'you talk and try to think, together' – a case study of a student diagnosed with autism spectrum disorder participating in philosophical dialogues

viktor gardelli[1]
luleå university of technology, sweden
orcid.org/0000-0001-6252-4000

ylva backman[2]
luleå university of technology, sweden
orcid.org/0000-0002-9511-0354

anders franklin[3]
luleå municipality school, sweden
orcid.org/0009-0002-8471-4010

åsa gardelli[4]
luleå university of technology, sweden
orcid.org/0000-0003-1166-0998

abstract

We present results from a single case study based on semi-structured interviews with a student (a boy in school year 3) diagnosed with autism spectrum disorder and his school staff after participating in a short and small-scale intervention carried out in a socio-economically disadvantaged Swedish elementary school in 2019. The student participated in a seven week long intervention with a total of 12 philosophical dialogues (ranging from 45 to 60 minutes). Two facilitators, both with years of facilitation experience and teacher degree and at least BA in philosophy, facilitated the majority of the dialogues and mainly followed a "routine" procedure. The student was interviewed in direct connection to the end of the intervention about his experiences from the dialogues and his perceptions about whether and how the dialogues had influenced him. The student's two teachers, who had participated in the dialogues as participants, were interviewed as a pair, also in direct connection to the end of the intervention, while the school principal was interviewed two years after the study. These staff interviews concerned the staff's experiences of the influence of the dialogues on the students within the intervention as well as transfer effects to other contexts in school. The data from the study include detailed elaborations from a student perspective of different effects on the student's communicative and cognitive development, which are in several respects supported also by staff reports. The results show that the student was able, interested, and willing to participate in philosophical dialogues, and our data point to several positive outcomes for the student in the communicative and cognitive domains.

---

[1] Email: viktor.gardelli@ltu.se
[2] Email: ylva.backman@ltu.se
[3] Email: anders.franklin@skol.lulea.se
[4] Email: asa.gardelli@ltu.se

'hablas e intentas pensar, juntos' - estudio de caso de un alumno diagnosticado con trastorno del espectro autista participante en diálogos filosóficos

resumen

Presentamos los resultados de un estudio de caso único basado en entrevistas semiestructuradas con un estudiante (un niño en el tercer año escolar) diagnosticado con trastorno del espectro autista y su personal escolar después de participar en una intervención corta y a pequeña escala llevada a cabo en 2019 en una escuela primaria sueca socioeconómicamente desfavorecida. El alumno participó en una intervención de siete semanas de duración con un total de 12 diálogos filosóficos (de entre 45 y 60 minutos). Dos facilitadores, ambos con años de experiencia en facilitación y título de profesor y al menos licenciatura en filosofía, facilitaron la mayoría de los diálogos y siguieron principalmente un procedimiento "de rutina". El estudiante fue entrevistado en directa conexión con el final de la intervención acerca de sus experiencias de los diálogos y sus percepciones sobre si los diálogos le habían influido y de qué manera. Los dos profesores del alumno, que habían participado en los diálogos como participantes, fueron entrevistados como pareja, también en conexión directa con el final de la intervención, mientras que el director de la escuela fue entrevistado dos años después del estudio. Estas entrevistas con el personal se refirieron tanto a las experiencias que el personal tuvo de la influencia de los diálogos en los alumnos dentro de la intervención, como a efectos de transferencia a otros contextos en la escuela. Los datos del estudio incluyen elaboraciones detalladas desde la perspectiva de un alumno sobre los distintos efectos en el desarrollo comunicativo y cognitivo del alumno, que en varios aspectos se ven respaldadas además por informes del personal. Los resultados muestran que el alumno era capaz, estaba interesado y dispuesto a participar en diálogos filosóficos, y nuestros datos apuntan a varios resultados positivos para el alumno en los dominios comunicativo y cognitivo.

palabras clave: trastorno del espectro autista; dificultades de comunicación; filosofía para niños; filosofía con niños; diálogo filosófico.

"fala e tenta pensar, juntos" - estudo de caso sobre a participação de um aluno diagnosticado com transtorno do espectro autista em diálogos filosóficos

resumo

Apresentamos os resultados de um único estudo de caso baseado em entrevistas semi-estruturadas com um estudante (do terceiro ano escolar) diagnosticado com TEA (Transtorno do Espectro Autista) e seu corpo docente, após participarem de uma intervenção curta e de pequena escala realizada em 2019 em uma escola primária sueca

socioeconomicamente desfavorecida. O estudante participou de uma intervenção de sete semanas, com um total de 12 diálogos filosóficos (entre 45 a 60 minutos cada). Dois facilitadores, ambos com anos de experiência em mediação escolar, professores e com, no mínimo, licenciatura em filosofia, facilitaram a maioria dos diálogos e, principalmente, seguiram uma "rotina". Tão logo a intervenção teve fim, o estudante foi entrevistado sobre as experiências que teve a partir dos diálogos e as suas percepções sobre se e como esses diálogos o influenciaram. Os dois professores do estudante, que engajaram nos diálogos como participantes, foram entrevistados em dupla, também em conexão direta com o fim da intervenção, enquanto a direção da escola foi entrevistada dois anos depois do estudo. Estas entrevistas com a equipe escolar se referiam às experiências do grupo sobre a influência dos diálogos nos alunos durante a intervenção, bem como aos efeitos de transferência para outros contextos na escola. Os dados do estudo incluem elaborações detalhadas da perspectiva do estudante sobre os diferentes efeitos no seu desenvolvimento comunicativo e cognitivo, que são, em diversos aspectos, confirmados também pelos relatos do corpo docente. Os resultados mostram que o estudante estava apto, interessado e disposto a participar dos diálogos filosóficos, e nossos dados apontam para diversos resultados positivos para o estudante nos domínios da comunicação e cognição.

palavras-chave: transtorno do espectro autista; dificuldades de comunicação; filosofia para crianças; filosofia com crianças; diálogo filosófico.

'you talk and try to think, together' – a case study of a student diagnosed with autism spectrum disorder participating in philosophical dialogues

introduction

Through our teaching endeavors in special needs education contexts throughout the years we have met numerous people, both in-service teachers and medical and care staff, with self-declared extensive experience in working with children, youths or adults diagnosed with autism spectrum disorder (ASD). Some of the professionals have immediately considered philosophical dialogues potent for communication and development in their professions, while others have equally immediately suggested that philosophical dialogues with persons diagnosed with ASD would be an unfruitful enterprise. The latter kind of responses have sometimes included the two claims that participants with ASD-diagnoses would 1) be uninterested or unwilling to participate in such dialogues, and 2) be unable to do so (with any quality). Let us call this view *the impossibility view*. This paper can be seen as a challenge of that view. It sets out to provide support for two different theses: 1) (at least some) persons diagnosed with ASD can successfully participate in philosophical dialogues, enjoy it, and develop from it, and therefore, 2) philosophical dialogues can indeed be a fruitful undertaking for persons diagnosed with ASD. This, in turn, means that there are reasons to study what further consequences participation in philosophical dialogues might have for persons with ASD-diagnoses, and the present exploratory case study-research can be seen as a contribution also towards this.

background

effects of philosophical dialogues in general

There are numerous studies and meta-studies indicating that philosophical dialogues have a plethora of desirable consequences in participants of widely different backgrounds: of different ages, in different parts of the world, in different contexts, and with different preconditions (Gardelli, 2016). Quite likely, the reader of

this journal is quite aware, and if not, there are several other papers in its archives that can be consulted. We will therefore just make a very brief mention of some of this body of research here.

There are several variations of methods for conducting philosophical dialogues, among which the arguably most well-known and thoroughly studied is the Philosophy for Children (P4C) approach developed from the late 1960s and onwards by Lipman and colleagues (e.g., Lipman, 2003; Lipman & Sharp, 1978; Lipman, Sharp & Oscanyan, 1980). In recent years, other forms have been developed, sometimes denoted by the umbrella term "philosophy for/with children" (P4wC) (e.g., Kizel, 2022).

P4wC is considered to be "substantiated by a record of published, peer-reviewed research" (Murphy et al. 2009, p. 760) where the "quality and quantity of evidence [is strong in] comparison with that on many other methods in education" (Trickey & Topping, 2004, p. 374). Meta-analyses support effectiveness of P4wC with regard to students' development in several areas relevant for increased and improved communicative participation, such as greater amount and improved quality of student talk, reasoning, and argumentation (García Moriyón, Rebollo & Colom, 2005; Murphy et al. 2009; Trickey & Topping, 2004, Yan et al., 2018). Development of non-verbal and verbal cognitive skills has been found (Topping & Trickey, 2007a), including logical and critical thinking skills (García Moriyón et al., 2005; Topping & Trickey, 2007a, 2007b), reasoning skills, and argumentation abilities (Topping & Trickey, 2007b). Participation in philosophical dialogues has been shown to promote the development of emotional and social skills, such as facilitating interpersonal relationships (Trickey & Topping, 2004), listening skills and confidence to speak (Gorard, Siddiqui, & See, 2015), as well as promoting gains in self-esteem (Gorard et al., 2015; Trickey & Topping, 2006). Considering the reported effects of dialogic education in general (cf. e.g., Hattie & Zierer, 2019), the reported positive effects are not very surprising.

Studies in special needs education contexts in particular are more rare, but there are studies that have been made, and which show positive effects. For example, Backman et al. (2020) showed large gains in group argumentation performance among persons with acquired brain injuries.

a prior attempt to do philosophy for children diagnosed with ASD
introductory remarks

While Lukey's reflective piece, of which he notes that "the inspiration behind [the] paper is largely personal", is perhaps not a research article as such, it constitutes a rare and welcome example of texts written about doing philosophical inquiries together with children diagnosed with ASD. (That is, we assume that at least some of the children that Lukey worked with were diagnosed with ASD, since he writes in terms of his "work with autistic children" (Lukey, 2004, p. 24) within the context of a school "that specializes in educating children with special needs, specifically autism" (Lukey, 2004, p. 24).) Lukey states that his piece is meant to serve "as an invitation for others doing similar work to engage in dialogue about how to bring together the wonder, thinking and community of P4C with the education and enrichment of special needs students" (Lukey, 2004, p. 24). Judging by the content of his article, we assume that Lukey specifically thinks about children diagnosed with ASD. This is evident in passages such as when Lukey appeals "to both academics and educators in exploring the philosophical and psychological issue of dialogue with people with autism and the pedagogical issue of how to approach such a challenge" (Lukey, 2004, p. 28) or when he asks

> how do we expand our activity, our communities of inquiry to include those who don't communicate in a way we typically understand? I am ultimately hoping that others will help me formulate an answer to this question. I put forth my own thoughts and attempts in order to contribute to the dialogue. (Lukey, 2004, p. 28)

The present article can be seen as a contribution to this dialogue, and to take up that challenge, by providing a positive example of how such a work can be carried out, and by giving voice to a student diagnosed with ASD about his experiences in

such an undertaking, as well as the voices of two of his regular teachers and his school principal. We share Lukey's aim to further special needs education with philosophical dialogues. There is indeed good evidence that a P4wC methodology, if carried out with high quality, can have positive impacts in many special needs educational settings (see e.g. Backman et al. 2020). However, evidence in contexts with students with ASD-diagnoses is more rare. Let us hope, with Lukey, that somewhere in the not so remote future this will no longer be the case.

on dialogue

In trying to define dialogue and taking works of Bohm and Yankelovich as starting points, Lukey gives an account of what (genuine) dialogue is, which constitutes the theoretical framework based on which he raises several challenges which will be detailed below. Therefore, let us briefly familiarise ourselves with these ideas. On this account of genuine dialogue, Lukey states that "[f]irst, dialogue is a collective endeavor. […] It requires that we play with each other, not against each other; 'everybody wins.'" (Lukey, 2004, p. 25). Community is also taken to be an important part of a genuine dialogue, with Lukey stating that community "deepens the thinking of its participants" and that by "exploring our own thoughts juxtaposed against those in the circle we become more aware of our own thoughts" (Lukey, 2004, p. 25). Citing Bohm he states that "the whole group becomes a mirror for each person" (Lukey, 2004, p. 26). Again with Bohm, he subscribes to "the importance of sensitivity and empathy for dialogue" (Lukey, 2004, p. 26). He also adopts Yankelovich's "three key features that are necessary for dialogue (and which distinguish it from discussion): (1) equality and the absence of coercive influences, (2) listening with empathy, and (3) bringing assumptions into the open" (Lukey, 2004, p. 26). Empathy is further given a more precise meaning when Lukey cites Yankelovich as describing "'the gift of empathy' as 'the ability to think someone else's thoughts and feel someone else's feelings,'" and states that Yankelovich sees it as "indispensable to dialogue" (Lukey, 2004, p. 26).

challenges

Against this background, Lukey raises some concerns regarding the possibility of doing philosophical dialogues with children diagnosed with ASD, somewhat similar to those raised by some of our students, as described above. For example, he states that after working with students with ASD-diagnoses, he "began to wonder if it was even possible to achieve[, in this context,] the same kind of experience ([i.e.] a successful P4C session) that was familiar in [his] work at other "regular" schools" (Lukey, 2004, p. 25). After his first half year of working in the special needs school, he perceived difficulties, leading him to question his work:

> I realized that I was not doing P4C or anything that would count as a stepping stone towards P4C. I realized that we were not having anything close to a dialogue, or even a discussion, because I was merely pulling thoughts and ideas from the children. It seemed that they really didn't understand the purpose of dialogue or even the structure of it (more accurately, they weren't behaving as if they understood). (Lukey, 2004, p. 25)

Many of the things that he claims to cherish about P4C in other contexts, he found to be "frustratingly rare" (Lukey, 2004, p. 25) in his work with the special needs children and thus "questioned whether [genuine] dialogue could ever be realized within the specialized communities of [ASD-diagnosed] students" (Lukey, 2004, p. 25). He lists some challenges in sensory processing that he argues that children diagnosed with ASD have, and states that "[g]iven that there are such challenges in sensory processing, the kind of behaviour that we consider successes in a regular P4C classroom may be close to impossible with some individuals" (Lukey, 2004, p. 26). Furthermore, against the background theory from Bohm and Yankelovich relating to empathy, he states that "[e]mpathy may also be a criterion that is unreasonable to expect from some autistic students" (Lukey, 2004, p. 27) and that "[i]ndeed, it is difficult to imagine that a P4C community or empathy would be possible among students who can't be sure that they are perceiving in the same way as their fellow participants" (Lukey, 2004, p. 26).

Furthermore, he claims that "[a]dded to the sensory challenges are the cognitive challenges of communicating with others, collective reasoning, and identifying assumptions" (Lukey, 2004, p. 26) and that "[m]any autistic children are unable to imagine what other people are thinking and often fail to recognise others as thinking and feeling persons" (Lukey, 2004, p. 27). Stating that "autism can be viewed as a cognitive disorder and a sensory processing disorder" he goes on to claim that "[as] a sensory processing disorder, the kind of sensitivity that Bohm says is necessary for dialogue to flourish may be physiologically impossible for some students" (Lukey, 2004, p. 26). He thus seems to consider philosophical dialogues with children diagnosed with ASD to be a daunting task, to say the least, saying that as

> for Yankelovich's three necessary conditions for dialogue, it is difficult to imagine three criteria that would be more difficult to satisfy in working with autistic children. Merely requiring some autistic children to talk is often coercive, and often rewards must be established to motivate a child to interact with his peers and teachers. (Lukey, 2004, p. 27)

"Relationships," he adds, "though a fundamental part of who we are, are not easy and require a kind of cultivated perception (sensitivity) in order to develop these relationships and the meaning that flows from them" (Lukey, 2004, p. 26). He concludes that "it is the seeming lack of this kind of cultivated sensitivity that makes P4C so challenging with autistic children" (Lukey, 2004, p. 26).

suggested explanations

Lukey does not, however, only perceive many challenges in this work. He also suggests some possible explanations of the difficulties he was experiencing, distinguishing between on the one hand so-called "lower-functioning autism" (Lukey, 2004, pp. 27-29) and on the other a "high-functioning form of autism" (Lukey, 2004, p. 27) and "higher functioning students" (Lukey, 2004, p. 29), and theorises that it is difficult to find activities that suite all of his students. He thus states that "[w]hile many of [the utilised] activities [were] successful with some students" he "do[es] not

think there was one that was successful with all the students" (Lukey, 2004, p. 29). He continues to explain that

> what remains most frustrating is that these activities seem most successful with people at a certain level; i.e., those children who are just beginning to use words effectively to communicate and grasp the existence of other minds. It focuses "lower" functioning children who have no interest in communicating with others so that they respond more readily to questions and can ask questions appropriately. However, it hasn't yet made them ready for what we would recognize as P4C discussion, much less dialogue. (Lukey, 2004, p. 29)

He claims that among these students, there

> is no expressed sense of wonder about themselves or others (and perhaps someone can't wonder about herself if she isn't really aware of others); when someone expresses a thought or idea, there is almost never an impulse from someone else in the circle to raise his hand and contribute something else. This may be impossible for the "lower-functioning" students, and the activities may be too simplistic for the "higher-functioning" students. (Lukey, 2004, p. 29)

On a more hopeful note, Lukey does deem some of his students as capable of participating in philosophical dialogues, although he expresses some concerns here too, in stating that

> [i]ndeed, the higher functioning students seem capable of a P4C discussion as it occurs in other 'mainstream' schools but either share very little experience or interests with children their own age, or they have difficulty feeling comfortable with their peers. (Lukey, 2004, p. 29)

some suggested remedies

Taking departure from Grandin's distinction between what she describes as her visual based way of thinking and a word-based way of thinking, which both Grandin and Lukey seem to think is more common in people not diagnosed with ASD, Lukey undertakes an interesting discussion about the possibility that there are different modes of thinking. After this discussion, he claims that in the work they do, they "are certainly attempting to bring autistic children into the world of speech, relationships and empathy" (Lukey, 2004, p. 28) and that he

> would be overjoyed if the students at [the special needs school] mastered the translation skills [between visual thinking and words-based thinking] so that they could articulate their difficulties

> with and assumptions about abstraction, empathy, spirituality and other aspects of life with which [he claims that] many of us identify. (Lukey, 2004, p. 28)

But, he holds that we "must also be willing to try and enter their world to the extent that this is possible. This may mean using more pictoral[*sic*] cues and doing more visual activities so that we share meaning in pictures rather than in words." Thus, on his view, the "exchange must be bi-directional." He goes on to explicate why he thinks that developing a more word-based form of thinking is beneficial:

> Language has helped […] several of my students to understand themselves and others better. It is because they have access to our language-based way of thinking that they can participate in discussions and dialogues with peers. This may be a necessity; yet, it seems unfair to only acknowledge someone as a participant in a dialogue if she "speaks our language." Furthermore, if we undertake to become more familiar with their mode of thought, we might hold even more meanings in our mind. (Lukey, 2004, p. 28)

As a last possible suggestion on adaption of the practices in order to overcome some of his challenges, Lukey states that

> [s]mall classes and one-on-one assistance for almost every student [as is practiced in his school] means that children are not used to working in groups and when groups greater than three or four students are formed, the difference in abilities and behaviors makes almost any activity frustrating for the participants. Or rather, perhaps P4C needs to create ways to accommodate very small groups of children who require educational aids to provide prompts and mediate differences. The successes achieved in such a context may be different from those in a regular P4C classroom, but they should still be P4C successes. (Lukey, 2004, p. 29)

Despite all the challenges that Lukey perceives, he ends his text in a more positive tone:

> There is a certain child who is very content in his own little world and who often seems deep in thought, wondering about things to himself in slight murmurs. I may never understand how he perceives the world or what he thinks about, but whenever he gives one of his highly original answers or solutions, I consider it a P4C success. (Lukey, 2004, p. 29)

Taking departure from this, Lukey wraps things up with a sort of call-to-arms, requesting more people to engage in thinking about and participating in

philosophical inquiry with children with ASD-diagnoses, in writing: "With such successes in mind, I appeal to both academics and educators in exploring the philosophical and psychological issue of dialogue with people with autism and the pedagogical issue of how to approach such a challenge" (Lukey, 2004, p. 29).

We would like to take up this challenge and provide an example of how philosophical dialogues can indeed be carried out in mixed groups with both children diagnosed with ASD and those not diagnosed with ASD, and give voice to one of these students (diagnosed with ASD) concerning some of his views on these dialogues and on their impact on him. In doing so, we hope to show that it is indeed possible and can be fruitful to conduct philosophical dialogues with children diagnosed with ASD, and that the methodology for doing so needs not always be very different from what we practice in other contexts as well.

method

overview and participants

We conducted a small-scale intervention with twelve philosophical dialogues in school year 3 in a Swedish elementary school during seven weeks in late Spring (April and May) 2019. The school was small (below 200 students in total), rural, and ranked among the 10% most socio-economically disadvantaged nationally (among all municipally run schools). The school included students from around 20 different countries and about 20% of the schools' students were asylum seekers. The school class comprised only eight students (four girls and four boys), where three of the students were diagnosed with attention-deficit/hyperactivity disorder (ADHD), learning disabilities, and ASD.

Application for ethical vetting, in accordance with the Swedish "Act concerning the Ethical Review of Research Involving Humans" (Dnr: 2019-00922), was sent to the Swedish Ethical Review Authority, which approved the project before the start of the intervention. Permission was also received from the school principal and other involved staff. All participants gave their informed consent, and were given

information that they were at all times free to terminate participation without giving
any reason and that confidentiality would be respected.

intervention procedure

During seven weeks, all twelve dialogues were carried out, mainly facilitated
by two of the researchers (henceforth called "the facilitators") both of whom had
several years of experience and practice in facilitating philosophical dialogues,
pedagogical training (teacher education) and experience, and philosophy education
(at least bachelor in Philosophy). Each session lasted for 45–60 minutes. While the
setup of the sessions partly changed during the intervention, we mainly followed the
form of a "routine classroom philosophical enquiry" (Trickey & Topping 2004, p. 369),
which by Trickey and Topping (2004) is summarised in approximately the following
nine steps, with some minor alterations from us in order to more clearly show the
intervention procedure followed in this study:

(1) Getting started (including agreeing upon or a reminder of the rules of
interaction);

(2) Sharing a stimulus (often a short written story) to prompt inquiry;

(3) Pausing for thought;

(4) Questioning (the participants think of interesting and contestable
questions);

(5) Making connections (making links between the questions);

(6) Choosing a question to begin an inquiry;

(7) Inquiring upon the chosen question under guidance of the facilitator;

(8) Recording the discussion (e.g. by graphic mapping); and

(9) Engaging in meta-dialogue (summarising and reflecting on the process)

We will call this shortly described process "the routine PwC procedure". In
more detail, each session began with a short summary of the structure of the session
and a reminder of conversation rules which the group had come up with and decided
upon in the beginning of the intervention (1). Examples of rules were "Listen when

someone else is talking" and "Show respect". Subsequently, however, the initial focus on reminders of conversation rules moved (that is, when the facilitators and the participants considered the rules to be followed to a sufficient extent) to encouragement to practice more advanced dialogic skills in later sessions. These targeted skills were mainly inspired by ART for kids (Reznitskaya & Wilkinson, 2017); a tool for children to become aware of and evaluate dialogic quality and progress in inquiry dialogic sessions. These skills, together with the jointly decided upon conversation rules, subsequently functioned as a foundation for formulating individual and group tasks. During the start-up phase of several sessions, each participant randomly picked a piece of paper with a sentence on it, such as "We show each other respect," "We provide reasons," "We see to it that everyone gets chances to speak," or "We make relevant contributions." Each participant were then tasked with paying extra attention towards how well the group succeeded with that task. These tasks were introduced mainly in order to support the participants' goal determination and meta-cognitive awareness.

After the introduction, a stimulus was introduced, frequently in the form of a one-page narrative-based story read aloud by one of the facilitators (2). The stories were written by one of the facilitators during the course of the intervention, and their contents were adapted to the group's interests. They often targeted ethical issues, for instance what a fair distribution of resources is, the moral status of lying, and the potential worth of solidarity towards friends, but some also prompted inquiry about ontological issues, such as whether there exist things that we cannot see, as well as criteria for reaching knowledge about such things. Two times, the facilitators diverged from the routine PwC procedure, and, instead of regular stories, used mystery-themed, deductive, and argumentation centered exercises during which each pair of students received different written leads to an imaginably committed crime with four suspects. The students were tasked with sorting out, for each suspect, different reasons for and against that he or she was guilty of the crime. The different leads were later brought up in whole-class dialogue, where the leads combined were

used to determine who was most likely to have committed the crime. The exercise followed the form of a dialogic puzzle, as described by, for instance, Hattie and Zierer (2019, p. 142), where, "[j]ust like in a puzzle, each piece – each student's piece – is necessary to be able to accomplish and fully understand the final product".

The introduction of the ordinarily used story stimulus was followed by a "thinking break" for reflection (3), where the participants were subsequently encouraged to come up with contestable questions (that is, questions to which there are at least two mutually exclusive reasonable answers) (4), which were then written on a whiteboard for all to see. Initially, however, the participants were not prompted to create their own questions. In order to ease them into the format of the dialogues, they were first presented with one prepared question to inquire upon. During the second session, they were presented with a couple of questions to choose between. In later sessions, they were encouraged to create their own questions, though this was not always the case since the facilitators at times felt the need for a group to be challenged in more appropriate ways. Sometimes, clarifying questions were asked about the posed questions, and on some occasions, questions were linked together and sub-grouped (5).

Next, anonymous voting took place (6), in order to decide which question to inquire upon during that session. Once a question had been selected, that question was inquired upon under the guidance of facilitators (7). This inquiry was conducted in accordance with typical P4C and dialogic facilitation procedures (see e.g. Lipman, Sharp, & Oscanyan, 1980; Reznitskaya & Wilkinson, 2017; Trickey & Topping, 2004), with an added methodological distinction included in the so-called "Luleå model of PwC", where two facilitators take part, one leading formally and one participating. The leading facilitator was responsible for the formal structure of the session, guided the group to the next step of the session, and assisted the inquiry by, among other things, nominating speakers and asking for clarifications. He or she used open-ended questions, such as "If someone disagreed with you, what would [s/he] say to argue against you?", "How are you using the word ...?" and "How does this relate to what

[s/he] said?" (Reznitskaya & Wilkinson 2017, pp. 186–188). Furthermore, the leading facilitator did not contribute through taking substantial positions or providing arguments. The participating facilitator, however, was free to make substantial contributions, such as making statements, taking sides, and arguing for and against different statements. For example, the participating facilitator made a statement in the very first session that signaled to the participants that it was allowed to consider different methods of fair distribution than what the group seemed to think that the adults in the room thought was correct. The purpose of having these distinct roles was to make possible for the facilitators to show the way towards valuable avenues of dialogue and to present good examples of how to conduct a dialogue, without risk of confusing the actions of the participating facilitator with the authority of the leading facilitator. Through this methodological distinction, the leading facilitator was provided the opportunity to show the rest of the participants certain new talk moves (such as "Why do you believe that?" or "Could anyone find a counter argument against her position?") through first directing them at the participating facilitator. Through these methodological choices, one ambition was to adjust so that no student felt that he or she was singled out as, for instance, not giving a sufficiently good answer to a posed question. The facilitators focused on illuminating important contributions from participants with perceived low self-esteem or participants that were perceived as being socially marginalised. It could also be noted that the facilitators took turns leading and participating from session to session.

During the inquiry, the argumentative structure of the dialogue was often made visible for the participants through the leading facilitator's graphic mapping on a whiteboard (8). It was partly used to write down the participants' questions and the voting results, but mainly for scaffolding during the inquiry; it was used to draw pictures, write down and categorise keywords, clarify the structure of arguments and positions, and introduce relevant terminology, such as "pro-argument" and "counter-argument". It was mainly the leading facilitator who wrote and drew on the whiteboard, but on occasions also the participants themselves.

Each session was concluded by a meta-dialogue (9), where the leading facilitator asked the participants to reflect on different aspects of the inquiry, in order to promote joined group meta-cognition. The leading facilitator encouraged the participants to reflect on different aspects of the dialogue, to revisit the conversation rules, and to evaluate the dialogues based on the individual and group tasks. Room was also made for the participants to make their own remarks. The meta-dialogues were considered a vital part of the sessions; even when the inquiry took longer than planned, time was made for the meta-dialogue to take place. During the course of the intervention, conversation rules were removed and reformulated during the meta-dialogues at the initiative of the participants, as a result of that the participants reflected on their own and their peers' behaviors and that they noticed ambiguities during the implementation of the rules.

Two more notes should be made. One is that the regular class teachers attended the sessions as participants. The facilitators initially encouraged the teachers not to act authoritative, which lead to the teachers mostly being passive. After more nuanced encouragement, the teachers sometimes participated actively at the same participatory level as the students. Also, breaks with physical exercises were introduced in the group before the inquiry in order to maintain focus, which was in accordance with how the school class usually worked.

data collection

Triangulation, that is "using more than one method or data source during the study of social phenomenon" (Bryman, 2018, p. 468, our translation), is commonly used to control correct interpretation of data and to secure conclusions. According to Lewis, "[i]n qualitative research, by using interviews, theory, previous research literature, personal observations, and other data, findings can be compared to determine the validity of a certain theme or category" (Lewis, 2009, p. 11). In this case study, we used interview data from three different sources – the student, the teachers, and the school principal – to view the same phenomena from different points of view.

The student was interviewed in direct connection to the end of the intervention about his experiences from the dialogues and his perceptions about whether and how the dialogues had influenced him. The interviews with the staff (two teachers and the school principal) concerned their experiences of the influence of the dialogues on the students within the intervention as well as transfer effects to other contexts in school. The student's two teachers, who had participated in the dialogues as participants and not facilitators, were interviewed as a pair, also in direct connection to the end of the intervention. The school principal was interviewed two years after the intervention, in order to get more long-term data. This way, we could get insight into whether potential changes were merely temporary or if they were sustainable. There are quite large differences in how principals work in their respective schools, and the principal interviewed in this study had a very close contact with, and a vast knowledge about, both students and staff in the school – sometimes stepping in to teach classes and routinely working very hands-on in the school – but did not participate in the philosophical dialogues in this intervention.

Lewis (2009) emphasises the importance of "avoiding leading questions that may solicit a desired response, but not necessarily an accurate response" (p. 8), in order to assess research worker reliability. During our interviews, the interviewer asked open questions such as "Do you think it's been just the right length of the dialogues or have they been too short or too long or …?" and questions concerning "[e]ither something that you think has been good, or something that you think we should have done a little better?" in order to allow for different opinions and responses. However, the interviews also contained plenty of follow-up questions connected to the specific interviewee response, in order to "ensure the collection of thick, rich data" (Lewis, 2009, p. 8), as recommended for increasing research worker reliability. All interviews were conducted by a researcher who had joined all the twelve dialogues as a participating observer.

data processing

During early phases of the data processing, the data were processed through Bryman's (2018, pp. 207–209) steps 1–6, explicating a generic procedure for thematic analysis, and here briefly summarised in the following:

1. Reading through the data
2. Initiating the coding
3. Developing initial themes through elaborating on the initial codes
4. Developing higher-order themes through evaluation and combination of initial themes
5. Exploring connections between concepts and themes
6. Controlling relevance and confirmability of the themes

One of the authors performed the coding of the data including the thematic grouping of data and the development of all themes (see Table 1 in the "Results" section). According to Lewis (2009), "[a]fter the themes or categories are determined, researchers must then search for data that would disprove the established themes or does not fit into one of the categories" (p. 11). In the data processing in this study, "[n]egative cases, discrepant data, or disconfirming evidence" (Lewis, 2009, p. 11) were continuously considered in order to reach and maintain a consistent order within and between the final themes. In this paper, we have also continuously strived to give a representative picture of both the advantages and disadvantages expressed by both students and staff. As emphasised earlier under "Data collection", triangulation was used as a means to receive multiple points of view on the same phenomenon, which provided opportunities to discover discrepant data.

Lewis (2009) emphasises that the following question is addressed that relates to the data processing procedure and research worker reliability: "Are interviews interpreted the same by different researchers?" (p. 8). This relates to the assessment of interrater reliability, which refers to "the level of agreement between a particular set of judges on a particular instrument at a particular time" (Stemler, 2004, p. 1). According to Stemler (2004), "[c]onsensus estimates tend to be the most useful when

data are nominal in nature and different levels of the rating scale represent qualitatively different ideas", for instance when written data is to be sorted into several different "possible thematic categories" (p. 2). He argues that "percent agreement", which is "calculated by adding up the number of cases that received the same rating by both judges and dividing that number by the total number of cases rated by the two judges", is both popular and has several advantages (Stemler, 2004, p. 2). According to Stemler (2004) a typical percent agreement threshold for consensus estimates of interrater reliability is 70%, that is, that the number of cases that received the same rating by a pair of coders divided by the total number of cases rated by the two coders does not fall below 70%.

In this study, after the first coder had finished coding, a second coder independently coded all the (randomly ordered) quotes (from all three data sources – the student, teachers, and the school principal) using Table 1. Finally, the consensus estimate of percent agreement interrater reliability was calculated, and amounted to 87,5%, which is well above the typical threshold mentioned previously.

results

Our results are structured following Table 1, which provides an overview of the themes and sub-themes that were produced during the data processing.

Table 1

Overarching theme	Talking and thinking together				
Themes	Verbal communication development and the mechanisms behind it			What promotes thinking and what thinking promotes	
Sub-themes	The intervention as a turning point for verbal activity?	Mechanisms promoting verbal communication	Transfer effects regarding communication	What promotes thinking	What thinking promotes

Note. Thematic overview resulting from the data processing.

overarching theme: talking and thinking together

As we processed the data, we found that an overarching theme that was inclusive enough to incorporate many aspects from the collected data about the student, henceforth called 'Fred', was well emphasised through a quote by Fred himself in his characterisation of a philosophical dialogue:

> I (Interviewer): If you were to tell someone what a philosophical conversation is, what would you say then?
> Fred: I don't know, that's a difficult question.
> I: That's a difficult question. But if they were to say "Tell me! What do you do in a philosophical dialogue?' What would you say then?
> Fred: You talk and try to think, together.

The emphasis on both communication and cognition, through a joint endeavour, is present throughout the data from both the student and the staff. Below, all three data sources (the student, teachers, and the school principal) are represented through quotes, jointly illuminating different aspects of the same phenomenon and thus adding to triangulation of data sources in relation to the same themes.

verbal communication development and the mechanisms behind it

the intervention as a turning point for verbal activity?

All interviewees described potential effects from the intervention on Fred's communication development. In the quote below, the school principal presented the view that the dialogic format promotes the tendency to talk for both Fred and other children with communication difficulties.

> School principal: It was a way for the children who [previously] were having a hard time getting started with talking to start talking. I think mainly of the foreign children but also of […] Fred … It was like it turned after that. Because then they talked a lot. [It was due to] The communicative pedagogy [of the philosophical dialogues].

Fred himself argued that the dialogues had positively affected his self-confidence during verbal interaction, as can be seen in the following quote:

> I: How do you think it's going … I notice that you have a very easy time listening, right – you don't find it so difficult, to listen to the others?
> Fred: No.

> I: No. What do you think about talking, then? Has it been better or worse in the later dialogues?
> Fred: It's been better. I tend to be quite shy to talk, but as we did it more and more, it became easier.

Also the teachers discussed how Fred engaged verbally in the dialogues:

> Teacher 1: You saw like, Fred, for example, he stepped forward [...] he's the more quiet [type], so to say, but that he, like ... also got heard.
> Teacher 2: Yes, exactly, and it was, like, fun – here you could see that he, like, stepped forward and probably felt that he had good things to say.

However, one of the teachers considered that while she had experienced a development of Fred's verbal activity, she was uncertain about whether it was in fact an effect of the intervention; a concern raised in the following:

> Teacher 2: ... he has also evolved, because he'd rather not be seen and heard [before], and this thing about standing up in front of everyone else in the class – there's also been a big development.
> I: Do you think these conversations have played a role there, or what?
> Teacher 2: Well, like, we had seen the development before, that it had started, but I don't know, I haven't had time to think about whether there has been any change after the dialogues here, I actually haven't had time ... I think he's pretty much the same. [...] But it may be that, without me having had time to notice it in classroom situations, he feels it somewhere.

mechanisms promoting verbal communication

Several interview responses concerned different kinds of mechanisms that were experienced by the interviewees to positively affect verbal interaction. Fred argued that learning of argumentation supported his verbal communication ability as emphasised in the following quote:

> I: Do you think you've learned anything?
> Fred: Yes, I have learned about arguments.
> I: You have, indeed. Yes, what's been good about learning about that, then?
> Fred: It gets easier to talk.
> I: Right. I feel that too, like you've given it very much thought, I think in the beginning ... what did you initially think it was like? Did you think it was...?
> Fred: I found it hard to explain [my thoughts], so then I didn't say much ... but then when I learned argumentation it got easier.

Fred also expressed the idea that visualisations through the mapping of the inquiry on the whiteboard aided communication, as stated in the quote below.

> Fred: I think [writing on the whiteboard] helped a lot. Otherwise, it would have been difficult to talk about the different parts.

The school principal brought up another aspect of the dialogues that she believed promoted communication for students with communication difficulties – the time offered for thinking thinking breaks. She argued that the dialogic method provided time for formulation of thoughts (especially for the newly arrived students, whom Fred is not one of), as stated in the following:

> School principal: There's a huge difference. Especially for the new arrivals, the children who have difficulty expressing themselves in speech. Somehow, through the method, they get half a second to think extra. And have time to formulate ….

transfer effects regarding communication

When it comes to perceived effects on other contexts outside the intervention context, the school principal argued that there were signs of transfers from the dialogues to more informal situations where the students conversed with each other:

> School principal: And then what you see is also that … children who have been involved [in the dialogic method] also take it out at recess, in their own conversations. You see it in a lot of places.

When Fred, as previously noted, discussed that his ability to express himself had developed as a consequence of learning argumentation, the interviewer asked about potential transfer effects of these learned argumentation skills to other communicative contexts, as can be seen in the following quote:

> I: Is this something that you feel you might find useful in other contexts as well?
> Fred: Maybe at home.
> I: Maybe at home, yes.
> Fred: If we're going to discuss something.

Below the sub-theme "The intervention as a turning point for verbal activity?" it was described that Fred experienced less shyness. In relation to this experienced

effect, Fred was also asked about potential transfer effects of the newly won self-confidence to other communicative contexts:

> I: Do you feel a little less shy? You nod – how lovely! Is it something that you feel — that you've been shy — is it something that you feel like you've been a long time before, or?
> Fred: Yes, for a long time.
> I: Mm, and it's gotten better, how nice. Do you notice it any other ways, too? Now, for example, that you wanted to come and talk to me?
> Fred: Yes, it was easier.
> I: It was easier, well, maybe you hadn't really dared to before, right?
> Fred: No.

The particular interview situation was also brought up by one of the teachers, who on beforehand had expressed that she thought that Fred would be unwilling to be interviewed, based on his earlier tendency to be reluctant to verbal interaction:

> I: … you thought he'd have a hard time getting to interview.
> Teacher 2: Yes, I thought so.
> I: And he said right away when I asked "Would you like to…?" – "Yes, you bet!".

what promotes thinking and what thinking promotes

what promotes thinking

According to Fred, the visualisations that the facilitators used to track and illustrate the line of inquiry and argument aided his memory:

> I: Do you feel like I've asked the questions I ought to ask, or is it something that you feel that "You just have to find out about that."? Or have we talked about what you think …?
> Fred: I came up with another thing. When we wrote like that on the whiteboard — it was good and easier than remembering everything in your head.

Fred also argued that the "thinking breaks" – moments of silence devoted to thinking and reflection that were relatively frequently taken – promoted his thinking:

> I: Is there anything that you want to tell me like "This would be good for you to think about." Do you have anything like that? Either something that you think has been good, or something that you think we should have done a little better – is there such a thing?
> Fred: The thinking breaks were good.
> I: The thinking breaks were good. Ah, right. Why?

> Fred: Because then you get ... it's easier to think when it's quiet ... because then you come up with very good things while it's quiet.

Similarly, the school principal emphasised the time provided in the dialogues as opportunities for thinking:

> School principal: Somehow, through the method, they get half a second to think extra. And have time to ... think.

what thinking promotes

When asked about the length of the dialogues, Fred stated that it would have been fun if they were longer and emphasised that his interest in the group dialogues and appreciation of them were positively affected by the opportunities they provided for thought about the contestable question under consideration:

> I: Do you think it's been just the right length of the dialogues or have they been too short or too long or ...?
> Fred: Sometimes it would have been fun if they had been a little longer.
> …
> I: Why have you been interested in this particular thing?
> Fred: You get to think a lot.
> …
> I: What do you get to think about?
> Fred: About the question and try to figure out the answer.

As described earlier, related to the sub-theme "Mechanisms promoting verbal communication", Fred argued that his learned argumentation supported his talking (stating that "I found it hard to explain [my thoughts], so then I didn't say much ... but then when I learned argumentation it got easier."). Relating this to transfer effects promoted by the development of thinking, Fred also added that he saw an opportunity to use this in discussions at home, as described earlier.

discussion and concluding remarks

Our gathered and above presented data constitute a counter-argument against *the impossibility view* and we are led to the conclusion that it is indeed *possible* to conduct fruitful philosophical dialogues with (at least some) students diagnosed with ASD. The two claims sometimes presented by in-service professionals working with

students diagnosed with ASD referred to in the "Introduction" section were that participants with ASD-diagnoses would 1) be uninterested or unwilling to participate in such dialogues, and 2) would be unable to do so (with any quality). These two claims are countered by the results of the present study, based on data from a student diagnosed with ASD, his teachers, and a school principal. The data include detailed elaborations from a student perspective of several different effects on the student's communicative and cognitive development, which are supported also by staff reports. The triangulated data almost exclusively point in the same directions, but on one occasion there are discrepant data regarding at what point in time that the student's development of started, which is relevant to keep in mind when considering the internal validity of the study. However, since both the student himself and the school principal clearly stated that the turning point for the student's verbal activity came during, and was due to, the intervention, a possible explanation for why one of the teachers is hesitant to agree with this picture is that she is reluctant to admit a failure to priorly help the student with this development. This raises methodological considerations relating to triangulation incorporating teachers' voices in situations when they potentially have a self-interest in the issue.

As described in the "Methods" section, we used visualising aids in our argument and inquiry mapping during the dialogues, and these aids were inspired by several theoretical traditions in informal argumentation, for instance argumentation theory suggested by Næss (1960), which has been called The Rational Force Model (RFM) of argumentation (Backman et al., 2023), and different argument elements as suggested by this theory of argumentation and our developments of it. This is a practice that we use in other groups as well, and not only in groups containing students with ASD-diagnoses. Indeed, Fred mentions this emphasis on argumentation several times in the interviews as something beneficial. For example, he argues that he has "learned about arguments" which has as a perceived consequence that it "gets easier to talk" and that "[i]nitially, [he] found it hard to explain [his thoughts], so then [he] didn't say much … but then when [he] learned

argumentation it got easier". He also explicitly mentioned the visual representation of the argumentation when he, unprompted, added that he "came up with another thing", namely that "[w]hen we wrote like that on the whiteboard — it was good and easier than remembering everything in your head". This is in agreement with Lukey's remarks that broadening the ways that we are able to think about things can be beneficial to all of us, and we indeed think that it would be beneficial to many of us – and we have seen this effect in many students, with or without ASD-diagnoses – to learn this way of representing arguments visually, to further the ability to think about argumentation in a well-functioning way.

As can be noted, the results of this study align well with previous studies on P4wC conducted with other target groups. However, this case study is, naturally, not making strong claims about external validity, and we suggest that further studies are conducted in different contexts about the effects that participation in philosophical dialogues might have for persons with ASD-diagnoses. Both small-scale and large-scale studies using different methodological approaches would be beneficial, since the research area of philosophical dialogue for persons diagnosed with ASD is in an early phase.

references

Backman, Y., Gardelli, T., Gardelli, V., & Strömberg, C. (2020). Group Argumentation Development through Philosophical Dialogues for Persons with Acquired Brain Injuries. *International Journal of Disability, Development and Education, 67*(1), 107–123. http://doi.org/10.1080/1034912X.2019.1681377

Backman, Y., Reznitskaya, A., Gardelli, V., & Wilkinson, I. A. G. (2023). Beyond Structure: Using the Rational Force Model to Assess Argumentative Writing. *Written Communication, 40*(2), 555–585. https://doi.org/10.1177/07410883221148664

Bryman, A. (2018). *Samhällsvetenskapliga metoder*. Malmö: Liber.

García Moriyón, F., Rebollo, I., & Colom, R. (2005). Evaluating philosophy for children: A meta-analysis. *Thinking: The Journal of Philosophy for Children, 17*(4), 14–22. https://doi.org/10.5840/thinking20051743

Gardelli. V. (2016). To describe, transmit or inquire: Ethics and technology in school. Luleå University of Technology. Retrieved from http://ltu.diva-portal.org/smash/get/diva2:999077FULLTEXT01.pdf

Gorard, S., Siddiqui, N., & See, B. H. (2015). Philosophy for Children (pp. 1–45). Education Endowment Foundation.

Hattie, J., & Zierer, K. (2019). 10 Mindframes for Visible Learning. Natur & Kultur.

Kizel, A. (ed.) (2022). *Philosophy with Children and Teacher Education: Global Perspectives on Critical, Creative and Caring Thinking*. Routledge.

Lewis, J. (2009). Redefining Qualitative Methods: Believability in the Fifth Moment. *International Journal of Qualitative Methods*, *8*(2), 1–15.

Lipman, M. (2003). Thinking in Education. Cambridge University Press.

Lipman, M., & Sharp, A. M. (1978). Growing up with philosophy. Temple University Press.

Lipman, M., Sharp, A. M., & Oscanyan, F. S. (1980). Philosophy in the Classroom. Temple University Press.

Lukey, B. (2004). Rethinking Dialogue: Reflections on P4C with Autistic Children. *Thinking: The Journal of Philosophy for Children, 17*(1), 24–29.

Murphy, K., Wilkinson, I., Soter, A., Hennessey, M., & Alexander, J. (2009). Examining the effects of classroom discussion on students' comprehension of text: A meta-analysis. *Journal of Educational Psychology, 101*(3), 740–764. https://doi.org/10.1037/a0015576

Reznitskaya, A., & Wilkinson, I. A. G. (2017). *The Most Reasonable Answer*. Cambridge, MA: Harvard Education Press.

Stemler, Steven E. (2004). A Comparison of Consensus, Consistency, and Measurement Approaches to Estimating Interrater Reliability. *Practical Assessment, Research, and Evaluation, 9*(4), 1–11.

Topping, K. J., & Trickey, S. (2007a). Collaborative philosophical enquiry for school children: Cognitive effects at 10–12 years. *British Journal of Educational Psychology, 77*(2), 271–288. http://doi.org/10.1348/000709906X105328

Topping, K. J., & Trickey, S. (2007b). Impact of philosophical enquiry on school students' interactive behaviour. *Thinking Skills and Creativity, 2*(2), 73–84. http://doi.org/10.1016/j.tsc.2007.03.001

Trickey, S., & Topping, K. J. (2004). 'Philosophy for children': A systematic review. *Research Papers in Education, 19*(3), 365–380.

Trickey, S., & Topping, K. J. (2006). Collaborative Philosophical Enquiry for School Children: Socio-Emotional Effects at 11 to 12 Years. *School Psychology International, 27*(5), 599–614. http://doi.org/10.1177/0143034306073417

Yan, S., Walters, L. M., Wang, Z., & Wang, C. (2018). Meta-analysis of the effectiveness of philosophy for children programs on students' cognitive outcomes. *Analytic Teaching and Philosophical Praxis, 39*(1), 13–33.