Einstein Class: Intervention to Reduce Secondary School Dropout of students with Autism Spectrum Disorder

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Abstract

Many students with Autism Spectrum Disorder (ASD) face significant challenges during secondary education (Nuske et al., 2018). The Einstein Class is a new intervention designed to address these challenges by offering both education and specialized care for students with ASD under one roof. The primary goal of the Einstein Class is to reduce dropout rates among students with ASD. However, until now, no studies have explored the effectiveness of this intervention in achieving its goal.
This study aims to fill that gap by employing a mixed methods approach. We analysed dropout rates before and during the implementation of the Einstein Class, including descriptive review of the total number of students with ASD at both the Einstein Class and its parent school, AMS, as well as their dropout rates. Additionally, we conducted in-depth interviews with teachers and coaches/pedagogues to explore intervention's effectiveness. Including a stratified sample of five teachers and five coaches/pedagogues from the Einstein Class, who were interviewed about their perspectives on the impact, benefits and challenges of the intervention. The interviews were subjected to a thematic content analysis. Following the implementation of the Einstein Class, dropout rates initially increased but later decreased at both Einstein Class and AMS. Notably, the dropout rates were lower at Einstein Class compared to AMS and the national average. Additionally, the number of students enrolled in the Einstein Class tripled over its five-year existence. Teachers and coaches/pedagogues reported several positive aspects of the Einstein Class, including the variety of care provided, effective collaboration between parents and coaches, and the support offered during educational transitions. However, they also identified challenges, such as the varying learning paces of students, issues related to peer acceptance by students without ASD, the need for regular evaluations, and gaps in support during the transition to postsecondary education. In conclusion, while it remains unclear whether the Einstein Class fully meets its goal of reducing dropout rates, it does effectively address the needs of students with ASD, according to the experiences of teachers and coaches/pedagogues. This suggests that the Einstein Class makes a valuable contribution to inclusive education.

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Introduction and theoretical exploration

Autism Spectrum Disorder (ASD) is a complex and diverse developmental disorder, characterized by several key symptoms (Thomas et al., 2023). Individuals with ASD typically struggle with social skills, which affects their interactions across various contexts. This includes challenges in both verbal and nonverbal communication, as well as restricted and repetitive patterns of interests, behaviours, and activities. These symptoms generally appear during early development and lead to significant impairments in daily functioning (American Psychiatric Association, 2013). According to data from the Dutch Youth Institute (2021), approximately 31,000 Dutch children aged 4 to 12 years (representing 2.1% of the population in that age group) are reported by their parents or caregivers to have ASD. As these students transition to secondary education, they are distributed between regular secondary education (44.6%) and special secondary education (55.4%), as noted by the Dutch Autism Register (2022).

Many children with ASD encounter significant challenges during the transition to and attendance at secondary education due to a combination of their characteristic traits, interaction difficulties—including issues with peer relationships, social skills, communication, physical settings, logistics, and daily structure—and deficits in emotion regulation and functioning within larger environments. For instance, children with ASD often struggle with forming friendships and adjusting to the new schedules associated with secondary education (Nuske et al., 2018). Consequently, approximately 52,5% of these students do not graduate on time according to the regular programme, and 11% drop out of school completely (Barrat et al., 2014). Furthermore, nearly 30% of Dutch children with ASD do not pursue postsecondary education (Jonkman et al., 2022).

Since 2014, with the implementation of the Law of Suitable Education, all schools in the Netherlands have been mandated to uphold a duty of care for every child, thereby making them responsible for the education of all children within their institutions (Ministry of Education, Culture and Science, 2024). In response to the challenges faced by children with ASD and to mitigate the risk of school dropout, various interventions have been developed and implemented throughout the Netherlands (Ministry of Public Health, Welfare and Sport, 2024). One of these interventions is Einstein Class (Haarsma, 2023). This study represents the first exploring of the effectiveness of and experiences with the Einstein Class intervention.

Needs of children with ASD

According to current theories, children with ASD have six distinct needs during their secondary education experience (Symes & Humphrey, 2010; Bottema-Beutel et al., 2020; Nuske et al., 2019; Tobias, 2009; Hewitt, 2011).

1. Children with ASD desire understanding and acceptance from their peers (Symes & Humphrey, 2010; Bottema-Beutel et al., 2020). These children are at a higher risk of being

bullied and rejected by their peers. Improving peer acceptance through interventions or support from a school psychologist can be beneficial (Symes & Humphrey, 2010).

2. Children with ASD benefit from tailormade support, particularly during transitions, to assist with emotional and social skills within the school environment (Bottema-Beutel et al., 2020; Nuske et al., 2019; Tobias, 2009). Nuske and colleagues suggest that transition support from primary to secondary education should include a team meeting dedicated to the transition (preferably with staff of the new school), a child-specific information page, and a designated point-person to oversee the transitional process (Nuske et al., 2019). When these needs are not adequately addressed, the children's learning and adjustment may be disrupted due to their deficits in social, emotional, and academic skills, leading to issues such as anxiety and bullying (Nuske et al., 2019).
3. Children with ASD require support for information processing, which includes consistent instructional strategies and learning environments that are low in stimulus (Bottema-Beutel et al., 2019; Tobias, 2009). Virtual homework help is an example of an effective way of supporting students with special needs (Epstein et al., 1999). Adjusted instructional strategies might include using visual PowerPoints and video-based resources (Moody et al., 2018).
4. It is essential for school staff to have a comprehensive understanding of ASD (Bottema-Beutel et al., 2020; Tobias, 2009).
5. There must be regular and effective communication between the parents and the school's teachers or mentors (Tobias, 2009). A collaborative relationship between parents and the school is associated with higher academic achievement among students (Bowen, 1999).
6. Preparing students for postsecondary education by teaching them various skills is crucial. These skills include independent problem-solving, self-advocacy, executive functioning, and the ability to plan and make quick decisions under changing circumstances, such as navigating traffic. Additionally, fostering independence and familiarity with college skills are important (Hewitt, 2011). Students with ASD benefit from coaching, feedback, practice, and modeling (Swiezy et al., 2008). Many students with ASD face challenges within mainstream education due to unmet needs, which can lead to school dropout (Renty & Roeyers, 2006). Therefore, interventions tailored to students with ASD, such as the Einstein Class, are necessary to support their educational journey.

The intervention

In 2018, the Anna Maria van Schurman (AMS) school in Franeker, the Netherlands, launched the Einstein Class intervention, specifically designed to support children with ASD and related comorbidities, including information processing difficulties and anxiety disorders. The intervention's primary aim is to address the high dropout rates among secondary school students with ASD by providing an integrated approach that combines education with specialized care, all within the same

educational environment. This comprehensive support system is underpinned by two guiding principles: 'Special where necessary, normal where possible' and 'Think in terms of opportunities and talents' (Einstein Class, n.d.).

Theory behind Einstein Class

The Einstein Class is founded on various educational philosophies regarding the education of children with ASD (Agterberg et al., 2021; Wevers, 2020). These philosophies include the principle of inclusive education for all children, regardless of having ASD. The emphasis is on adapting educational practices to meet the individual needs of each child rather than compelling the child to conform to a standardized norm (Agterberg et al., 2021). The guiding vision of the Einstein Class can be encapsulated in the following (translated) quote:
"We support the pursuit of inclusion, but in such a way that specialist provision is linked to (and in) regular schools. It is important that every pupil can be themselves, and can develop at their own pace and in their own way." (Agterberg et al., 2021, p. 4)

Agterberg and colleagues assert that every child with ASD is unique, possessing individual talents and facing specific challenges, which necessitates personalized support (Agterberg et al., 2021). It is crucial for children to be able to express their individuality, experience a sense of belonging, and receive the appropriate care they require. Children who process information differently, which is generally the case with those diagnosed with ASD, have unique educational needs that must be accommodated by their schools. The Einstein Class seeks to address these needs through a customized, student-centred approach to education (Wevers, 2020).

Arrangements of care and education

Based on the specific needs in care of children with ASD, three distinct arrangements are available within the Einstein Class programme:

1. Full Integration with Tailored Support: Children receive regular education combined with individualized care agreements. A low-stimulus room, located within the same building, provides a space where children have access to care if needed. They may enter this room autonomously or be directed by their teacher if, for example, they become overstimulated.
2. Partial Integration with Enhanced Care: Children receive a combination of regular education and tailored support. This arrangement is designed for children for whom the regular schedule is overwhelming. Compared to the first arrangement, this option provides a higher level of care. Children will participate in at least 50% of the regular education hours, though the ratio of care to education is individualized, based on each child's needs.

3. Exclusive Tailored Education: Children receive a completely customized educational experience, fully adapted to their individual needs, without participation in the regular programme. They spend the entire school day in a single classroom, except for physical education and cooking classes. This differs from the traditional schedule, where students change classrooms every hour. The educational and care services amount to a minimum of 24 hours per week. Each class has designated coaches who provide both educational and care support. In the first and second grades, a specialized teaching method known as the International Middle Years Curriculum (IMYC) is employed (IMYC Nederland, 2024). This curriculum involves thematic projects, such as sustainability, which span six to eight weeks, as opposed to traditional subject-based instruction. Objectives for each theme are established at the beginning of the project, and students engage in reflective learning, utilizing their existing knowledge and skills. They maintain a reflective journal throughout the project.

Each child is assigned a dedicated coach or pedagogue responsible for overseeing their personalized care. The first and second arrangements are conducted at the AMS main building, while the third arrangement operates at a separate location in Franeker. Children have the flexibility to transition between these arrangements as needed throughout the academic year (Haarsma, 2023; Einstein Class, n.d.; Einstein Class, 2022). The Einstein Class programme addresses the needs of children with ASD through personalized care and information processing support, including the provision of low-stimulus environments in all three arrangements. However, it remains unclear whether the programme adequately addresses other critical needs such as peer acceptance, staff knowledge of ASD, effective communication between parents and mentors/teachers, and the development of skills necessary for postsecondary education (Einstein Class, 2022; Symes & Humphrey, 2010; Bottema-Beutel et al., 2020; Nuske et al., 2019; Tobias, 2009; Hewitt, 2011).

Pilot study

In 2022, teachers and coaches from the Einstein Class programme completed a self-report questionnaire evaluating their own practices. The questionnaire addressed several areas, including reflection, evaluation, goal-setting, impact on the child, adequacy of actions, structure, and collaboration. Examples of items from the questionnaire included: 1) "Our teachers reflect on the relationships between students, teachers, classes, and subject matter to understand and adjust educational needs accordingly," and 2) "Our teachers collaborate with parents, involving them as experiential experts and partners in analysing, devising, and implementing the approach" (Einstein Class, 2022, p. 15). Respondents were asked to rate these statements using the following options: very weak, unsatisfactory, sufficient, and good. Overall, all areas assessed, with the exception of ownership of the learning process, received a rating of “good”. Ownership of the learning process was rated as “sufficient”, indicating that this is an area in need of improvement. In conclusion, the results of the

pilot study suggest that, overall, the teachers and coaches adhered to the Einstein Class approach as intended. However, the pilot study did not investigate whether the Einstein Class programme effectively achieves its goal of reducing student dropout rates. The present study aims to address this gap and contribute to understanding the programme's impact on dropout reduction.

Aim and research questions

The Einstein Class approach is grounded in the literature and the professional experiences related to the challenges faced by students with ASD in educational settings (Agterberg et al., 2021; Wevers, 2020). To date, no study has examined whether the Einstein Class intervention effectively reduces school dropout rates among children with ASD. This study aims to address this gap in the existing research. The primary objective of this study is to enhance understanding of the efficacy of the Einstein Class intervention. It seeks to answer the following three research questions:

1. Does the Einstein Class reduce school dropout in students with special needs?
2. What could explain the dropout numbers according to the teachers and care providers who work with the Einstein Class approach?
3. What are the benefits and challenges of the Einstein Class approach?

Methods

This research was a practice-oriented research using mixed methods. The mixed methods contained a quantitative part: collecting numerical data and a qualitative part: interviews.

Quantitative part: Dropouts

To address the first research question, dropout rates were analysed. The data encompassed the number of students with ASD and the corresponding dropout rates at the Anna Maria van Schurman (AMS) school prior to the implementation of the Einstein Class intervention (school years 2012-2013 to 2017-2018) and during the period of the Einstein Class intervention (school years 2018-2019 to 2022-2023). For each academic year, data on the total number of students with ASD, the number of students with ASD who dropped out, and the dropout percentages were collected. The quantitative component of this study employed an longitudinal design. Student records from the AMS school's student registration system (Magister) were utilized to track the number of students with ASD and dropout rates. The analysis was descriptive in nature. The target population included all students with ASD enrolled at AMS and Einstein Class during the specified periods. Inclusion criteria for the quantitative data collection were students with ASD at AMS and Einstein Class between the academic years 2013-2014 and 2022-2023. Participants were aged 11 to 18 years and included both male and female students. Data collection involved: 1) the total number of Einstein Class students from school year 2018-2019 to 2022-2023, 2) the number and percentage of dropouts among Einstein Class students for the same period, 3) the number of AMS students with ASD from school year 2013-2014

to 2022-2023, and 4) the number and percentage of dropouts among AMS students with ASD for the same period. Permission to access the data was granted by the head of the school. This procedure was reviewed and approved by the Ethics Committee of the Behavioural and Social Sciences of the University of Groningen. A table was constructed to present the data, and a descriptive analysis was conducted to address the first research question: "Does the Einstein Class intervention reduce school dropout rates among students with ASD?".

Qualitative part: Interviews with teachers and coaches/pedagogues

The qualitative aspect of this research was designed to address the second and third research questions: 2) "What could explain the dropout numbers according to the teachers and care providers who work with the Einstein Class approach?" and 3) "What are the benefits and challenges of the Einstein Class approach?". To effectively address these questions, in-depth interviews were conducted with teachers and coaches/pedagogues who have substantial experience with students participating in the Einstein Class programme. To enhance the credibility and reliability of the interview data, a checklist developed by Elo et al. (2014) was utilized. This checklist guided the creation of the interview questions and the overall study framework, ensuring a thorough and methodologically sound data collection process.

Sample

The qualitative segment of this study targeted teachers and coaches/pedagogues involved with the Einstein Class intervention. Participants were selected based on their employment with the intervention. The criteria for inclusion were deliberately broad, encompassing all teachers and coaches/pedagogues of Einstein Class, without differentiation by age, gender, years of employment, type of care arrangement, or specific location within the Einstein Class or AMS buildings (Einstein Class, n.d.). The student researcher, who was a teacher at AMS, was well-positioned to approach potential participants. However, to avoid potential bias or discomfort, direct colleagues from the researcher's subject section were excluded from participation. It was explicitly communicated to all invited participants that their involvement was voluntary and that there would be no adverse consequences for withdrawing at any time. Among the twenty employees at Einstein Class, seventeen met the inclusion criteria. At AMS, there were 130 staff members, with nineteen meeting the criteria. Due to practical limitations, it was not feasible to obtain a list of teachers who had taught at least one Einstein Class student. Consequently, the head of the school provided a list of teachers who had taught one or more classes at the Einstein Class location (arrangement 3). In the sample, five coaches and pedagogues were interviewed, representing approximately 29% of the total coaches/pedagogues. Likewise, five teachers from the Einstein Class site were interviewed, accounting for around 26% of the total teaching staff at that location. This selection strategy aimed to ensure a representative cross-section of perspectives from both teaching and coaching staff involved in the intervention.

Concepts and instruments

The interview guide for this study was developed to address the second and third research questions, drawing on theoretical frameworks regarding the needs of secondary school students with ASD. The guide incorporated the following themes: 1) peer understanding and acceptance, 2) individualized transition support, 3) information processing support, 4) staff knowledge of ASD, 5) effective communication between parents and teachers/mentors, and 6) skill development in preparation for postsecondary education (Symes & Humphrey, 2010; Bottema-Beutel et al., 2020; Nuske et al., 2019; Tobias, 2009; Hewitt, 2011). The interviews were conducted using a semi-structured format, which allowed the researcher to seek clarification as needed. Distinct interview guides were created for coaches/pedagogues and teachers, each tailored to include items pertinent to their specific roles (Appendices I and II). For example, the question, "How would you describe the communication between the Einstein coaches and parents?" was relevant for coaches and pedagogues but not for teachers. The questions were administered in Dutch, as all participants were fluent in the language.

Procedure

Formal permission to conduct this research was first obtained from the head of the school via an information letter and a consent form (Appendices III and IV). Upon receiving this permission, the researcher approached the team leaders of AMS to seek their approval to contact their team members. Team leaders were also provided with an information letter and a consent form (Appendices V and VI). Participants were selected using a purposive sampling technique, specifically a stratified sample approach. The head of the school was asked to provide the researcher with two lists: one of all Einstein Class coaches/pedagogues and another of all teachers who had instructed at least one student from Einstein Class (both lists in alphabetical order). Each individual on the lists was assigned a number by the researcher. Subsequently, two sets of five random numbers were generated using a random number generator (www.numbergenerator.org). The individuals corresponding to these numbers were invited to participate. Therefore, five participants were randomly selected from each stratum. Participation was entirely voluntary, and participants were assured that declining the invitation or withdrawing from the study at any point would not result in any negative consequences. If an invited individual declined participation, another random number was generated to select a replacement, ensuring that the target number of ten participants was achieved. Once selected, participants were contacted by the researcher either via email or in person. They received an invitation and information letter, and if they agreed to participate, a consent form was sent (Appendices VII and VIII). Upon receiving consent, interview appointments were scheduled. All interviews were conducted in April 2024, took place on-site, and lasted between 15 and 30 minutes. Interviews were recorded

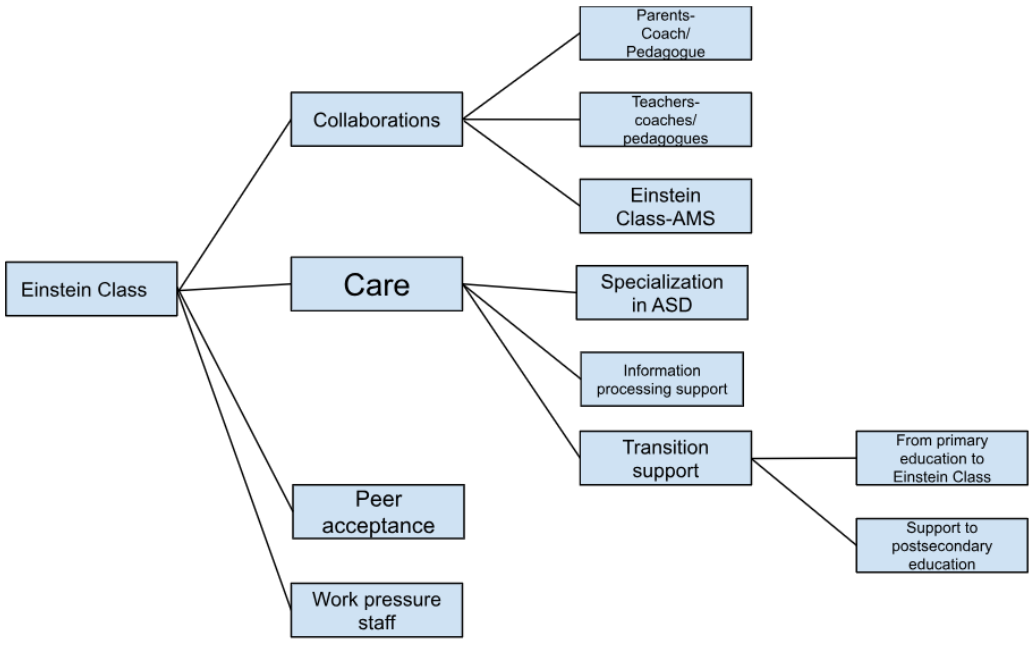
with an audio recorder and stored in a secure location accessible only to the supervisor and the researcher. Participants provided consent for recording prior to the interviews.

Analysis plan

The interviews were transcribed and subsequently subjected to a quality assurance process, where 20% of the transcripts were reviewed by a second assessor (Dr. A. M. Sluiter-Oerlemans) to ensure accuracy. The transcripts were meticulously examined, and relevant statements were identified and selected. The analysis employed thematic and open coding techniques using Atlas.ti. During the coding process, an inductive approach was used by assigning codes to statements. Each relevant statement received a code, and codes that appeared multiple times were cross-referenced to enhance internal validity (Boeije, 2002). This process ensured that each code maintained consistent meaning throughout the analysis. To mitigate potential bias—considering that the researcher was an AMS employee—a second assessor was involved in the coding process. This measure aimed to prevent issues such as selective reporting or cherry-picking (Morse, 2010). The second assessor independently reviewed and coded the transcripts, contributing additional codes as needed. The researcher and the second assessor reached a consensus on most codes, with some new codes introduced by the second assessor. Following the feedback from the second assessor, the researcher completed the coding of the remaining eight transcripts. The codes were subsequently organized into themes, as illustrated in the code tree (Figure I) and detailed in Appendix IX. An overview of the coding tree is used because of the size of all the codes and themes, and to fit the descriptive nature of the second and third research questions (Schreier, 2012).

Figure I

Overview of support offered to Einstein Class students



In my capacity as a teacher at AMS, I had the opportunity to engage with several students from the Einstein Class, specifically within the first and second care arrangements. My interactions with the interview participants were varied: some were colleagues with whom I had previously collaborated, while others were unfamiliar to me before the interviews. Because I had seven months of experience with Einstein Class before conducting these interviews, I had a good understanding of the programme. Which may have influenced the depth and focus of my questioning. It is crucial to acknowledge that my perspective on Einstein Class may be shaped by my direct involvement and the insights shared by colleagues, potentially introducing a conflict of interest. This personal experience could lead to a more positive assessment of the programme than might be objectively warranted. However, it is important to note that my role did not extend to influencing the Einstein Class programme.

Results

The quantitative results give an comprehensive examination of the dropout rates before and during the intervention period, next to the dropout students with ASD from AMS. Complementarily, the qualitative analysis explores potential underlying causes of the dropout rates, along with an evaluation of the benefits and challenges associated with the intervention, as experienced by the teachers and coaches/pedagogues of Einstein Class.

Quantitative part: Drop-out rates

Table I offers a detailed account of dropout percentages and absolute numbers from AMS prior to the implementation of the Einstein Class programme. In contrast, Table II presents a comparative analysis of dropout percentages between AMS and Einstein Class for the period spanning from 2018 to 2023.

Table I

Percentages of dropouts of AMS during 2013-2014 to 2017-2018

School year	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Dropouts with ASS from AMS	0	0	1	0	2
Total number of students with ASS from AMS	30	27	33	35	43
Dropouts with ASS from AMS in percentages	0%	0%	3,0%	0%	4,7%

Table II

Percentages of dropouts of AMS and Einstein Class during 2018-2019 to 2022-2023

School year	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Dropouts with ASS from AMS	0	1	5	15	13
Total number of students with ASS from AMS	55	59	59	70	87
Dropouts with ASS from AMS in percentages	0%	1,7%	8,5%	21,4%	14,9%
Dropouts of Einstein Class	4	6	5	15	8
Total number of Einstein Class students	30	46	67	86	91
Dropouts of Einstein Class in percentages	13,3%	13,0%	7,5%	17,4%	8,8%

A notable trend is evident in the dropout percentages: initially, both Einstein Class and AMS had an increase in dropout rates, followed by a subsequent decline. Since the implementation of the intervention, there has been a substantial increase in the number of students with ASD in regular education settings, with the figure doubling, and a tripling within the Einstein Class cohort. Furthermore, the distribution of students with ASD between AMS and Einstein Class had remained relatively balanced. The 2021-2022 academic year saw a peak in dropout rates, coinciding with the global COVID-19 pandemic.

Qualitative part: Interviews

Initially, respondents were asked to provide their characteristics. All coaches and pedagogues were female, with an average age of 31,4 years. Their average experience working with Einstein Class was 2 years and 4 months. All held a bachelor's degree in pedagogy or education, though one had additionally obtained a master's degree in the same field. Among the teachers, 40% were female and 60% male, with an average age of 46 years and 5 months. Their average teaching experience at Einstein Class was 2 years and 3 months. Forty percent of these teachers had pursued vocational education in pedagogy or education, while all had earned a bachelor's degree and 40% had also achieved a master's degree in pedagogy or education (Appendix III).

Subsequently, respondents were interviewed about potential explanations for dropout rates, as well as the benefits and challenges associated with Einstein Class (Appendix VI). A total of 258 codes were applied, which were categorized into eleven thematic areas. These themes included: 1) peer understanding and acceptance, 2) dropout rate of Einstein Class, 3) specialization of Einstein Class in ASD, 4) information processing support, 5) transition support from primary school to Einstein Class, 6) support for postsecondary education, 7) parental involvement, 8) collaboration between teachers/mentors and coaches/pedagogues, 9) collaboration between Einstein Class and AMS school, 10) work pressure on coaches/pedagogues and teachers, and 11) overall care. The themes are further elaborated in the following sections. Quotations are translated and paraphrased from Dutch to English.

Dropouts Einstein Class

Respondents were asked to address the second research question: 'Do you think that Einstein Class prevents dropouts of children with ASD?' All respondents affirmed that they felt the Einstein Class significantly reduces dropout rates. As one respondent noted:

"It would go all wrong for most of the Einstein students if they were to follow regular education. That is probably the most detrimental to the Einstein student.". (Respondent 10)

Respondents cited several reasons for the success of the Einstein Class in reducing dropouts. These included active measures such as ensuring students remain engaged in school, for example, by picking up students from home if they are struggling to attend—something not typically offered in regular

education. Additionally, respondents highlighted the benefit of extra funding and resources from the government, which allow for more individualized time and care, facilitating the students' development. The increasing number of student applications to the Einstein Class was also noted as a noteworthy trend. To meet this growing demand, several respondents suggested expanding the programme to additional locations, ensuring that all interested students can be accommodated.

Benefits

The perceived benefits of the Einstein Class by the interviews encompass a variety of care, effective collaboration, and transitional support between educational stages. The care provided is characterized by its tailored approach, specialization in ASD, and fostering of peer acceptance. Collaboration was highlighted through the strong partnerships between parents and coaches/pedagogues, as well as between coaches/pedagogues and teachers. Transitional support was evident in the structured guidance offered during the transition from primary education to the Einstein Class and from the Einstein Class to postsecondary education.

Care. Nearly half (n=4) of the respondents indicated that the typical class sizes in regular education, which usually consist of about 26 students, are too large for those in the Einstein Class. They emphasized that students with ASD require more individualized care and attention than is typically provided in mainstream educational settings.

"Nowadays, you have around 26 students in a class. Then the stimuli are so big that the subject matter does not reach the Einstein student's head." (Respondent 8)

The experienced care structure in the Einstein Class is organized into three main subthemes: tailored care, ASD specialization, and peer acceptance. Most respondents (n=8) noted that the Einstein Class provided a tailored care approach, which was grounded in the individual development plans of each student. All coaches and pedagogues reported that the support was customized based on these plans, with half of the respondents highlighting the quick accessibility of care. As a result of this tailored care approach, five respondents observed an increase in the students' independence.

"In the lower grades, investment is mainly made in the relationship between the student and his coach and teachers. In the higher grades, you see that the focus is increasingly on independence. Working on your own, taking responsibility, and taking control." (Respondent 2)

The Einstein Class stands out by its range of specializations designed to meet the specific needs of students with ASD, according to the respondents. These specializations included adapted facilities that differ significantly from those in regular education settings. Six respondents described the environment at Einstein Class locations as calm and tranquil, with low-stimulus areas and seating arrangements. Other notable specializations included a small-scale learning environment, support for social-emotional development, the implementation of the International Middle Years Curriculum

(IMYC) during the initial years, and extensive information processing support. The information processing support provided was categorized into everyday adjustments and accommodations made on an as-needed basis. Everyday adjustments described by respondents included maintaining consistent classrooms throughout the day, having subject teachers come to the students, facilitating small-group learning, verbally repeating the schedule to establish routines, and ensuring regular interactions with the same teachers to manage expectations effectively. Additionally, classrooms featured fixed seating arrangements and quiet spaces, and students received assistance with schoolwork. An example of an as-needed adjustment was the provision of step-by-step assistance to help students understand and respond to questions in their educational materials.

"A student of ours had to make a practical assignment. We looked together in a very structured way at what is needed for which question. Then, together with the student, we look at what the question is and how do you then arrive at an answer." (Respondent 1)

Peer acceptance was identified as one of the significant benefits of the Einstein Class by respondents. Given that all students in the Einstein Class have ASD, seven respondents highlighted this as a crucial factor in fostering mutual understanding among students. The majority of respondents (n=7) indicated that students in the Einstein Class are well-accepted by their peers.

"I see the acceptance of each other in that everything is possible and allowed." (Respondent 10)

"Students match with each other, sometimes making friends for the first time." (Respondent 2)

The students in the Einstein Class received a range of care tailored to their needs. Due to this specialized care, more than half of the respondents (n=6) observed that Einstein Class students had the opportunity to develop themselves.

"The concept allows students to discover their talents and be valued." (Respondent 9)

Collaborations. The collaboration within Einstein Class primarily involved two key interactions: the parent-coach/pedagogue collaboration and the coach/pedagogue-teacher collaboration. Respondents indicated that parents were notably more engaged in the Einstein Class environment compared to traditional educational settings. Specifically, four respondents highlighted that the coach served as the primary contact person for parents. The frequency and formality of this communication varied, with three respondents noting weekly interactions (such as newsletters) and another three mentioning daily communications.

"We now have a student who struggles to come to school. Then we have contact with the parents every morning. If the student is not there, we call." (Respondent 5)

While coaches maintained regular contact with parents, all five teachers reported an absence of direct communication with the parents of their students.

"It seems to me that parents might like having contact with me. Their child must be talking about that crazy teacher. Unfortunately, I have no contact with parents. I myself would have liked it if there was contact." (Respondent 10)

Furthermore, four respondents noted that the inclusion of the care triangle—comprising parents, coaches/pedagogues, and the student—was experienced as a benefit (e.g. during the evaluation of the individual development perspective plan).

Respondents described both differences and similarities in the collaboration between teachers and coaches/pedagogues. All respondents acknowledged the existence of a collaborative relationship between these groups. The majority (n=7) reported that coaches/pedagogues played a supportive role for teachers.

"I really like having close contact with subject teachers. That works very well actually." (Respondent 5)

Most respondents (n=7) found the regular pre-class communication between teachers and coaches/pedagogues to be beneficial. However, four respondents felt that the frequency and/or depth of this contact was insufficient. In addition to collaborating on student-related matters, coaches/pedagogues and teachers also worked together to enhance their professional knowledge and skills. A majority of respondents (n=7) participated in joint lectures and training sessions on ASD offered by the Einstein Class, such as the 'Give Me Five' programme.

School transition support. Respondents identified various supportive measures implemented by the school to facilitate transitions, both from primary education to the Einstein Class, and from the Einstein Class to postsecondary education. These measures were perceived as beneficial by the respondents. In particular, it was noted that the transition from primary education to the Einstein Class received more focused attention compared to traditional educational settings. This support included a tailored development perspective plan, which was informed by the student's previous education, as reported by four respondents. Additionally, two respondents highlighted the significance of meetings with parents to discuss the development perspective plan. Another supportive measure involved conducting trial periods lasting 6-8 weeks.

"Last year a group participated in a trial run before the summer holidays. They came to Einstein in the morning to acclimate to the environment, familiarize themselves with the building, and prepare for the actual start." (Respondent 4)

Regarding the transition from the Einstein Class to postsecondary education, respondents described several supportive strategies. Half of the respondents considered discussions with students about their postsecondary education options to be beneficial. Three respondents reported the occurrence of transition meetings with representatives from postsecondary institutions as advantageous. Additionally, two respondents noted the involvement of a dedicated transfer coach from the Einstein Class who provided extra support to both students and parents. Other supportive measures mentioned included organizing an occupational fair, offering guidance during open days, and arranging joint walk-in days for prospective students.

Challenges

The respondents identified three primary challenges associated with the Einstein Class: education, care and collaboration. The educational challenges encompassed the students' learning pace and the allocation of instructional hours. Within the domain of care, the difficulties were categorized into peer acceptance, evaluation and the gap in support during the transition to postsecondary education. Collaboration challenges were segmented into the dynamics between teachers and coaches/pedagogues, as well as between the Einstein Class and AMS.

Education. Students in the Einstein Class were provided with educational accommodations tailored to their abilities, which introduced several challenges. The flexibility to learn at an individual pace, as offered by the Einstein Class, created a tension between accommodating these personalized learning speeds and adhering to the fixed timelines of national examinations. Respondents highlighted this tension as an issue. On one hand, instruction must be paced to match each student's learning speed, while on the other, students needed to keep up with the overall class to graduate on time. One respondent suggested a possible solution: allowing students to progress through all subjects at their own pace. If a student completed a subject ahead of schedule, the remaining time could be devoted to more challenging subjects. Respondents also reported additional educational challenges, such as ensuring students maintain the appropriate level across all subjects. As any gaps in learning cannot be addressed within the academic year.

Furthermore, teachers in the Einstein Class were allocated fewer instructional hours than their counterparts in traditional educational settings, and students were granted exemptions from certain assessment requirements.

" I do hear from other colleagues that they are worried about students. The teaching hours will be reduced at some point. As a teacher of an exam class, you get half the teaching hours compared to a regular exam class... Yes that is difficult. Besides, you also have different levels in a class, all of which you want to serve." (Respondent 10)

Care. The experienced challenges related to care within the Einstein Class primarily encompasses issues of peer acceptance, evaluating the care class and care needs of the students, and

support during postsecondary education. Peer acceptance among AMS students without ASD was inconsistently observed across respondents. Two respondents indicated that Einstein Class students were accepted by their AMS classmates, while two others reported a lack of acceptance from these peers.

"The understanding is not there at the start. [It depends on the guidance of the teachers if peer acceptance will grow.]" (Respondent 9)

In cases where students from the Einstein Class faced difficulties with peer acceptance, respondents observed that their classmates frequently distanced themselves, engaged in dares, or displayed bullying behaviours. Teachers and coaches/pedagogues identified several factors influencing the variability in peer acceptance. These factors included the individual characteristics of the Einstein Class students, the cultural dynamics within the classroom, the age and educational level of their peers (with lower educational levels being associated with decreased acceptance), the number of Einstein Class students within a given class, and the extent to which each student had embraced their own identity. Additionally, peer acceptance was found to be more likely when parents were transparent about their child's ASD with the classmates. Respondents suggested that peer acceptance could be improved through structured discussions among students and the establishment of class agreements.

Two aspects of the Einstein Class interventions were highlighted as needing further evaluation. The first concerns the care class (arrangement 3+), an additional care provision currently in practice. It was suggested by a respondent that this arrangement might benefit from being reassigned to a more suitable authority, better equipped to meet the specific needs of the students. The second concerns conducting regular evaluations of the care arrangements of each student to ensure they remain appropriate as students' needs change over time, suggested by a respondent.

Lastly, respondents pointed out challenges related to the support provided for students transitioning from the Einstein Class to postsecondary education. Three respondents noted a gap between the level of support available in the Einstein Class and that provided in postsecondary settings, underscoring the need for more seamless transitions to better prepare students for their future educational career.

"The education system after Einstein Class is not geared to students with autism. For example vocational education, they don't have guidance there and that is difficult for students." (Respondent 9)

Collaborations. Respondents highlighted important challenges in the collaborative efforts between teachers and coaches/pedagogues, as well as between the Einstein Class and AMS. Specifically, four respondents emphasized the difficulties in the interaction between teachers and coaches/pedagogues.

"I think it is still seen as two islands, being two separate schools rather than one big entity. But in this, I think the distance also plays a role, this can limit it. Isn't it together, which means I can't speak to a lot of people quickly, I do miss that." (Respondent 10)

Two teachers reported that their collaboration with coaches/pedagogues was impeded by inadequate contact and limited involvement. Respondents (n=2) identified potential barriers to effective communication, such as teachers might perceive barriers when attempting to initiate communication and poorly defined expectations between the two groups. One respondent noted a noticeable decline in communication quality this academic year compared to previous years, the respondent suggested that enhanced training for new staff could be beneficial.

Similar issues were observed in the collaboration between the Einstein Class and AMS. One respondent stressed the need for improved communication and collaboration between these organizations.

"It often happens that things are communicated within AMS but not with Einstein. It would be better if this is handled more tactfully." (Respondent 8)

Another respondent expressed a wish for a more integrated relationship between AMS and the Einstein Class, suggesting that such a reconnection would facilitate more effective cooperation.

"I would like Einstein to reconnect with AMS. As a result, AMS will also reconnect more with Einstein. Then we will be together more and it will go much faster. It is so separate now and I would like to see how we can tackle things together." (Respondent 8)

In addition to these collaborative challenges, high workload pressures were reported. Two teachers and three coaches/pedagogues specifically noted the significant stress, indicating a need for support and potentially a reassessment of workload distribution.

" Einstein Class is doing very well, so there are a lot of applications. Actually too many, giving classes too many students. This puts too much pressure on teachers and coaches." (Respondent 10)

Conclusion and Discussion

The primary objective of this study was to enhance our understanding of the efficacy of the Einstein Class intervention. This mixed-methods study aimed to address three core research questions: 1) "Does the Einstein Class intervention reduce school dropout rates among students with special needs?", 2) "What could explain the dropout numbers according to the teachers and care providers who work with the Einstein Class approach?" and 3) "What are the benefits and challenges of the Einstein Class approach?". The overarching conclusion of this study is that the Einstein Class intervention is effective in meeting the needs of students with ASD, as evidenced by both participant responses and extant literature (Bottema-Beutel et al., 2020; Nuske et al., 2019; Tobias, 2009; Hewitt,

2011). However, definitive conclusions regarding its impact on reducing dropout rates remain inconclusive due to the limited strength of the available evidence.

With respect to the first research question—concerning the intervention's impact on dropout rates among students with special needs—the findings are ambivalent. Initially, both the Einstein Class and the broader AMS group experienced an increase in dropout rates, which subsequently declined. The Einstein Class reported dropout rates lower than the national average of 11% in two of its five years of operation, with one year registering a rate below 8% (Barrat et al., 2014). Furthermore, the enrolment of students with ASD in the Einstein Class tripled over a five-year period, paralleling a similar trend within AMS over ten years, consistent with the broader increase in ASD diagnoses over the past two decades (Russel et al., 2022). The distribution of students between AMS and Einstein Class suggests that those with higher care needs are more likely to be placed in the Einstein Class, which offers more comprehensive support. The second research question sought to elucidate the factors contributing to dropout rates, as perceived by teachers and care providers. Respondents unanimously indicated that the Einstein Class effectively mitigates dropout rates among students with ASD, attributing this success to factors such as peer acceptance within the Einstein Class environment and the provision of individualized support. These factors are consistent with the established needs of students with ASD (Bottema-Beutel et al., 2020; Nuske et al., 2019; Tobias, 2009; Hewitt, 2011).

The third research question examined the perceived benefits and challenges associated with the Einstein Class approach. According to respondents, the primary benefits include the provision of a diverse range of care options, effective collaboration between parents and coaches, strong partnerships between coaches/pedagogues and teachers, and support during transitions between educational stages (i.e., from primary education to the Einstein Class, and from the Einstein Class to postsecondary education). The care options provided are diverse, encompassing tailored educational approaches, specialized support for ASD, and the fostering of peer acceptance. The tailored approach is exemplified by individualized development perspective plans, while specialization in ASD is reflected in the structured teaching methodologies implemented within the class. Peer acceptance is particularly facilitated within the Einstein Class, where the shared ASD diagnosis among students promotes a deeper understanding of self and others, contributing to the development of self-confidence and self-acceptance (Cann, 2007: Whitaker, 2006). However, respondents also identified several significant challenges. Educational challenges include managing the diverse learning paces of students and the allocation of instructional hours. Care-related challenges encompasses issues of peer acceptance, particularly from students without ASD, the evaluation of care arrangements and the perceived gap in support between the Einstein Class and postsecondary education. To enhance peer acceptance, Schlieder and colleagues suggested that discussions regarding the strengths, challenges, and needs of students with ASD should be integrated into classroom activities (2014). Additionally, regular evaluations of care arrangements were recommended by a respondent to ensure that support is

appropriately tailored over time. Although some respondents expressed concerns about the adequacy of support for students transitioning from the Einstein Class to postsecondary education. Bakker and colleagues have found that students with ASD perform comparably to their peers without ASD at the university (2023). However, the sense of belonging among students with ASD at Dutch universities remains variable (Pesonen et al., 2023). The issue of collaboration between teachers and coaches/pedagogues emerged as both a benefit and a challenge. While regular consultations are perceived positively, some teachers reported feeling less involved, possibly due to the heavy workload they face within the Einstein Class. This lack of involvement is further exacerbated by the reduced physical presence of teachers compared to coaches/pedagogues, which may lead to communication breakdowns (Liu et al., 2022). This issue is compounded by high workload pressure, particularly in larger classes or those with a significant number of disruptive students (Selden, 1970). High work pressure is frequently cited as a key factor contributing to teacher attrition (United Nations, 2023).

In conclusion, the Einstein Class intervention is demonstrably effective in addressing the needs of students with ASD, as substantiated by both the literature and experiences of the teachers and coaches/pedagogues (Bottema-Beutel et al., 2020; Nuske et al., 2019; Tobias, 2009; Hewitt, 2011). The Einstein Class model offers a potential framework for other educational institutions seeking to enhance their support for students with ASD. Comparative analysis of care structures between schools and the Einstein Class may provide actionable insights for improving ASD support frameworks. The result of the comparative analysis is a list of similarities and differences between the offered care of Einstein Class and the compared institution, using the case-oriented strategy (Pickvance, 2001). Beyond serving as a model for ASD-related interventions, the Einstein Class is a government-funded initiative that is required to demonstrate tangible results over time (Ministry of Education, Culture and Science, 2023). The intervention's theoretical foundation could provide continued government support, in alignment with the Law of Suitable Education, which mandates that every child receives an education commensurate with their abilities and needs (Ministry of Education, Culture and Science, 2024). Respondents observed that students within the Einstein Class thrive and benefiting from the tailored care that they critically require. The relatively low dropout rates suggest that the majority of students are receiving appropriate educational placements. Every child deserves to be situated within an environment that recognizes and nurtures their unique abilities, contributing to the broader goal of an inclusive society where everyone belongs.

Limitations

This study represents the first evaluation of the Einstein Class intervention in its efficacy at reducing secondary school dropout rates among students with ASD. However, several methodological limitations warrant consideration, such as the role of the researcher, representation of care arrangements and the sample size. The dual role of the researcher, who was also a teacher at AMS, potentially introduced bias. Participants, including coaches, pedagogues and teachers may have felt

compelled to participate in interviews or may have moderated their responses due to the researcher's affiliation. Furthermore, the possibility of bias in data coding and interpretation was acknowledged. To mitigate these risks, teachers with close working relationships with the researcher were excluded from the participant pool before random selection. Given that a positive outcome of the research could potentially benefit the researcher's professional standing, the involvement of a supervising academic was sought to ensure objectivity. Approximately 20% of the transcripts and coding were rigorously reviewed during an online session with the supervisor, and subsequent feedback was integrated into the analysis of the remaining interviews. Despite these measures, occasional interviewer bias, manifested through brief, potentially leading comments during some interviews, cannot be entirely discounted. As Kühne emphasizes, interviewer bias often stems from respondents' perceptions of the interviewer (2023).

The second limitation is the incomplete representation of the care arrangements. This study did not differentiate among the various levels of care arrangements provided within the Einstein Class. In practice, all participating coaches, pedagogues and teachers primarily engaged with students receiving the most intensive care, leading to an underrepresentation of students in lower-care arrangements. Consequently, the study did not address variations in disorder severity among students.

The research design, centred on a single institution, constitutes a case study. The reason of this third limit is the scope of this master's thesis, which precluded a more extensive examination that would have required a larger sample size to adequately represent all levels of care. Additionally, the limited sample size precluded the use of statistical analyses to examine dropout rates and percentages. The case study approach is subject to critiques, particularly concerning the potential for bias and its limited generalizability to broader populations (Flyvbjerg, 2011). Nonetheless, the strengths of case studies—such as their depth, high conceptual validity, and capacity for detailed understanding—make them well-suited for the evaluation of interventions like the Einstein Class, which have not been extensively studied (Flyvbjerg, 2011). The depth of analysis inherent in case studies provides valuable insights into the effectiveness of novel interventions (Yin, 1992).

Recommendations for practice and further research

The Einstein Class approach presents several benefits; however, it also encounters challenges. The most prominent challenges identified include: communication between coaches/pedagogues and teachers, as well as the enhancement of peer acceptance for Einstein Class students at AMS, and the care of graduates. Multiple teachers reported deficiencies in communication with the coaches/pedagogues, suggesting that improved management of expectations on both sides could enhance collaborative efforts. According to the interview data, teachers anticipate more proactive engagement from coaches/pedagogues, while literature suggests that coaches/pedagogues expect teachers to articulate their needs more effectively (Liu et al., 2022). To mitigate these issues, it is

recommended that both parties participate in regular joint meetings to align their expectations. Potential strategies could include establishing a minimum of one annual meeting to discuss the progress of Einstein Class students and ensuring that teachers are adequately informed about decisions made by coaches in their absence. Research indicates that fostering collaborative practices enhances the effectiveness of inclusive education (Ainscow, 1997). Moreover, the enhancement of peer acceptance for Einstein Class students at AMS could be facilitated through targeted interventions, such as structured discussions about the strengths, challenges, and requirements of students with ASD with their classmates, or through the involvement of a school psychologist (Schlieder et al., 2014; Symes & Humphrey, 2010). Additionally, there are concerns regarding the transition of Einstein Class students to postsecondary education. While the intervention proves effective in fulfilling the needs during the secondary education period, it does not extend beyond graduation. Postsecondary institutions could benefit from adopting practices from the Einstein Class approach, ensuring a better alignment of support systems to accommodate the needs of students with ASD, who are integral members of the broader society. Establishing closer collaboration between Einstein Class and postsecondary institutions could mitigate the current discontinuity in care.

The gap between the care offered at Einstein Class and postsecondary education can be included in follow-up research. The post-intervention outcomes of graduates from the Einstein Class can be systematically tracked and analysed to investigate their subsequent trajectories. This could examine the long-term effects and whether there is a difference between the students who did and did not follow the intervention. In addition, one limitation of this study is the lack of differentiation between various care arrangements. Future research should investigate the extent to which each of the three care arrangements fulfils the needs of students with ASD, as the level of support provided varies across these arrangements. Additionally, the correlation between the amount of care and the specific type of ASD may have implications for dropout numbers and warrants further exploration. Another potential area for investigation is the inclusion of students' perspectives, which were beyond the size of this thesis but would provide valuable insights in future studies.

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Appendices

Appendix I: Interview questions coaches and pedagogues

Question	Sub question
Wat is uw leeftijd?	
Met welk gender identificeert u uzelf?	
Welke opleiding(en) heeft u gedaan?	
Heeft u tijdens uw opleiding of tijdens uw loopbaan training over ASS gevolgd?	Kunt u daar iets over vertellen?
Hoeveel jaar heeft u ervaring met het coachen aan leerlingen van Einstein Class?	
Veel kinderen met ASS hebben moeite met het verwerken van informatie. Kunt u wat vertellen over de ondersteuning die Einstein Class hierin aanbiedt aan de leerlingen?	
Vindt u dat Einstein leerlingen worden geaccepteerd door andere Einstein leerlingen?	Waar zit u dat aan?
Zou u willen uitleggen hoe het plan omtrent de zorg van een Einstein leerling wordt gemaakt?	
Hoe wordt dit plan in de praktijk gebruikt?	
Welke ondersteuning biedt Einstein Class aan bij een kind voor de schoolwissel van PO naar VO?	
In hoeverre ziet u dat de Einstein leerlingen worden voorbereid op hun vervolgopleiding?	Kunt u voorbeelden noemen?
Hoe zou u de communicatie tussen de Einstein coaches en de ouders omschrijven?	Om hoevaak per week gaat dit?
Hoe zou u de communicatie tussen de Einstein coaches en de docenten omschrijven?	Om hoevaak per week gaat dit?
Heeft u de indruk dat Einstein Class uitval van kinderen met ASS voorkomt?	Waar ziet u dat aan?
Wat vindt u een voordeel van Einstein Class voor kinderen met ASS?	
Wat vindt u een verbeterpunt voor Einstein Class voor kinderen met ASS?	

Appendix II: Interview questions Teachers

Question	Sub question
Wat is uw leeftijd?	
Met welk gender identificeert u uzelf?	
Welke opleiding(en) heeft u gedaan?	
Heeft u tijdens uw opleiding of tijdens uw loopbaan training over ASS gevolgd?	Kunt u daar iets over vertellen?
Hoeveel jaar heeft u ervaring met het lesgeven aan leerlingen van Einstein Class?	
Veel kinderen met ASS hebben moeite met het verwerken van informatie. Kunt u wat vertellen over de ondersteuning die Einstein Class hierin aanbiedt aan de leerlingen?	
In hoeverre ziet u dat de Einstein leerlingen worden voorbereid op hun vervolgopleiding?	Kunt u voorbeelden noemen?
In een klas kan het zijn dat een leerling met ASS niet wordt begrepen door klasgenoten, vanwege zijn ASS. Hierdoor kan een leerling met ASS worden buitengesloten in de groep. In hoeverre denkt u dat een Einstein leerling begrepen wordt door zijn klasgenoten zonder ASS?	
Vindt u dat Einstein leerlingen worden geaccepteerd door andere Einstein leerlingen?	Waar zit u dat aan?
Vindt u dat Einstein leerlingen worden geaccepteerd door zijn/haar AMS klasgenoten?	Waar zit u dat aan?
Hoe zou u de communicatie tussen de docenten en de ouders omschrijven?	Om hoevaak per week gaat dit?
Hoe zou u de communicatie tussen de Einstein coaches en de docenten omschrijven?	Om hoevaak per week gaat dit?
Heeft u de indruk dat Einstein Class uitval van kinderen met ASS voorkomt?	Waar ziet u dat aan?
Wat vindt u een voordeel van Einstein Class voor kinderen met ASS?	
Wat vindt u een verbeterpunt voor Einstein Class voor kinderen met ASS?	

Appendix III: Inform letter head of the school

INFORMATIEOVERHETONDERZOEK
VERSIE VOOR DIRECTEUR

PROFITEREN LEERLINGEN MET AUTISME SPECTRUM STOORNIS VAN DE EINSTEIN CLASS AANPAK?
PED-2324-S-0032

- **Waarom krijg ik deze informatie?**

Graag vraag ik u toestemming voor een onderzoek over de Einstein Class aanpak voor leerlingen met autismespectrumstoornissen (ASS) die wordt aangeboden door de Anna Maria van Schurman (AMS) School te Franeker. Dit onderzoek vormt de basis voor de Masterthesis van uw collega Hedwig van der Werff, studente Pedagogische Wetenschappen en Onderwijskunde, met de specialisatie Jeugd (0-21jaar), Maatschappij, en Beleid (studentonderzoeker). Het onderzoek wordt begeleid door Dr. Anoek Sluiter-Oerlemans, universitair docent aan de Rijksuniversiteit Groningen (hoofdonderzoeker). Het onderzoek zal starten op 1 maart 2024 en is naar verwachting voor de zomer afgerond (juli 2024).

Voor dit onderzoek willen we tien docenten en pedagogen/coaches interviewen over hun ervaringen met de Einstein Class aanpak. Dit betreft zowel coaches/pedagogen die de Einstein Class begeleiding verzorgen als docenten die één of meerdere leerlingen lesgeven die onderwijs en begeleiding krijgen vanuit de Einstein Class. Omdat we niet alle docenten en coaches/pedagogen die werkzaam zijn bij de AMS-school en de Einstein Class kunnen interviewen, worden er, op willekeurige wijze, tien personen geselecteerd uit het personeelsbestand.

- **Moeten de geselecteerden meedoen aan dit onderzoek?**

Meedoen aan het onderzoek is vrijwillig. Wel is per deelnemer toestemming nodig. De deelnemers uit uw team kunnen vragen stellen over het onderzoek en daarna pas besluiten of zij mee willen doen. Er is geen verantwoording nodig als iemand besluit niet mee te doen. Het besluit om niet mee te doen zal geen negatieve gevolgen hebben. Het recht om niet mee te doen geldt op elk moment, dus ook nadat een deelnemer eerder heeft toegestemd in deelname aan het onderzoek.

- **Waarom dit onderzoek?**

Het doel van Einstein Class is om het aantal schoolverlaters met ASS te verlagen. Er is nog geen wetenschappelijk onderzoek naar de ervaringen en effectiviteit van het programma gedaan; daar komt met dit onderzoek verandering in. Eerst wordt er gekeken of er sprake is van een daling in het percentage schoolverlaters met ASS sinds de Einstein Class aanpak. We vergelijken het uitvalspercentage van de vijf schooljaren voor en na invoering van de Einstein Class aanpak met elkaar. Vervolgens wordt er gezocht naar mogelijke verklaringen voor een al dan niet zichtbare vermindering van de uitstroom. Ook worden ervaringen met de Einstein Class aanpak verzameld, waaronder positieve effecten, beperkingen, en uitdagingen. Dit doen we door een aantal Einstein Class coaches/pedagogen en docenten die lesgeven aan leerlingen van de Einstein Class te interviewen.

- **Wat vragen we van u tijdens het onderzoek?**

Allereerst wordt u gevraagd om toestemming te geven voor het gebruik van de (jaarlijkse) leerlingenaantallen met ASS en de aantallen schoolverlaters met ASS in de periode 2013 en 2023

voor het berekenen van de jaarlijkse uitvalpercentages. Hierbij gaat het voor de start van Einstein Class (2018) om de leerlingen met ASS van Anna Maria van Schurman school en vanaf 2018 om de leerlingen met ASS van Anna Maria van Schurman school en Einstein Class. Als tweede wordt u gevraagd om een rol te spelen in de voorbereiding van het selecteren van de deelnemers. Voor het onderzoek zijn twee personeelslijsten nodig: een lijst van alle pedagogen en coaches van Einstein Class en een lijst van alle docenten die lesgeven aan één of meer Einstein leerlingen. Door de student onderzoeker worden vervolgens willekeurig vijf personen van elke lijst uitgenodigd voor een interview. Nadat u toestemming hebt gegeven, neemt de student onderzoeker contact met u op voor een veilige uitwisseling van leerlingenaantallen met ASS en schoolverlaters met ASS en de uitwisseling van de personeelslijsten.

- **Hoe verloopt het onderzoek?**

Daarna zal zij contact opnemen met de willekeurig geselecteerde deelnemers om een afspraak te maken voor het afnemen van het interview op locatie. Het interview duurt naar schatting een half uur. Daarna worden de gegevens gepseudonimiseerd verwerkt in de Masterthesis. Tijdens het interview worden audio-opnamen gemaakt. Deze opnames zijn nodig om de onderzoeker in staat te stellen het interview terug te luisteren en woordelijk te transcriberen met behoud van de betekenis/bedoeling van de antwoorden, om de antwoorden vervolgens te analyseren. De opname wordt opgeslagen op een beveiligde schijf waartoe enkel de hoofdonderzoeker en student onderzoeker toegang hebben. Dit geldt ook voor de leerlingenaantallen. De deelnemers worden gevraagd om toestemming te geven voor het maken van deze audio-opname. Als dank voor deelname aan het onderzoek zal de student onderzoeker na afronding van het onderzoek de bevindingen presenteren aan alle deelnemers en overige medewerkers van de AMS-school en de Einstein Class.

- **Welke gevolgen kan deelname hebben?**

Het voordeel van toestemming geven aan dit onderzoek is dat u bijdraagt aan een wetenschappelijk onderzoek naar de effectiviteit van en ervaringen met de Einstein Class aanpak. Een mogelijk nadeel voor de deelnemers van dit onderzoek, is dat er tijdens het interview wellicht ervaringen besproken worden die een emotionele impact op hen hebben. Mochten zij tijdens het interview behoefte hebben aan een korte pauze, dan is dit ten alle tijde mogelijk. Ook kunnen zij napraten met de onderzoeker als zij daar behoefte aan hebben.

- **Hoe gaan we met de gegevens om?**

Met de gegevens wordt zorgvuldig omgegaan. De informatie die verzameld wordt tijdens het interview (audio-opnames en transcripten, de uitkomsten van de analyses, en het schriftelijk verslag) worden bewaard in een afgeschermde map op de beveiligde Y-schijf van de Rijksuniversiteit Groningen. Alleen de hoofdonderzoeker en student onderzoeker hebben toegang tot deze map. Er wordt niet op online platformen gewerkt. Hierdoor is het risico zo klein mogelijk dat de informatie van de deelnemers bij een ander terecht komt. De vertrouwelijkheid van de deelnemers wordt gewaarborgd door te werken met proefpersoonnummers in plaats van namen in de transcripten, analyses, notities, en schriftelijke rapportage. Elke geïnterviewde krijgt een individueel proefpersoon-nummer toegewezen dat alleen te herleiden is tot de persoon door de onderzoekers. Deelnemers hebben ook later nog de mogelijkheid om gegevens te laten corrigeren of om terug te trekken uit het onderzoek. Dit kan door tot 31 mei een mail te sturen naar Hedwig van der Werff (h.s.van.der.werff@student.rug.nl) of vanaf 1 juni een mail te sturen naar Dr. Anoek Sluiter-Oerlemans (a.m.sluiter-oerlemans@rug.nl). In het schriftelijk verslag van de studie zal enkel gerefereerd worden naar percentages, frequenties en geanonimiseerde quotes uit de interviewtranscripten. Er wordt niet gedeeld wie wat op welke vraag heeft gezegd, alleen niet

herleidbare gegevens worden gedeeld. Er is geen intentie om de gegevens te hergebruiken voor een volgend onderzoek.

- **Wat moet u nog meer weten?**

U kunt altijd vragen stellen over het onderzoek: nu, tijdens het onderzoek, en na afloop. Dit kan door een van de betrokken onderzoekers te e-mailen. Tot 31 mei kunt u contact opnemen met Hedwig van der Werff (h.s.van.der.werff@student.rug.nl) en vanaf 1 juni kunt u contact opnemen met Dr. Anoek Sluiter-Oerlemans (a.m.sluiter-oerlemans@rug.nl).

Heeft u vragen/zorgen over de rechten als toestemminggever of de uitvoering van het onderzoek? U kunt hierover ook contact opnemen met de Ethische Commissie Gedrags- en Maatschappijwetenschappen van de Rijksuniversiteit Groningen: ec-bss@rug.nl.

Heeft u vragen of zorgen over hoe er met persoonsgegevens wordt omgegaan? U kunt hierover ook contact opnemen met de Functionaris Gegevensbescherming van de Rijksuniversiteit Groningen: privacy@rug.nl

Als toestemminggever heeft u recht op een kopie van deze onderzoeksinformatie.

Appendix IV: Consent form head of the school

GEÏNFORMEERDETOESTEMMING
VERSIE VOOR DIRECTEUR

PROFITEREN LEERLINGEN MET ONTWIKKELINGSPROBLEMEN VAN DE EINSTEIN CLASS

AANPAK?
PED-2324-S-0032

- Ik heb de informatie over het onderzoek gelezen. Ik heb genoeg gelegenheid gehad om er vragen over te stellen.

- Ik begrijp waar het onderzoek over gaat, wat er van me gevraagd wordt, welke gevolgen toestemming kan geven, hoe er met de gegevens wordt omgegaan, en wat de rechten van de deelnemers zijn.

- Ik lever het aantal leerlingen met ASS en het aantal schoolverlaters met ASS van de Anna Maria van Schurman school tussen 2013 en 2023 aan bij het onderzoeksteam. Ik lever het aantal leerlingen van Einstein Class en het aantal Einstein Class verlaters tussen 2018 en 2023 aan het onderzoeksteam.

- Ik, dan wel de teamleiders, verstrekt/verstrekken twee personeelsbestanden, van de pedagogen/coaches van Einstein Class en de docenten die een of meer Einstein leerlingen lesgeven.

- Ik geef hieronder aan waar ik toestemming voor geef.

Toestemming voor deelname aan het onderzoek:
[ ] Ja, ik geef toestemming voor medewerking, ik verstrek de personeelsbestanden
[ ] Ja, ik geef toestemming voor medewerking, de teamleiders verstrekken de personeelsbestanden
[ ] Nee, ik geef geen toestemming voor medewerking

Volledige naam deelnemer:	Handtekening deelnemer:	Datum:

Volledige naam aanwezige onderzoeker:	Handtekening onderzoeker:	Datum:

De aanwezige onderzoeker verklaart dat de deelnemer uitvoerig over het onderzoek is geïnformeerd.

U heeft recht op een kopie van dit toestemmingsformulier.

Appendix V: Inform letter team leaders

INFORMATIEOVERHETONDERZOEK
VERSIE VOOR LEIDINGGEVENDEN

PROFITEREN LEERLINGEN MET ONTWIKKELINGSPROBLEMEN VAN DE EINSTEIN CLASS AANPAK?
PED-2324-S-0032

Waarom krijg ik deze informatie?

Graag vraag ik u toestemming voor een onderzoek over de Einstein Class aanpak voor leerlingen met autismespectrumstoornissen (ASS) die wordt aangeboden door de Anna Maria van Schurman (AMS) School te Franeker. Dit onderzoek vormt de basis voor de Masterthesis van uw collega Hedwig van der Werff, studente Pedagogische Wetenschappen en Onderwijskunde, met de specialisatie Jeugd (0-21jaar), Maatschappij, en Beleid (studentonderzoeker). Het onderzoek wordt begeleid door Dr. Anoek Sluiter-Oerlemans, universitair docent aan de Rijksuniversiteit Groningen (hoofdonderzoeker). Het onderzoek zal starten op 1 maart 2024 en is naar verwachting voor de zomer afgerond (juli 2024).

Voor dit onderzoek willen we tien docenten en pedagogen/coaches interviewen over hun ervaringen met de Einstein Class aanpak. Dit betreft zowel coaches/pedagogen die de Einstein Class begeleiding verzorgen als docenten die één of meerdere leerlingen lesgeven die onderwijs en begeleiding krijgen vanuit de Einstein Class. Omdat we niet alle docenten en coaches/pedagogen die werkzaam zijn bij de AMS-school en de Einstein Class kunnen interviewen, worden er, op willekeurige wijze, tien personen geselecteerd uit het personeelsbestand.

Moeten de geselecteerden meedoen aan dit onderzoek?

Meedoen aan het onderzoek is vrijwillig. Wel is per deelnemer toestemming nodig. De deelnemers uit uw team kunnen vragen stellen over het onderzoek en daarna pas besluiten of zij mee willen doen. Er is geen verantwoording nodig als iemand besluit niet mee te doen. En dit zal geen negatieve gevolgen hebben. Dit recht geldt op elk moment, dus ook nadat een deelnemer eerder heeft ingestemd met deelname aan het onderzoek.

Waarom dit onderzoek?

Het doel van Einstein Class is om het aantal schoolverlaters met ASS te verlagen. Er is nog geen wetenschappelijk onderzoek naar de ervaringen en effectiviteit van het programma gedaan; daar komt met dit onderzoek verandering in. Eerst wordt er gekeken of er sprake is van een daling in het percentage schoolverlaters met ASS sinds de Einstein Class aanpak. We vergelijken het uitvalspercentage van de vijf schooljaren voor en na invoering van de Einstein Class aanpak met elkaar. Vervolgens wordt er gezocht naar mogelijke verklaringen voor een al dan niet zichtbare vermindering van de uitstroom. Ook worden ervaringen met de Einstein Class aanpak verzameld, waaronder positieve effecten, beperkingen, en uitdagingen. Dit doen we door een aantal Einstein Class coaches/pedagogen en docenten die lesgeven aan leerlingen van de Einstein Class te interviewen.

- **Wat vragen we van u tijdens het onderzoek?**

Aan u wordt toestemming gevraagd om uw teamleden te mogen benaderen voor deelname aan het onderzoek. Nadat u hiervoor toestemming heeft gegeven, zal de student onderzoeker contact op met de geselecteerde deelnemers om een afspraak te maken voor het afnemen van het interview op locatie. U hoeft hier verder niets meer voor te doen.

- **Hoe verloopt het onderzoek?**

Daarna zal zij contact opnemen met de willekeurig geselecteerde deelnemers om een afspraak te maken voor het afnemen van het interview op locatie. Het interview duurt naar schatting een half uur. Daarna worden de gegevens gepseudonimiseerd verwerkt in de thesis. Tijdens het interview worden audio-opnamen gemaakt. Deze opnames zijn nodig om de onderzoeker in staat te stellen het interview terug te luisteren en woordelijk te transcriberen met behoud van de betekenis/bedoeling van de antwoorden, om de antwoorden vervolgens te analyseren. De opname wordt opgeslagen op een beveiligde schijf waartoe enkel de hoofdonderzoeker en student onderzoeker toegang hebben. De deelnemers worden gevraagd om toestemming te geven voor het maken van deze audio-opname. Als dank voor deelname aan het onderzoek zal de student onderzoeker na afronding van het onderzoek de bevindingen presenteren aan alle deelnemers en overige medewerkers van de AMS-school en de Einstein Class.

- **Welke gevolgen kan deelname hebben?**

Het voordeel van toestemming geven aan dit onderzoek is dat u bijdraagt aan een wetenschappelijk onderzoek naar de effectiviteit van en ervaringen met de Einstein Class aanpak. Een mogelijk nadeel van de deelname van de deelnemers van dit onderzoek, is dat er tijdens het interview wellicht ervaringen besproken worden die een emotionele impact op hen hebben. Mochten zij tijdens het interview behoefte hebben aan een korte pauze, dan is dit ten alle tijde mogelijk. Ook kunnen zij napraten met de onderzoeker als u daar behoefte aan heeft.

- **Hoe gaan we met de gegevens om?**

Met de gegevens wordt zorgvuldig omgegaan. De informatie die verzameld wordt tijdens het interview (audio-opnames en transcripten, de uitkomsten van de analyses, en het schriftelijk verslag) worden bewaard in een afgeschermde map op de beveiligde Y-schijf van de Rijksuniversiteit Groningen. Alleen de hoofdonderzoeker en student onderzoeker hebben toegang tot deze map. Er wordt niet op online platformen gewerkt. Hierdoor is het risico zo klein mogelijk dat de informatie van de deelnemers bij een ander terecht komt. De vertrouwelijkheid van de deelnemers wordt gewaarborgd door te werken met proefpersoonnummers in plaats van namen in de transcripten, analyses, notities, en schriftelijke rapportage. Elke geïnterviewde krijgt een individueel proefpersoon-nummer toegewezen dat alleen te herleiden is tot de persoon door de onderzoekers. Deelnemers hebben ook later nog de mogelijkheid om gegevens te laten corrigeren of om terug te trekken uit het onderzoek. Dit kan door tot 31 mei een mail te sturen naar Hedwig van der Werff (h.s.van.der.werff@student.rug.nl) of vanaf 1 juni een mail te sturen naar Dr. Anoek Sluiter-Oerlemans (a.m.sluiter-oerlemans@rug.nl). In het schriftelijk verslag van de studie zal enkel gerefereerd worden naar percentages, frequenties en geanonimiseerde quotes uit de interviewtranscripten. Er wordt niet gedeeld wie wat op welke vraag heeft gezegd, alleen niet herleidbare gegevens worden gedeeld. Er is geen intentie om de gegevens te hergebruiken voor een volgend onderzoek.

- **Wat moet u nog meer weten?**

U kunt altijd vragen stellen over het onderzoek: nu, tijdens het onderzoek, en na afloop. Tot 31 mei kunt u contact opnemen met Hedwig van der Werff (h.s.van.der.werff@student.rug.nl) en vanaf 1 juni kunt u contact opnemen met Dr. Anoek Sluiter-Oerlemans (a.m.sluiter-oerlemans@rug.nl).
Heeft u vragen/zorgen over de rechten als toestemminggever of de uitvoering van het onderzoek? U kunt hierover ook contact opnemen met de Ethische Commissie Gedrags- en Maatschappijwetenschappen van de Rijksuniversiteit Groningen: ec-bss@rug.nl.

Heeft u vragen of zorgen over hoe er met persoonsgegevens wordt omgegaan? U kunt hierover ook contact opnemen met de Functionaris Gegevensbescherming van de Rijksuniversiteit Groningen: privacy@rug.nl

Als toestemminggever heeft u recht op een kopie van deze onderzoeksinformatie.

Appendix VI: Consent form team leaders

GEÏNFORMEERDETOESTEMMING
VERSIE VOOR LEIDINGGEVENDEN

PROFITEREN LEERLINGEN MET ONTWIKKELINGSPROBLEMEN VAN DE EINSTEIN CLASS

AANPAK?
PED-2324-S-0032

- Ik heb de informatie over het onderzoek gelezen. Ik heb genoeg gelegenheid gehad om er vragen over te stellen.
- Ik begrijp waar het onderzoek over gaat, wat er van me gevraagd wordt, welke gevolgen toestemming kan geven, hoe er met de gegevens wordt omgegaan, en wat de rechten van de deelnemers zijn.
- Ik geef toestemming dat mijn teamleden benaderd en geïnterviewd mogen worden.
- Ik begrijp dat het onderzoek op vrijwillige basis is. Mijn teamleden kiezen er zelf voor om mee te doen. En kunnen op elk moment stoppen met meedoen. Als zij stoppen, hoeven zij of ik niet uit te leggen waarom. Stoppen zal geen negatieve gevolgen voor hen of mij hebben.
- Ik geef hieronder aan waar ik toestemming voor geef.

<u>Toestemming voor deelname aan het onderzoek:</u>
[ ] Ja, ik geef toestemming voor medewerking
[ ] Nee, ik geef geen toestemming voor medewerking

Volledige naam deelnemer:	Handtekening deelnemer:	Datum:

Volledige naam aanwezige onderzoeker:	Handtekening onderzoeker:	Datum:

De aanwezige onderzoeker verklaart dat de deelnemer uitvoerig over het onderzoek is geïnformeerd.

U heeft recht op een kopie van dit toestemmingsformulier.

Appendix VII: Inform letter participants

INFORMATIE OVER HET ONDERZOEK

VERSIE VOOR DEELNEMERS

PROFITEREN LEERLINGEN MET ONTWIKKELINGSPROBLEMEN VAN DE EINSTEIN CLASS AANPAK?

PED-2324-S-0032

Waarom krijg ik deze informatie?

Graag nodig ik u uit om mee te doen aan een onderzoek over de Einstein Class aanpak voor leerlingen met autismespectrumstoornissen (ASS) die wordt aangeboden door de Anna Maria van Schurman (AMS) School te Franeker, Leeuwarden. Dit onderzoek vormt de basis voor de Masterthesis van uw collega Hedwig van der Werff, studente Pedagogische Wetenschappen en Onderwijskunde, met de specialisatie Jeugd (0-21jaar), Maatschappij, en Beleid (studentonderzoeker). Het onderzoek wordt begeleid door Dr. Anoek Sluiter-Oerlemans, universitair docent aan de Rijksuniversiteit Groningen (hoofdonderzoeker). Het onderzoek zal starten op 1 februari 2024 en is naar verwachting voor de zomer afgerond (juli 2024).

Voor dit onderzoek willen we tien docenten en zorgverleners/coaches interviewen over hun ervaringen met de Einstein Class aanpak. Dit betreft zowel coaches die het Einstein Class onderwijs verzorgen als docenten die één of meerdere leerlingen lesgeven die onderwijs en begeleiding krijgen vanuit de Einstein Class. Omdat we niet alle docenten en coaches die werkzaam zijn bij de AMS-school en de Einstein Class kunnen interviewen, zijn er, op willekeurige wijze, tien personen geselecteerd uit het personeelsbestand.

Moet ik meedoen aan dit onderzoek?

Meedoen aan het onderzoek is vrijwillig. Wel is uw toestemming nodig. Lees deze informatie daarom goed door. Stel alle vragen die u misschien heeft, bijvoorbeeld omdat u iets niet begrijpt. Pas daarna besluit u of u wilt meedoen. Als u besluit om niet mee te doen, hoeft u niet uit te leggen waarom, en zal dit geen negatieve gevolgen voor u hebben. Dit recht geldt op elk moment, dus ook nadat u hebt toegestemd in deelname aan het onderzoek.

Waarom dit onderzoek?

Het doel van Einstein Class is om het aantal schoolverlaters met ASS te verlagen. Er is nog geen wetenschappelijk onderzoek naar de ervaringen en effectiviteit van het programma gedaan; daar komt met dit onderzoek verandering in. Eerst wordt er gekeken of er sprake is van een verlaging in schoolverlaters met ASS sinds de Einstein Class aanpak. Vervolgens wordt er gezocht naar mogelijke verklaringen voor een al dan niet zichtbare vermindering van de uitstroom. Ook worden ervaringen met de Einstein Class aanpak verzameld, waaronder positieve effecten, beperkingen, en uitdagingen. Dit doen we door een aantal Einstein Class coaches en docenten die lesgeven aan leerlingen van de Einstein Class te interviewen. Als u instemt met deelname aan dit onderzoek, doet u enkel mee aan dit deel van het onderzoek.

Wat vragen we van u tijdens het onderzoek?

Allereerst wordt u gevraagd om toestemming om deel te nemen aan het interview. Nadat u toestemming hebt gegeven, neemt de student onderzoeker contact met u op om een afspraak te maken voor het afnemen van het interview. De locatie zal een van de C.S.G. Anna Maria van Schurman gebouwen zijn, hier vallen de Einstein Class gebouwen ook onder. Het interview duurt naar schatting een half uur. Tevens zullen enkele persoonlijke gegevens gevraagd worden, namelijk leeftijd, geslacht, het aantal jaar onderwijservaring, en het aantal jaar ervaring met de Einstein Class aanpak. Deze persoonlijke gegevens worden enkel gevraagd om een algemene beschrijving te kunnen geven van de groep deelnemers. Na het interview uw gegevens gepseudonimiseerd verwerkt in de Master thesis. Dat betekent dat de gegevens niet meer rechtstreeks naar u terug te herleiden zijn. Tijdens het interview worden er audio-opnames gemaakt. Deze opnames zijn nodig omdat deze de onderzoeker in staat stellen om het interview terug te luisteren en woordelijk te transcriberen met behoud van de betekenis/bedoeling van de antwoorden, om de antwoorden vervolgens te analyseren. De audio-opname en de interviewtranscripten zullen conform de richtlijnen voor dataopslag van de Rijksuniversiteit Groningen gedurende 10 jaar, gepseudonmiseerd, worden bewaard op een beveiligde schijf waartoe enkel de hoofdonderzoeker en student onderzoeker toegang hebben. U wordt gevraagd om toestemming te geven voor het maken van deze audio-opname. Deelname aan dit onderzoek kost u in totaal (afspraak maken en interview geven) ongeveer 45 minuten en is eenmalig. Als dank voor deelname aan het onderzoek zal Hedwig van der Werff na afronding van het onderzoek de bevindingen presenteren aan alle deelnemers en overige medewerkers van de AMS-school en de Einstein Class.

Welke gevolgen kan deelname hebben?

Het voordeel van deelnemen aan dit onderzoek is dat u bijdraagt aan een wetenschappelijk onderzoek naar de effectiviteit van en ervaringen met de Einstein Class aanpak. Een mogelijk nadeel van de deelname van dit onderzoek, is dat er tijdens het interview wellicht ervaringen besproken worden die een emotionele impact op u hebben. Mocht u tijdens het interview behoefte hebben aan een korte pauze, dan is dit te allen tijde mogelijk. Ook kunt u napraten met de onderzoeker als u daar behoefte aan heeft.

Hoe gaan we met uw gegevens om?

Met uw gegevens wordt zorgvuldig omgegaan. De informatie die verzameld wordt tijdens het interview (audio-opnames en transcripten, de uitkomsten van de analyses, en het schriftelijk verslag) worden bewaard in een afgeschermde map op de beveiligde Y-schijf van de Rijksuniversiteit Groningen. Alleen de hoofdonderzoeker en student onderzoeker heeft toegang tot deze map. Er wordt niet op online platformen gewerkt. Hierdoor is het risico zo klein mogelijk dat uw informatie bij een ander terecht komt. De vertrouwelijkheid van de deelnemers wordt gewaarborgd door te werken met proefpersoon-nummers in plaats van namen in de transcripten, analyses, notities, en schriftelijke rapportage. Elke geïnterviewde krijgt een individueel proefpersoon-nummer toegewezen dat alleen te herleiden is tot de persoon door de hoofdonderzoeker. Alle data zullen conform de richtlijnen voor dataopslag van de Rijksuniversiteit Groningen gedurende 10 jaar bewaard worden (juli 2034). Deelnemers hebben de mogelijkheid om gegevens te laten corrigeren of om terug te trekken ui het onderzoek. Dit is mogelijk tot 1 juni 2024. Dit kan door een mail te sturen naar de student onderzoeker (Hedwig van der Werff, h.s.van.der.werff@student.rug.nl). In het schriftelijk verslag van de studie zal enkel gerefereerd worden naar percentages en frequenties en gepseudononimiseerde quotes uit de

interview-transcripten. Er wordt niet gedeeld wie wat op welke vraag heeft gezegd, alleen niet herleidbare gegevens worden gedeeld. Er is geen intentie om de gegevens te hergebruiken voor een volgend onderzoek.

Wat moet u nog meer weten?

U kunt altijd vragen stellen over het onderzoek: nu, tijdens het onderzoek, en na afloop. Tot 31 mei 2024 kunt u contact opnemen met Hedwig van der Werff (h.s.van.der.werff@student.rug.nl) en vanaf 1 juni 2024 kunt u contact opnemen met Dr. Anoek Sluiter-Oerlemans (a.m.sluiter-oerlemans@rug.nl) .

Heeft u vragen/zorgen over uw rechten als onderzoeksdeelnemer of de uitvoering van het onderzoek? U kunt hierover ook contact opnemen met de Ethische Commissie Gedrags- en Maatschappijwetenschappen van de Rijksuniversiteit Groningen: ec-bss@rug.nl.

Heeft u vragen of zorgen over hoe er met uw persoonsgegevens wordt omgegaan? U kunt hierover ook contact opnemen met de Functionaris Gegevensbescherming van de Rijksuniversiteit Groningen: privacy@rug.nl

Als onderzoeksdeelnemer heeft u recht op een kopie van deze onderzoeksinformatie.

Appendix VIII: Consent form

GEÏNFORMEERDETOESTEMMING

"EINSTEIN CLASS"
PED-2324-S-0032

- Ik heb de informatie over het onderzoek gelezen. Ik heb genoeg gelegenheid gehad om er vragen over te stellen.

- Ik begrijp waar het onderzoek over gaat, wat er van me gevraagd wordt, welke gevolgen deelname kan hebben, hoe er met mijn gegevens wordt omgegaan, en wat mijn rechten als deelnemer zijn.

- Ik begrijp dat deelname aan het onderzoek vrijwillig is. Ik kies er zelf voor om mee te doen. Ik kan op elk moment stoppen met meedoen. Als ik stop, hoef ik niet uit te leggen waarom. Stoppen zal geen negatieve gevolgen voor mij hebben.

- Ik geef hieronder aan waar ik toestemming voor geef.

Toestemming voor deelname aan het onderzoek:
[ ] Ja, ik geef toestemming voor deelname
[ ] Nee, ik geef geen toestemming voor deelname

Toestemming voor het maken van audio/video-opnames tijdens het onderzoek:
[ ] Ja, ik geef toestemming voor het maken van een audio-opname van mij als deelnemer.
[ ] Nee, ik geef geen toestemming voor het maken van een audio-opname van mij als deelnemer.

Volledige naam deelnemer:	Handtekening deelnemer:	Datum:

Volledige naam aanwezige onderzoeker:	Handtekening onderzoeker:	Datum:

De aanwezige onderzoeker verklaart dat de deelnemer uitvoerig over het onderzoek is geïnformeerd.

U heeft recht op een kopie van dit toestemmingsformulier.

Appendix IX: Code tree interviews

Code group:	Subcode:
Understanding and accepting by peers	EC students are accepted by other EC students
	No bullying
	Recognising ASD in each other
	Classmates without ASD dare EC'er
	Bullying behaviour
	Classmates without ASD and ECs protect each other
	It varries if an EC student is understood by classmates without ASD
	EC students are accepted by other EC students
	EC students play together
	EC student not accepted by students without ASD
	Students without ASD distance themselves from EC student
	EC student has friends at EC
	Depends on the EC student whether he is accepted by AMS classmates
	EC student accepted by AMS classmates
	It depends on the class whether an EC student is accepted
	Discuss ability increases EC acceptance
	Parents hold back discussing ASD
	EC student is sometimes accepted by other EC student
	EC student does not understand other EC student
	EC student acceptance is age dependent
	Coaches work on ECs accepting each other
	EC student acceptance varies by moment
	EC student not accepted by AMS classmates
	EC student dares EC student

	Acceptance is level-dependent
	Acceptance depends on character EC student
	Students without ASD struggle with special approach EC student
	EC student is accepted by classmates without ASD
	Acceptance depends on whether EC student accepted to go to EC
	Acceptance depends on how many ECs are in a regular class
	EC students allowed to be who they are
Dropouts EC	EC prevents dropout children with ASD
	Home sitters reported to EC
	EC is full
	Being able to offer more children with ASD EC
	Add location
	Not the same faces for EC students
	EC accommodates ‘between the rails’ children
	Keeping EC students active in school
	Where would ECs end up if EC did not exist?
	Dropout of EC
	EC not suitable for EC student
	Space government through care arrangement
	Dropouts EC can go to special secondary education
	New staff
EC is specialised in ASD	Experience from care
	‘Give me the five’
	‘Give me the five’ from EC
	Various lectures and training from EC
	ASD occurred in training

Offer a lot of structure

Pre-structure

Encouraging development

Many applications

Too many stimuli in regular education

Maintaining quality

Rest

Small-scale

Every EC student has ASD

Various lectures and trainings outside EC

Experience with ASD in private circumstances

Opportunity to develop

EC is unique in education

Engage specialist to increase knowledge about ASD

Subject teachers come to the EC class

Predictability

Social-emotional development

De-stimulation space

Side inflow

Fitted teaching method undergrad

Clear rooms

(Too) big step to go back to regular education

No ASD training attended

Open house EC

Too little care in regular education

EC is accessible to children with ASD

Many small spaces

Dividing the central space into small rooms

	Affinity with the concept
	Affinity with the target group
	Improvement point: transition between lower and upper school methods
	Teacher reads herself in about ASD
	Knowledge ASD in training teacher
	Structure needed
	ASD training from school community
	ASD experience in the workplace
	Word of mouth advertising EC
Information processing support	Small classes
	All day in the same classroom
	Repeat schedule
	Same faces for EC students
	Routine
	Expectation management students
	giving clarity to EC student
	Step-by-step question answering with EC student
	Giving extra thinking time to ECs
	Checking whether question has been understood by EC student
	Support schoolwork
	Familiar structure
	Learning at a slower pace
	EC student makes tests in parts
	Adjusted schedule
	Offering learning in small chunks
	ECs has fixed place in classroom
	Learning at own pace

	Brief explanation from teacher
	Slow information processing ECs
	Teacher adapts choice of words to EC student
	Teacher asks control questions to EC student
	Each EC student sits alone in the classroom
	Keeping EC student at the right pace of learning material
	Improvement point: offering subjects at own pace
	Peaceful room
Support transitioning from primary school to EC	Development perspective plan based on info primary school
	Contact with new students EC
	Walk-in period
	Introductions before the summer holidays
	Too busy in regular education
	Too large groups in regular education
	Preparation starts well before school year
	EC student has negative experience with education
	Bullying history of EC student
	Introductory meeting EC and parents
	'Warm' handover EC and primary school
	Care before attending EC
	Flow-through spot to EC
	ECs more vulnerable in regular education
Support postsecondary education	Transition interview with further education
	Care ongoing after EC
	Plan of tests and completion not finalised
	Having the right level on subjects to attend further education
	Gap in guidance between EC and further education

	Transition coach to further education
	Conversation with EC student about further education
	Coach important when seeking further education
	Visit open house at further education
	Counselling parents about further education
	Giving exemption for parts
	Coach coming along to open house
	Join a trial day at further education
	Conversation with class about further education
	Career orientation and guidance
	Communication transfer coach and parents
	Improvement point: more cooperation transition EC to further education
	Professional fair
	ECs graduate because of EC
	Learning gap cannot be made up
	Future ECs: care farm/day care
	Society does not take ASD into account
	Teacher in discussion with EC student about further education
	Fewer teaching hours in exam subjects compared to regular education
	Teacher has concerns about EC students' exam
Parents	Contact parents: daily
	No parent-teacher contact
	Coach is the contact person of parents
	Contact parents: in case of particularities
	Contact parents: weekly
	Contact parents: monthly

	Contact parents: several times a week
	Parents' concerns
	Parent newsletter
	Parent Council
	Development Perspective Plan based on parental information
	Parents are guided
	Teachers miss contact with parents
Collaboration teachers/mentor and coaches/pedagogues	Coaches support teachers
	Coaches and teachers work together
	Communication coaches-teachers: every lesson
	Discussions coaches and teachers
	Teacher-coach expectations not clear
	Clear distinction of tasks/responsibilities teacher and coach
	Mentor and coach work together
	Difference responsibilities per arrangement
	Coach and mentor work together
	Teacher-coach collaboration varies by coach/teacher
	Teachers seek little advice from coaches
	Responsibility contact with coach lies with teacher
	Teachers contact coach weekly
	Teachers occasionally contact coach
	Improvement point: coach-teacher collaboration
	Agreements/goals ECs are known
	Coaches-teachers communication: few
	Enthusiastic teachers
	Coaches-teachers have low-threshold contact

	Persevering coaches
	Coaches support coaches
	Teachers experience a barrier to contacting coaches
	Tougher teacher-coach collaboration this year
	Agreements not communicated to teachers
	Teacher wants to attend annual student meeting
	Skilled teachers and coaching team
	Improvement point: staff better induction
	Teacher-coach good communication
	Coach-teacher communication: two islands
	Teachers and coaches do not have joint meetings
	Teachers need more contact with coaches
Collaboration EC and AMS	Improvement point: communication EC and AMS
	Improvement point: involve AMS teachers who do not teach in EC
	Improvement point: EC needs to connect more with AMS
Work pressure coaches/pedagogues and teachers	High work pressure coaches
	Dropout of coaches
	Work pressure teachers
	Sick team leader
	large groups EC due to many registrations
Care	the dynamic triangle
	Support emotion regulation
	Care staff always available
	Providing care quickly
	Development perspective plan
	Development perspective plan based on previous plans
	Development perspective plan based on therapists

Development perspective plan based on all available information

Development perspective plan discussion with parent, child and EC staff

Healthcare provider

Development perspective plan continuously evaluated and adjusted

Care throughout the year

Tailor-made

coach present all day

Student well-being

(Too) much guidance

Independence

Self-working

Care triangle involved

Development perspective plan is used continuously

Lots of contact with assistance

Coach is familiar with learning goals of each student

Practical learning objectives for the school setting

Development perspective plan discussion with parent, child and AMS mentor

Coach has own students

EC student feels heard

Evaluate goals

Difference care per arrangement

Improvement point: guidance social emotional

Vision EC must be written per arrangement

Enough occupation EC staff

Safety

Confidence of an EC student

EC student insecure

EC student anxious about failure

Good relationship coach and EC student

Development perspective plan: starting with standard support

Group formation of ECs

Investing in positive experiences

EC student development fluctuates

Coaches know all ECs

One-to-one coaching

Development perspective plan based on info social workers

Advice on using assistance at home

With EC student looking at what will work

The EC student is seen

Matching the needs of EC students

Improvement point: discuss whether ECs can follow an arrangement with less care

Specialised care

Improvement point: transfer care class to other agency

Eye for the child

Difficulty with emotion regulation

Social-emotional support

Tidy rooms