mentors and teachers often seek confirmation of their own ideas and hope their proposal is adopted by the participants. Some realise, however, this may also be a negative point of the meetings. "I feel good when my ideas are confirmed by others. (...) I guess that just means I want to be right. But I guess most of us want to be right" (Matt). Teachers believe the meeting has been constructive when they are convinced that the right decision is made about their students. This often means they hope their students may pass to the next year. "We are satisfied when no or hardly any students are required to retain the current year. But this does not mean it was a good meeting" (Ben).

In general, teachers are dissatisfied with the current allocation process. Most (N = 14) seldom or never leave the meetings satisfied. Mentors and teachers indicated they are most content if the wellbeing of the students is the central focus of the discussion and students are allocated to a year and track that is considered suitable for their capacities. This objective is lost in numerous meetings. "I never think: this was a good meeting. I hope we make the right decisions for the students, but that is usually not the focus of most meetings" (Steve). Teachers question the fairness and quality of made decisions. Especially mentors regularly wonder if students in similar situations are offered equal opportunities. This point of critique is emphasised by the experience that different meetings

follow very different patterns. Almost all teachers experience major differences in leadership techniques and course of the decision-making process.

4.2.2. Points for improvement

Different areas for improvement were suggested (see Table 5). Many teachers (N = 17) primarily mentioned 'structuring the meeting' to improve participation and interaction during discussions. They experience that teachers often do not listen to each other, or that the most persuasive colleague in a meeting is decisive. The meetings should be strictly managed so that everyone has a chance to participate actively. "We, including myself, should all just put our egos aside (...). I plea for a very strict chair and explicit rules" (Marco). Within schools and teams, allocation meetings should also be structured similarly to increase fairness. Teachers reported they experience great differences in decision-making processes and advise schools' management to better coordinate the meetings and reflect on procedures in different teams.

Clarity on the objective of meetings is needed, since visions in this respect widely differ. For example, two teachers at the same school expressed very different views on the importance and consequences of retaining a year: "Retaining is used as a reward or a sanction by some colleagues, but I believe retaining does not contribute to the learning process of a student" (Mike). His colleague, however, stated: "Students can really take advantage of retaining a year, sometimes they just need an extra year to grow" (Michael). One third of the teachers argued that schools' management should discuss the objective and vision on allocation and clearly communicate this with the teachers.

A distinct focus on what is best for the students is a point of improvement suggested by nine teachers. All teachers who believed the objective of the meeting is discussing what is best for the students, agreed on the same idea: putting students and their opportunities first. "We should change our approach to these meetings: what does the student need to be successful?" (Eva).

Other suggestions for improvement relate to the preparation by both mentors and teachers, ensuring that valuable information is shared and that irrelevant information, such as anecdotes, is not part of the discussion. More time to discuss each student as well as better insights into different arguments that are or should be used are other suggestions for improving allocation decisions.

5. Discussion and conclusion

This study explored teachers' beliefs and experiences regarding allocation decisions at a crucial moment in students' school careers. Teachers believe that making a substantiated and fair decision regarding student allocation is important, but they experience that group decisions are often unstructured and variable. This variety in decision-making results in frustration; it raises doubts among teachers on the fairness and quality of the decisions made. Teachers experience various factors that influence the decision-making process, such as interaction and teacher expectations. Teachers'

Table 5
Frequencies of statements regarding improvement suggestions for allocation meetings.

Suggestion:	Total	Example
Structure	17	"We should align procedures in the different teams, there is no pattern in the course of different meetings." (Sven)
Preparation	16	"We need to exchange information before the meeting, so everyone comes prepared and knows who we are talking about." (Marie)
Focus on student	9	"We have to focus on the student: where would they feel at their best?" (Marco)
Time	9	"Time is always an issue, if we don't have time to prepare, how can we have a substantiated discussion?" (Philippe)
Objective	8	"The objective of an allocation meeting? I don't know ... A first step would be to discuss what we are doing here." (Claire)
Interaction	7	"If we all put our egos aside and would listen to each other, that would help." (Steve)
Argumentation	5	"Decisions can be based on very subjective, sometimes random arguments and 'gut feelings.'" (Walt)

perceptions furthermore indicate great differences in how decisions are made within and between schools. These findings support prior research on how teachers' perceptions of student characteristics influence decisions about placement of students in specific groups (e.g., Soland, 2013; Van Houtte & Demanet, 2016), add to what is known about influencing factors and limitations in group decision-making by teachers, and offer a more detailed picture of how allocation decisions are made in practice (Bol et al., 2014; Elffers, 2012).

Regarding individual factors that influence allocation decisions, the results demonstrate that teachers widely differ in their views on decision-making when allocating students. These differences are reflected in a great variety we found in teacher expectations and individual use of arguments, resulting in a mixture of arguments making each meeting different. This is believed to lead to unpredictable outcomes. In the context of allocating students this is relevant to know, because these arguments form the basis of an important decision, but at the same time they are not fixed nor predictable. For example, although teachers at all four schools indicated that cognitive information generally is decisive in the decision-making process, they show remarkable differences in the weight they attach to arguments based on students' cognitive capacities. While some teachers and mentors almost completely rely on cognitive arguments, such as grades, others perceive non-cognitive arguments, such as students' behaviour in class, as equally important. The results confirm the notion that teacher expectations and decisions are based on varying arguments and data sources (Ingram, Louis & Schroeder, 2004; McMillan, Myran, & Workman, 2002; Vanlommel et al., 2018) and correspond to the literature on the pervasiveness of teachers' expectations about student ability across international contexts (e.g., Rubin, 2008). Differences in argumentation might be partially explained by the teachers' type of schools: School D, for example, is a school that focuses on relationships with the students and perceives competence development and study attitude (which includes responsibility and motivation) as main learning goals. In contrast, School B focuses more on students' cognitive skills to decide whether they can pass to a next year. Results further show that teachers' expectations are partially based on intuition which makes their advice on allocation subjective and biased. These findings are consistent with and add to literature on teachers' intuition and data use to substantiate opinions regarding students (Vanlommel et al., 2018). Differences in expectations seem to originate from differently perceived objectives of the meetings, visions on education, and teacher characteristics. For example, it appeared that more experienced teachers tend to use their intuition more often, while inexperienced teachers rely more on hard data, such as grades.

Teachers' experiences indicate that group processes during the allocation process are variable and of great influence on the decisions that are made. First, teachers mentioned dissimilarities in leadership and management which may influence the course and outcome of the meetings (see also Dobie & Anderson, 2015). Within schools, leadership varies from authoritarian and strict to insecure and hesitant. Discrepancies in the allocation process of similar students and inequity in decisions may be the result of this. Second, results indicate that changes in the team composition have a profound influence on the decision-making process. Teachers believe that interaction and participation are major influencers of the allocation decision and may therefore determine the course of a student's school career. This finding is in line with the study of Forsyth (2009) into group dynamics, which demonstrates that group interaction and formation can influence actions and opinions of individuals and thus the outcome of a meeting. This study further emphasizes the notion that interaction may be decisive in an allocation decision. Third, although open discussions can lead to

greater participation (Dobie & Anderson, 2015), we found that interaction is often determined by a few persuasive team members and that open discussions may lead to convincing colleagues overruling more hesitant teachers. Taken together, combining these different insights and applying them to allocation decisions provides a relevant and interesting perspective on a topic that has not been investigated much.

The teachers in our study mentioned numerous suggestions for improvement of the decision-making process. Most indicated the need for a more systematic approach to allocating students. Structuring the meeting and formulating a clear vision on allocation may prevent the idea that decisions are made arbitrary and enhance the fairness of decisions. Interaction is believed to be a main influencer of the allocation decision, yet not all teachers are given or take the opportunity to participate, and interaction is often ill-structured. A common mind-set regarding what is best for the student should be the objective of the allocation according to nearly all teachers. Teachers also believe a more extensive preparation of the meeting can improve decision-making. Entering a meeting well prepared with well-substantiated arguments will help to form a complete picture of the students in order to make a grounded decision.

5.1. Implications for practice

Teachers generally agree that the current allocation process is deficient and they emphasize the need to improve decision-making in allocation meetings. Especially structure and interaction in meetings were believed to be inadequate and decisions often seem to be arbitrary. The interviews provided rich data as a basis for improvements of the decision-making process. We recommend to develop a professional development program that focuses on creating awareness among teachers and mentors of the impact of their role and input in a group-decision and on processes related to group decision-making. By discussing student cases in life-like settings, teachers may exchange experiences and practice interaction and participation skills, such as turn-taking and expressing contrasting ideas, to structure the course of the discussion. Teacher interaction and participation can be improved by practicing guided open discussions with a focus on constructive problem-solving interaction, such as learning to involve all participants in a meeting and listening to opposing views. Teachers indicated that reaching consensus on a decision is complicated because of varying teachers' expectations and experiences. We therefore recommend to add reflection activities in this program that stimulate teachers to reflect on teacher expectations. For example, teachers can become aware of how expectations are formed, how intuition influences their beliefs, and which (non-)cognitive student characteristics may be used to form an impression of students.

5.2. Limitations and future research

This study must be considered in light of its limitations. This study on a relatively new research area is preliminary and exploratory and results may therefore not be generalizable. First, only a limited number of teachers from four schools participated in this study, which limits the generalizability of the findings. We tried to meet this limit to some extent by selecting a sample of schools that represent the width of Dutch secondary education. Despite limited generalizability, we believe the interviews revealed interesting and important insights into a relatively new area that is worth investigating further.

Second, our conclusions are solely based on teachers' beliefs and experiences and not on observations of real allocation meetings. We nevertheless found it relevant to investigate their points of

view, because they are most involved in this topic and key to possible changes. As argued before, teachers' behaviour in group decision-making is strongly influenced by their beliefs that are based on and shaped by their own experiences in practice.

The current study has shown that allocation decisions are complex and need further investigation to increase the quality and fairness of the allocation process. A possible avenue for future research is observing allocation meetings and analyzing interactions in allocation discussions, including how certain interactions influence the common mind-set teachers create during decision-making processes.

5.3. Conclusion

We have explored a highly relevant topic in secondary education: allocating students to an optimal track and year, corresponding to their capacities and characteristics. We made use of theories from different fields of research to create a clearer picture of the processes involved in allocating students, which provided us with new insights in a relatively unexplored field of study. We believe that these insights justify this field of study as a relevant area for further research and development. Our results indicate that the allocation of students by teachers can be improved considerably and should take place more professionally. There is a good basis for this as teachers themselves mention a number of suggestions for improvement. By giving teachers and mentors a voice in our study the discussion has been opened how to do so. A well-structured, substantiated and unequivocal allocation process can benefit schools, teachers, and most importantly: students.

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