Dimensions of student participation: participatory action research in a teacher education context

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participatory action research in a teacher education context

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your children
are not your children
[…]
for they have their own thoughts
they have their own thoughts

Astrid Seriese, song ‘On Children’
album ‘On Children: de kinderen van de Hondsberg’
1998, Brigadoon, Hilversum, the Netherlands

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Abbreviations

PAR participatory action research
PST pre-service teacher
TEd teacher education

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Chapter 1

General introduction

“Never underestimate what it is that young people can tell us!”

Susan Groundwater-Smith (interviewed by Kelly, 2015)

Chapter 1 – General introduction

This dissertation concerns an exploration of enabling student participation in decision-making processes through forms of teacher-student partnerships in educational research. By this, it seeks to support the development of democratic approaches and practices in schools and to investigate ways to interest and prepare prospective teachers for such collaborative practices. Therefore, the studies reported in this dissertation implemented and investigated the combination of three constituting aspects: teacher research, teacher education, and student participation, into a participatory action research (PAR) project by pre-service teachers (PSTs) and their school students. In this dissertation, conducting PAR has been employed as a method to encourage student participation and steer pre-service teachers towards adopting a participatory approach to education.

Combined, the studies aim to shed light on actual practices of research collaboration of pre-service teachers and their students and on conditions in teacher education contexts that affect unfolding and developing participatory practices. Describing such practices and the conditions that promote them is expected to help schools and teacher education institutes to implement or further develop student participation in decision-making processes.

Teacher research

It has often been observed that the outcomes of educational research do not automatically lead to their implementation in teaching and learning practices. Reasons for this include the impracticality of the recommendations for specific local contexts, the lack of coherence with existing ways of working, the distance between researchers and practitioners in interpreting educational issues under investigation, and the relative unfamiliarity of practitioners with educational research and its scientific results, and researchers with school practices. In other words, a so-called gap between theory and practice (e.g. Admiraal et al., 2016; Bendtsen et al., 2021; Korthagen, 2010). This alleged theory-practice gap spurred the idea that research should not only be conducted by academic researchers but should involve education practitioners or should have teachers conduct their own research. Zwart et al. (2015, p. 133 [original in Dutch]) mention three goals of such research by teachers:

1) directly changing and underpinning their own teaching and school practices (e.g. designing education, evaluating teaching, and supporting innovations in school), 2) the professionalization of teachers (e.g., giving voice to teachers in changes in education), and 3) generating knowledge about teaching practice (what works for whom, when and why).

In the last decades, teacher research has become acknowledged as a valuable form of research and as an integral part of the teaching profession, both as a valid way of knowledge construction about education and as a transformative professional development activity for teachers (Zeichner, 2003). In line with these goals, action research was identified and promoted as a well-suited research approach for (critically) investigating the teaching and learning practice and as an approach to teacher professional development (e.g. Moreira, 2009; Ponte et al., 2004; Rönnerman et al., 2008; West, 2011). Action research approaches imply systematically investigating issues within an educator's own practice context, including the perspectives of all stakeholders, and mostly also in collaboration with them.

In action research, the process of identifying a problem, creating a plan, implementing solutions, and monitoring progress is used to promote change and establish mechanisms for improvement. This concept of mechanisms for improvement is also reflected in the 'Interconnected model of professional growth' (IMTPG) proposed by Clarke and Hollingsworth (2002), which suggests that teachers' views and attitudes, as well as their practices and the outcomes of those practices, can change as a result of various experiences, including those initiated by external sources such as research projects or academic researchers. This model, IMTPG, served as one of the foundations for the idea of introducing and investigating PAR in the TEd program (reported in this dissertation). Practicing PAR would supposedly elicit transformation in teachers' thinking and acting towards student participation and democratic approaches; a conjecture and goal that is also supported by various researchers (e.g. Bendtsen et al., 2021; Hardy et al., 2015; Mitchell et al., 2009; Rutten, 2021; Saiz-Linares et al., 2019).

Teacher education and Participatory Action Research

Since most pre-service students enter teacher education with little or no experience in social or educational research, and even less in action research, it is a prerequisite to educate and support teachers in conducting such research, either as part of professional development activities, for graduate teachers, or in initial TEd programs, for pre-service teachers. However, as will be elaborated on below, educational research commonly suffers from a missing perspective – that of the students, as 'consequential stakeholders', on relevant issues around teaching and learning in schools (Groundwater-Smith, 2005). Excluding their views and ideas from teacher research implies less fitting transformations of school practices, and less motivation and engagement of students in educational development (Cook-Sather, 2020; Rudduck & McIntyre, 2007; Thomson & Gunter, 2006). Still, collaborating with school students in research is not a natural or cultured habitus of most teachers and requires preparation, for example, by letting teachers experience research collaborations in practice – via conducting PAR projects and TEd courses or programs – to understand how that can take shape and how valuable that can be for teaching and learning and for contributing to a democratic culture in schools.

In the studies for this dissertation, PAR has been introduced into a TEd program as one of the possible *means* to elicit or enable school students to participate in decision-making processes, as PAR is not only a site-based approach to research but also meant to be a democratic practice in itself. PAR creates a context (a *niche*, in ecological terms) for PSTs that facilitates involving their students in researching their school practices; it enables certain – dialogical and collaborative – practices and constraints – more hierarchical, unilateral, and isolated – others. These enabling and constraining mechanisms are a substantial part of the *Theory of practice architectures* (Kemmis & Grootenboer, 2008; Mahon et al., 2017) in the form of arrangements in three dimensions (cultural-discursive, material-economic, social-political) that in conjunction prefigure and make possible the professional practice. Therefore, this theory has been used in our studies to describe and analyze practices of PAR by teachers and their students.

Student participation: education, schools, and scope for decision-making

In different times and places, the education of young people has been taken up in different ways. Initially, by upbringing and participating in a family or a community, and their daily work and leisure

activities but also in explicit forms of teaching and modeling of practices, e.g. in master-apprentice situations. Later, in societies of higher complexity and induced by economic, societal, and political demands, more institutional forms of education were established, and attending schools became a regular and mostly also mandatory way for young people's development. In the 19th century, the industrial revolution led to the rise of mass education and the development of public schools. Education became housed in specially designated buildings, formalized in curricula and programs, and compartmentalized in classes and groups of similar age, capacities, and interests. Teachers became professional workers; governments largely determined the structure of education, the learning objectives and the content and scope of the subject matter, and even how this education should be delivered. For young people, compulsory education became the norm and with it came following the rules, practices, lesson content, tests, and learning pace as decided upon, nationally, by governments, and, locally, by the schools and teachers. With a predominant focus on a 'factory model' of standardized curricula and rote learning, student influence on their education was limited. In short, the scope for participation in decision-making in the practices of those stakeholders directly involved in the teaching-learning process was restricted, not only for teachers but especially for the young people attending the schools.

Even though such a standardized model might seem logical from the policy perspective of efficiency and practicality in educating large groups of young people, it is at odds with the goal of preparing them for independent adult lives and responsible and active participation in society, which is generally aimed for in Western democratic countries. Limiting the participation of children in decision-making about their own lives also reflects a way of thinking about young people as a separate category of human beings with a lightweight set of general human civil and political rights (Quennerstedt, 2010).

In the last decades, a resurgence of the perspective on student involvement in education and research can be traced (Cook-Sather, 2006) towards the awareness that students should be invited and enabled to express their views and to be taken seriously by adults and be responded to. This aligns with the view that for building and sustaining a democratic society, education should not be just learning about democracy and citizenship, but should enable young people to practice a democratic way of life, also in school (Print et al., 2002). It should be connected to the real-life experiences of students, as applied learning instead of a theoretical exercise (Wilson, 2000), and as an integral part of everyday critically reflexive practice (Jones & Hall, 2021). An increase in student participation in formal education bodies, such as school councils, emerged. However, as Wilson also underlines, limiting the notion of student participation to formal bodies is a misconception of authentic participation, because 'important forms of participation do occur in school contexts, especially in classrooms' (2000, p. 26) and schools should provide suitable environments for holistic opportunities for participation.

Still, realizing actual student participation in decision-making in the classroom and the school more broadly can be a complex and challenging process. It requires a shift in the traditional teacher-centered approach to education and the implementation of new pedagogical methods that prioritize student engagement and agency. As stated by Cook-Sather (2006, p. 363): " 'Student voice', in its most profound and radical form, calls for a cultural shift that opens up spaces and minds not only to the sound but also to the presence and power of students." This can be difficult for teachers who may

have been trained in traditional teaching methods and may not have the skills, resources, or inclination to incorporate student participation into their lessons. Additionally, changing classroom practices towards increased student involvement in decision-making can also be hindered by factors such as lack of support from school administration, limited resources, and resistance from students, parents, and colleagues. To effectively enable student participation, teachers must be provided with ongoing professional development, resources, and support to help them implement new practices and strategies. In addition, it also requires a change in the mindset of teachers and students who have been accustomed to a traditional teacher-centric approach leading to re-think their roles in the classroom and support increased ownership of student learning. Such changes take time and require a consistent effort from teachers, students, and school leaders to build a culture of participation in the classroom (Kirby et al., 2003; Rudduck & Fielding, 2006).

"Inviting students to be participants and agents in research on educational practice challenges deep-seated social and cultural assumptions about the capacity of young people and children to discern and analyse effective approaches to teaching and learning." (Cook-Sather, 2014, p. 133)

Children's rights

Today, the role of pedagogy continues to evolve, with a focus on fostering creativity, critical thinking, and self-directed learning, and on providing inclusive and equitable education for all children. We see this development reflected in the creation of the Declaration of human rights and subsequently also, specifically, the rights of the child (UN Convention of the Rights of the Child) (Evans, 2016; OHCHR, 1989). Even though this declaration includes the rights of children to be heard and to have a say in decisions concerning their life, student participation in decision-making in education and educational research has remained for the most part, scarce and superficial.

A rights-based perspective on student participation may frame the obligations for adults, but it is only effectively realized if combined with "… genuine respect for all parties involved and intentional structures to support collective action by adults and young people, which includes student empowerment, …" (Cook-Sather, 2014, p. 134). Views and experiences of students should be taken seriously, they have to be treated as active participants, and claims should be acted upon in practice (Rudduck & Flutter, 2000). Involving students in decision-making is not an optional affair or a handy way to rapidly adapt school to changing circumstances and demands. The UN-CRC ratification sets specific demands, as Lundy (2007, p. 931) formulates:

"The practice of actively involving pupils in decision making should not be portrayed as an option which is in the gift of adults but a legal imperative which is the right of the child."

Therefore, Lundy (2007, p. 933) states that conceptualising Article 12 of the UN-CRC, which implies giving due weight to children's views, builds on four chronologically interrelated elements:

- Space: Children must be given the opportunity to express a view
- Voice: Children must be facilitated to express their views
- Audience: The view must be listened to
- Influence: The view must be acted upon, as appropriate.

Participation in research

A parallel development in educational research in previous decades that aligns with Lundy's four elements is the shift from research *on* students to research *with* students (Cook-Sather, 2002; Fielding, 2004; Fine et al., 2007; Groundwater-Smith et al., 2015; Mitra, 2006). It repositions teachers and students into partnerships in educational research and reform (Cook-Sather, 2014, 2018), based on the conviction 'that young people have unique perspectives on learning, teaching, and schooling […]' (Cook-Sather, 2006, p. 359). The actual form this can take is dependent on the age, capacities, and preferences of the young people, and might range from inclusive and participatory approaches to a revision of roles, structures, and processes in research. Students can become the primary actors in the research, that is, as subjects instead of objects (Honerød Hoveid & Hoveid, 2007), in a process of dialogue with all stakeholders (Bragg, 2010; Edwards-Groves & Hoare, 2012; Fielding, 2004) and with mutual recognition (Honneth, 2012) of participants as capable and responsible persons in learning and researching. Inevitably, issues of power and hierarchy between adults and young people will remain in these forms of partnerships in educational research (Gore, 1996; Graham & Fitzgerald, 2010; Hawkins, 2015). Perceived or anticipated changes in status and power might be stressful for both teachers and students. Overcoming felt barriers to such changes needs an environment that supports participants feeling empowered to take risks (Le Fevre, 2014) and 'to conceptualise themselves, to act, and to interact differently than what many are used to in more hierarchical and distanced research relationships' (Cook-Sather, 2014, p. 135).

Incorporating the participation of school students in decision-making processes in schools through action research also presents challenges for current teacher education practices, which typically do not involve their adult students in decision-making on educational issues. Experiencing having a voice, being listened to, and having an influence on decisions regarding their learning conditions can exemplify for PSTs how this can be realized in schools. To address the lack of such experiences, on the one hand, student-teachers as learners could also be more included in the development of the TEd program and research about TEd practice, and, on the other hand, as future teachers, they can experience this themselves by conducting participatory research on their teaching practice (Zeichner et al., 2015). Consequently, the implementation of student participation in teacher education and school practice through action research leads to interventions and mechanisms at two levels (see Figure 1):

1. *Modeling*: Within the teacher education program, teacher educators and PSTs work together to design the program and incorporate action research methods (the blue box on the left-hand side of Figure 1).

2. *Enacting*: In school practice, PSTs and their school students actively participate in action research on relevant educational issues (the blue box on the right-hand side of Figure 1).

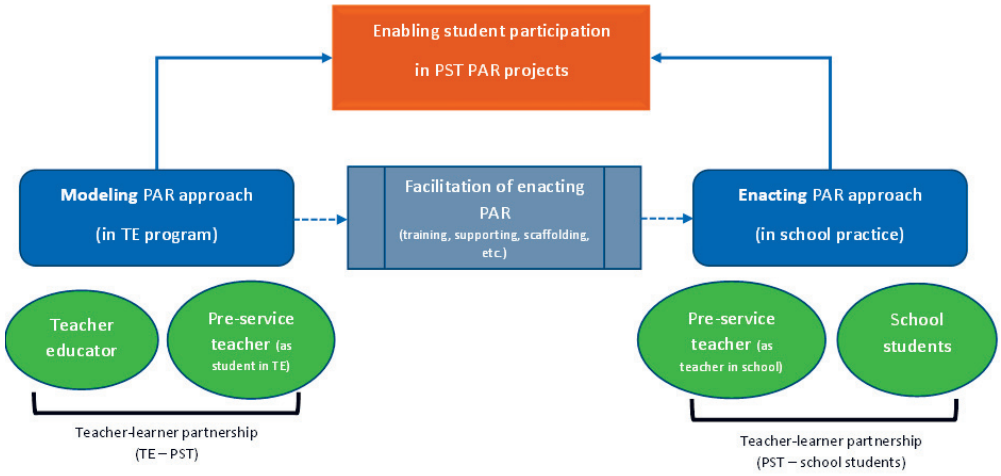

Figure 1. Enabling student participation in PST PAR projects

In such a model, a PST operates in two parallel teacher-learner partnerships (the green ovals in Figure 1): as a student-teacher with the teacher educator (on the left-hand side), and as a teacher with the school students (on the right-hand side). During the TEd program, enacting the participatory approach is facilitated by teacher educators, expert staff, and school mentors (represented in the middle, grey-blue box in Figure 1) in various ways, e.g. by training PSTs in educational action research; supporting and advising them in ways to valuably and meaningfully involve their students in their research projects; scaffolding PSTs in conducting their PAR projects towards independent participatory practices.

Currently, a comprehensive teacher education program in the Netherlands that focuses on preparing PSTs for incorporating student participation through action research does not yet exist. Research on how to set up such a program is limited, and ultimately, the program would need to be tailored to local conditions.

Therefore, this dissertation concerns how to understand and facilitate PSTs' participative educational research in the TEd context so that they feel equipped and motivated to do this with their school students.

Context and outline of the dissertation

This dissertation is based on the premise that enabling student participation, in the sense that students are involved in decisions that affect them in their school lives, is valuable and should be pursued for various motives. One of these motives is a rights-based motive following from the Convention on the Rights of the Child (OHCHR, 1989, 2009) and the World Declaration of Education for All (UNESCO, 1990). Moreover, student and teacher learning are identified as other important motives for intensive student participation practices. Such participatory practices are scarce in education and educational research. Therefore, further development and research into these issues are considered needed to enable and foster student participation in schools.

Figure 2. Constituting aspects of the research focus on PST PAR projects

The four studies in this dissertation all focus on PAR by (pre-service) teachers and their school students based on three constituting aspects: student participation in decision-making processes, teacher research into educational practices at school, and teacher education preparing for participatory approaches in education and research (see Figure 2). The goal of introducing PAR, then, is to facilitate connections and collaboration with school students as the 'consequential stakeholders' in education. It takes the perspective of the participation of young people as active agents in investigating the conditions of their learning.

The dissertation studies were conducted in two separate projects: the first one, as an exploratory study, in the context of a master's course for pre-service and in-service teachers in primary and secondary education; the second one, as a series of three consecutive studies, in the context of a post-graduate teacher education program for secondary education.

The general aim of this dissertation is to contribute to the understanding of enabling democratic approaches in education, and, more specifically for this dissertation, to the participation of students in decision-making processes in schools. Starting from this perspective, the studies described in Chapters 2 to 5 pertain to both *teaching* and *teacher learning*. Concerning teaching, the studies provide insight into conditions for *conducting* research in schools, by teachers and students collaboratively, in the form of PAR; and, concerning teacher learning, they provide insight into how to *prepare* teachers and

students for collaboratively examining and developing their educational practice using a PAR approach. See Table 1 for a schematic overview of the studies in this dissertation.

The first project (sub-study 1)

In the first project (**Chapter 2**), we explore the concept of student participation and the way this can be incorporated into educational practice based on experiences in a project with students and teachers in primary schools and secondary vocational schools. In this research project, 'Students and Teachers as Co-researchers' (2009–2011)[1], teams of school students, their teachers, and local educators collaboratively investigated what enabled or constrained student learning in external educational settings, such as a museum or library. The goal was to have students conduct their own inquiries to inform recommendations for educational change (e.g. Thomson & Gunter, 2006). The question was how to design such a strategy to gain experience with student participation and support student participation/PAR in TEd in the Netherlands. The participants enacted a cycle of action research, aimed at formulating and presenting recommendations for improvements in the external practice, a process in which the students acted as co-researchers. The project included activities at two levels: 1) 10 research teams encompassing primary or secondary school students aged 6-16, their school teacher, and an external educator conducted research on student learning in external educational settings like museums or libraries; 2) facilitators and researchers from Utrecht University of Applied Sciences and the participating teachers examined the best approach to design the participation strategy and how to facilitate it effectively.

In Chapter 2, first, the concept of student participation is explored and related to teachers' professional development. Second, the characteristics and the intensity of student participation are described along six dimensions of participation. Next, the implications for the learning and professional development of teachers who participated in the Dutch project are explored. The four domains of the *Interconnected Model of Teacher Professional Growth* (Clarke & Hollingsworth, 2002) serve as the structuring framework.

The project yielded useful, and mostly positive experiences concerning the involvement of the students, collaboration in research with their teachers and other stakeholders, and professional learning of the teachers. However, for reasons of practicality, equality in positions of students and teachers, and reduction of complexity for teachers, the project was conducted in external settings (museum and library). This left the question of how student participation in research, as a democratic approach to education, could be realized *within* schools and how prospective teachers could be prepared for such a participatory approach and practice, in a context of a relatively short, one-year, postgraduate program.

The consecutive project (sub-studies 2, 3, and 4)

Inspired by the promising experiences in the exploratory first project, and based on the observation that participatory practices were still scarce in schools and TEd programs in the Netherlands, a series of studies were conducted with pre-service students and teacher educators in a university teacher

[1] A project of the former Research Group of Dr Petra Ponte at the Utrecht University of Applied Sciences (in Dutch: *LAMO-project*).

education program (**Chapters 3-5**). As part of these studies, PAR by pre-service teachers and their school students was introduced as a pathway to school student participation in decision-making.

The context for these studies was the *ICLON World Teacher Program*, which involved the student cohorts 2015 and 2016, their school students at the internship schools, and the teacher educators. Within the ICLON World Teacher Program, student-teachers already conducted research (single/duo) on a relevant educational issue but the project for this dissertation included a modified version of this research, namely PAR as a prescribed approach for collaboration with school students. Since the participants (including teacher educators) had limited experience in conducting PAR, the project design included guidance in conducting such research (see Groundwater-Smith et al., 2013; Ponte, 2002, 2012; Verbeek & Ponte, 2014).

The research was conducted within a one-year postgraduate teacher education program at a Dutch university. Participants were PSTs from a specialized track focused on preparing them for teaching in bilingual and international secondary schools. The program included concurrent courses at the university and school practicum, with PSTs teaching in schools throughout the year. All PSTs in the program were required to complete a capstone research project using a PAR approach, aimed at increasing student involvement in educational decision-making and fostering teacher-student partnerships in schools.

From the beginning of the teacher education program, PSTs were gradually exposed to the concepts of teacher research and student involvement through various methods. This included reading relevant literature, completing school-based assignments to gain insight into student needs and perspectives, developing research plans that incorporated student participation, and attending university seminars on action research and PST research projects. PSTs developed research questions for their projects during their internship, in collaboration with university-based teachers, focusing on their teaching practice and relevant to their school students.

One way to involve school students in the research process is by including them in the development and formulation of research questions. As is typical in action research, the questions can be refined or added to as the project progresses. Additionally, as a part of the action research projects, PSTs were required to test out a proposed change in their teaching practice, collect data about that, in collaboration with their school students, and reflect on the results in their project reports. This reflection should include not only the impact of the change on their students but also on their professional growth as a teacher.

Study 2 / Chapter 3 – Occurrence and nature of student participation

The study reported in **Chapter 3** addresses the level and nature of school student participation in PST PAR projects. The research reports submitted by the PSTs as part of the TEd program were analyzed using the *SPinSTAR matrix*, developed in this study, in which four levels of student participation were distinguished: Inform, Consult, Participate, and Collaborate, at various stages of research. The study was guided by the research questions:

- How do PSTs involve school students in their action research projects about school practice?

- At what level of student participation are school students involved in the PST action research projects, and in which stages of the research process does this occur?

This study aimed to provide insight into what research activities PSTs and their school students performed and what role they played in these activities. Their role could vary from no involvement at all to intensive, equal collaboration with the teacher. Furthermore, it was expected that the level of student participation would vary along different phases of the research project, from defining the problem to reporting results and recommendations. This study describes and clarifies the variations in student participation in PST PAR research in the one-year teacher education program context.

Study 3 / Chapter 4 - Principles for school student participation in PST research

Even though it was expected that student participation in this project would appear at various levels, we aimed at enabling more intensive levels of student participation (Participate, Collaborate), the two levels of higher school students' activity, involvement, and impact. Therefore, gaining deeper insight into enabling and constraining factors for student participation in PST research projects was the topic for the next study (**Chapter 4**). More specifically, this study focused on pre-service teachers' views of the conditions that foster their PAR practices in secondary schools and on how these conditions can inform the development of a teacher education program for a participatory approach. In line with the participatory research approach, we were primarily interested in the perspective of the PSTs on the conditions for conducting PAR in a TEd context. Consequently, the study was guided by two research questions:

- What do pre-service teachers perceive as enabling or constraining conditions for involving school students in their participatory action research?
- What principles for supporting preservice teachers' participatory action research can be derived based on these conditions?

By using the *Theory of Practice Architectures* (see Page 4) as an analytical lens, eight cases of PAR projects were studied at two interrelated sites of pre-service teachers' learning: the teacher education institute and the internship school. We expected the findings to shed light on the conditions for fostering PAR practices in a teacher education context in terms of three kinds of arrangements, i.e.: cultural-discursive, material-economic, and social-political. The findings of this study were used for defining guidelines for supporting participatory research practices in teacher education. Moreover, we anticipated them to be useful for assessing the viability of pre-service teachers' PAR within a teacher education program.

Study 4 / Chapter 5 - Manifestations of PST PAR principles in a teacher education program

From Study 3 (Chapter 4), a set of 17 principles for pre-service teachers' PAR in secondary education (*PST PAR principles*) was derived. This set was meant to be useful for developing future TEd programs, but also for analyzing if and how these principles were taken up or incorporated into the TEd program the PSTs in this study followed. This way, we shed light on the implementation of student participation and PAR in a teacher education program as well as on the preparation and support of preservice teachers in collaborating with their school students. Subsequently, **Chapter 5** reports on the next study that investigated the way this set of principles was manifest in the teacher educators' views and actions and in the TEd program. By mapping the perspective of the teacher educators and the actual TEd

practice on the manifestations of the set of principles that were derived from the PSTs' experiences, across three dimensions of the *Theory of practice architectures* (cultural-discursive, material-economic, social-political), we aimed to illustrate how participatory research practices were supported and what options for improvement remained.

Concluding Chapter 6

Chapter 6 provides a summary of the main findings of the four studies, including their limitations. Additionally, this chapter delves into pertinent issues regarding student participation in schools and the preparation of prospective teachers in teacher education settings. It outlines both the theoretical and practical implications of the research findings and suggests ways to encourage student participation in teacher research, both during pre-service training and beyond.

Table 1. Overview of the studies

Study	Focus	Type	Instruments	Participants	Data collection	Analysis
1 – Chapter 2	Concept of student participation. Application in collaborative research in external settings	Qualitative	Semi-structured interviews; one-minute papers; project materials; team research presentations	10 research teams, each: (student) teacher, 3-5 school students (primary/pre-vocational education), external educator	Study years 2009-2010, 2010-2011	Dimensions of participation; IMTPG model
2 – Chapter 3	Level and nature of school student participation in PST PAR projects	Mixed method	PST PAR reports	30 pre-service teachers	Study years 2015-2016, 2016-2017	SPinSTAR matrix
3 – Chapter 4	Enabling and constraining factors for student participation in PST PAR projects	Qualitative	PST interviews, PST PAR reports	8 cases / 10 pre-service teachers	Study years 2015-2016, 2016-2017	Multiple case study; Cross-case thematic analysis
4 – Chapter 5	Manifestations of PST PAR principles	Mixed method	Semi-structured interviews	5 teacher educators / 12 interviews	Study years 2015-2016, 2016-2017	Set of 17 PST PAR principles

Chapter 2

Young People as Co-researchers

Enabling Student Participation

in Educational Practice

"It is not that we have become more 'in charge,'

but that she [the teacher] has become less so"

Student (primary school, age 7 years)

Abstract

This article explores how student participation can be incorporated in educational practice, particularly in the form of the student participation process 'students as co-researchers'. It is argued that enabling student participation, in the sense that students are involved in decisions that affect them in their school lives, is valuable and should be pursued for various motives. One of these motives is a rights-based motive following from the *Convention on the Rights of the Child* and the declaration *Education for All*. Moreover, student and teacher learning are identified as other important motives for intensive student participation practices.

An action research project in the Netherlands conducted by teams of teachers, students, and museum educators, serves to illustrate the student participation process and the strategy for teacher learning.

First, the concept student participation will be explored and related to teacher's professional development. Second, the characteristics and the intensity of the student participation in this case are described along six dimensions of participation. Next, the implications for the learning and professional development of teachers who participated in the Dutch project are explored. The four domains of the Interconnected Model of Teacher Professional Growth serve as the structuring framework.

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Chapter 2 – Young People as Co-researchers: Enabling Student Participation in Educational Practice

Introduction

In line with changing views on childhood, citizenship, and educational goals, the last decades have shown a growing interest in student participation. More and more, it became felt desirable and necessary for student voices to be heard and really listened to and for students to be consulted on educational matters that affect them. It was observed that students often were not seriously involved in matters that concern them, and had little influence on decisions that affect them. In research, students typically were just seen as a data source and not as partners.[2] A range of motives underlies the advocacy for student participation, one of which is a legal motive. The UN Convention on the Rights of the Child (OHCHR, 1989) explicitly states that children not only have a right to good education but also that 'States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child.' (Art. 12.1). In addition, it stipulates that 'the child shall have the right to freedom of expression ... to seek, receive and impart information and ideas of all kinds …' (Art, 13.1). Consequently, only listening to students is not sufficient. Taking their opinions and ideas seriously, letting these opinions be actually part of decision-making, and creating an environment in which pupils are able to make their voices heard and taken into account have all become an obligation. This applies equally to everyone working in the educational system of a country that ratified this Convention in 1995 and that is therefore bound by it. Such a legal-political obligation, however, does not prescribe how to make this manifest in actual practice, thus turning the issue into an issue of pedagogy and educational development (Ponte & Smit, 2013). Since then, thinking and understanding about children have seen major changes. Consulting young people regarding their experiences of education in the classroom and beyond has been advocated and acceptance of children's right to be involved in decision-making in matters that affect them has broadened. In addition to the rights-based approach to education, as stated in the UN-CRC, the Education for All movement positions individuals' talents and potential as of central importance in education and links this to influence on their lives. Differences between children are set as the norm, and education has to accommodate the capacities and needs of all children.

The attention to these issues led to an increasing number of participatory initiatives and also has evolved into a plea for developing and applying more intensive and higher-level forms of student participation, for instance, a form in which students act as co-researchers. By implication, a more equal position of teachers and students in educational decision-making is advocated. Furthermore, it is acknowledged that both students and teachers can benefit and learn from such an approach. However, as participatory practices imply new ways of working, relating, and learning, they require teachers and schools to change, and often established educational practices appear to have a

[2] As aptly put by Susan Groundwater-Smith (2005, p. 2): "They are observed, surveyed, measured, interviewed and commented upon in order to inform a research agenda to which they have made little contribution. […] The students are rarely recognised as active agents, who can be not only reliable informants, but also interpreters of their own lives. They are at worst, silenced; at best patronised.".

stubborn character. The practices are embedded in domains of education that relatively slowly change, such as school organization and culture; teachers' and students' beliefs, attitudes, and collective practices; educational goals, curriculum, and examination requirements.

This article describes an action research project in the Netherlands that was set up as a strategy to enable participatory practices through the process of embracing the concept of 'students as co-researchers'. The article has several components. First, the concept of student participation is explored and related to teachers' professional development. Second, the characteristics and the intensity of the student participation in this case are described along six dimensions of participation as distinguished by Kirby et al. (2003). Next, the implications for the learning and professional development of teachers who participated in the project are explored. The four domains of the teacher professional growth model as distinguished by Clarke and Hollingsworth (2002) serve as the structuring framework. Finally, some issues for further research are listed.

Student participation[3]

The concept of 'participation' (of young people) has been used in various domains, such as politics and community development, welfare and social work, and education, and in relation to a wide range of activities in which children are involved. It encompasses terms like youth consultation, listening to children, pupil or student voice, and student participation. Even within the educational domain, very different situations and processes have been labeled with the term 'participation', as Thomas et al. (2012a) illustrate:

> For example, 'participation' refers to any number of education situations from enrollment …, to sleeping in class …, to parental involvement …, to a strategy for increasing student attendance or teacher performance …. (p. 2-3)

They continue stating that:

> […] educational scholars and practitioners alike have freely identified participation as a statistic to be monitored, a right, an involvement in decision making, a physical presence, and as an educational intervention, leaving its meaning within the context they are using it undefined and assumed. (p. 3)

Therefore, the much-used term 'student participation' can be considered as multi-layered, bearing various meanings in different contexts.[4] It can refer to quantitative aspects such as the enrollment and (countable) participation of students in a particular type of education, or to qualitative aspects such as the extent and intensity to which students are engaged in educational activities. In the action research project that will be discussed in this paper, student participation is seen as the active involvement of students in decision-making about matters that affect and concern the students themselves. This involvement in decision-making is legally based on children's civil, political and social rights (Quennerstedt, 2010), but is also grounded in a democratic view on child development and on

[3] While some distinguish the terms 'pupils' and 'students' to identify children of different age ranges, in this paper the term 'students' is used for all children from 4 to 18 years of age who are enrolled in formal education. Furthermore, here it is meant to be a neutral term, not referring to a specific kind of teacher-child relationship, a specific role or responsibility of the child, or an educational and social-political perspective (see Bragg, 2007).

[4] See e.g. Thomas, Whybrow and Scharber (2012a; 2012b, 2012c) for an in-depth exploration of the concept 'participation'.

education and in a social-constructivist perspective on knowledge. In our view, student participation extends to a wide range of aspects of the design and implementation of their curriculum and educational context and implies having an active role in researching those aspects as well, in order to contribute to improvements in the educational practice on a personal, school and community level, in the best interest of all stakeholders.

An attempt to describe or define student participation reveals that it can have very different underlying goals and motives. The various motives can broadly be categorized into four groups (Smit et al., 2010):

- *Legal* motives, which emphasize children's right to participate. As described by Ponte and Smit in the introduction to this Special Issue, participation categorizes important underlying principles of the international *Convention on the Rights of the Child* (OHCHR, 1989), and has been laid down in several articles (see also Quennerstedt, 2010; Warnick, 2009);
- *Social* motives, which emphasize the community aspects of student participation, and position it as a first *real lifetime event* on the path toward citizenship and democracy (e.g. Cook-Sather, 2009; Rudduck & McIntyre, 2007); we can see this reflected in a concern for democratic education and education for citizenship, as well as in the aim to establish an inclusive practice;
- *Innovative* motives, which emphasize that students have relevant insights that the school can make use of when reforming the curriculum in a broad sense. That also creates *commitment* and *ownership* (see Cook-Sather, 2009; Rudduck & McIntyre, 2007; Thomson & Gunter, 2006); leading to a more informed basis for educational development and for changes and innovations in education and to a stronger connection with the needs, capacities, and perspectives of students;
- *Pedagogische*[5] motives, which emphasize that teachers – out of a genuine belief in their potential – should invite students to contribute their own opinions and ideas (see De Winter, 2009; Rudduck & McIntyre, 2007); this position can be found in the desire for more open and positive teacher-student relationships and in student's personal growth, empowerment and increased motivation and self-confidence as intended outcomes.

Besides the legal obligation and mission, which follow from the human rights and children's rights as stated by the UN, there are several other reasons for involving students in education and for setting up education in a different, perhaps even a radically different, way (cf. De Winter, 2009; Fielding & Moss, 2011; Rudduck & McIntyre, 2007). On the one hand, student participation can be regarded as a goal in itself, in the sense that it creates an environment for experiencing democracy in practice and thus turns an educational practice of 'teaching citizenship' into one of 'learning democracy' (Biesta & Lawy, 2006). On the other hand, it is thought to contribute to student learning and learning processes in general. In a review study on student participation projects, Sol and Stokking (2008) pointed to the chain of mediating processes between forms of student participation and the actual learning of students, while further distinguishing effects on actually participating students and effects on all students. Nonetheless, Mager and Nowak's (2012) review of effects of student participation in school decision-making processes reports a range of effects, although empirical evidence is still moderate:

[5] *Pedagogisch* is an adjective (in Dutch) that reflects the European tradition of child upbringing, education, and pedagogy. Here, it stands for an amalgam of didactic, pedagogical, teleological, and moral aspects of pupil-teacher interactions. The Dutch terms *pedagogiek* or *pedagogisch* and *didactiek* or *didactisch* cannot be literally translated as 'pedagogy' or 'pedagogic' and 'didactics' or 'didactic'. *Pedagogiek* or *pedagogisch* refers to the science of the child's upbringing in general (cognitive, social, emotional etcetera) and refers not only to education, but also to rearing processes in the family, social care, and many other institutions. (see Ax & Ponte, 2010).

personal effects for students such as developing democratic skills and citizenship and improvements in learning and academic achievement; effects on interactions as shown in improvements of peer and student-teacher relationships; effects on the school as an organization, such as influence on class content and teaching strategies, and on policies, rules, and procedures; and, as the strongest finding, an improved school ethos. The sense of belonging and agency as a result of being involved in genuine decision-making on issues that are worthwhile for students enhances motivation for school and learning in the school. For the students, not so much the curriculum itself might be the most interesting subject here, but "the *conditions of learning* in school; how regimes and relationships shape their sense of status as individual learners and as members of the community and, consequently, affect their sense of commitment to learning in school" (Rudduck & Flutter, 2000, p. 76). "The more that the regimes are changed to reflect the values that pupils call for (intellectual challenge, fairness, etc.), the stronger pupils' commitment to learning in school is likely to be" (Rudduck & Flutter, 2000, p. 85). In an interactionist or social-constructivist view of education, learning is dependent on interaction processes and learners' active construction of knowledge within social environments, constituted by "other students, teachers, parents, siblings and others who may make an impact on his or her learning" (Quicke, 2003, p. 52). As a further principle, stated by Quicke, individuals are seen as reflective agents who are capable of thinking about themselves as learners. While this process of reflection ('metacognition') is an aspect of the 'thinking skills' agenda (Quicke, 2003) – not only suitable for high-ability students though –, it also demonstrates what is potentially new about such a practice of student participation:

- students are more explicitly invited to comment not just on their own learning but on frameworks for learning, including teaching strategies and other conditions of learning;
- students have a more consciously analytic and responsible stance, knowing that they are contributing to school improvement and that their voices can make a difference;
- students' expertise as insightful commentators on teaching and learning is recognized;
- the status of students is enhanced through this recognition of their capacity to contribute to school improvement through informed commentary (Rudduck & McIntyre, 2007).

In actual educational practice, the various reasons and motives for pursuing student participation are interrelated and appear jointly. They may vary, however, in their relative weights, and thus lead to different manifestations of student participation and to different perspectives on its value and outcomes and on the roles and responsibilities of the children and adults involved. We will elaborate on the variety in student participation below, but before that, two issues of specific importance in education have to be mentioned.

The first issue pertains to the compulsory character of education for children of a certain age range, the adult-child relationship that comes with it, and the morally informed, value- and goal-based implementation of the educational context and content.

In most educational systems, children are legally required to attend school and to follow lessons and activities according to a global program and a schedule that is regulated and monitored by the government. Adults – the teachers and other school staff – are appointed to design and implement the curriculum in order to organize and manage students' learning. For this purpose, teachers have

been given the authority to intervene in students' lives. The teacher's authority to do so finds its legitimacy in societal and political demands for a well-educated population, as well as in the – assumed or demonstrated – professional knowledge of the teacher. Authority and power are, then, not divided equally between teachers and students (cf. Arnot & Reay, 2007; Bragg, 2007; Buzzelli & Johnston, 2001; Smith & Donnelly, 2004; Taylor & Robinson, 2009), which might be perceived as being at odds with a strive for self-determination and active participation of young people.

Obviously, compulsory education has characteristics that are positive to the extent that it guarantees children formal access to resources that help them in their development and in their chances to live an independent, valuable, and useful life as an adult. However, the unbalanced power differential frequently leads to one-sided and authoritarian relationships of teachers with their students. In reaction to this, a strictly anti-authoritarian approach has been advocated (e.g. Illich, 1971). In between the two positions a perspective on power is located that views power as an inherent characteristic of a teacher-student situation (Buzzelli & Johnston, 2001; Gore, 1994, 1996). This view implies moral and practical issues that cannot be avoided, but also that power should not necessarily be looked at as negative. The involvement of the teacher is a prerequisite for most students' activities. Furthermore, because the teacher's actions are necessarily intentional, full reciprocity in the teacher-student relationship is not possible. Gore (1994), in her critique of the authoritarian model, argues that power should better be understood as a continuous process of participation and negotiation of all stakeholders. The critical analysis of Cook-Sather (2009) shows that such a view of power has not yet invaded education since then. She argues that children and young people might be perceived as a significant social group in education, but that they are seldom consulted when it comes to decisions about their education. This finding leads her (and us) to the desire not only to listen more carefully to what students have to say about their living and learning environments but also to allow them to actively participate in shaping them.

The second issue pertains to the way policy measures are reflected in educational practice. Declaring children's rights to participation establishes a strong basis under political decisions and legal measures aimed at enabling children's involvement, and not exclusively in the domain of education. However, in education, governments can set the necessary preconditions for teachers and students to work in, but it remains an educational problem how to make student participation manifest in educational practice. This practice is situation-specific and requires constant normative and moral choices geared to individual students. In other words, legal and political guidelines can provide the 'havings', but they cannot guarantee the 'doings' (terms by Young, 1990). Student participation, then, is not only a manifestation of legal rights that can be distributed (Young, 1990), but it is also an educational challenge that teachers and students have to give expression to in their daily interactions. Teachers have to get to know their students and their views, they have to create space for them to use, show, and develop their capacities. In short, they are challenged to create a context in which student participation is enabled and can flourish. However, this is a challenge that turns out to be difficult to take up, because traditional views, expectations, roles, and patterns of interaction need to change, within an organizational context defined by traditional codes (Cook-Sather, 2002). This is certainly true of the most intensive forms of participation such as 'student as researcher' initiatives.

Dimensions and levels of student participation

Despite constraining factors, many participation activities and projects have been identified (see e.g. the overview of Fielding & McGregor, 2005), although most of them are of low intensive levels of participation (see below) or confined to involvement in formal procedures (Quicke, 2003). We draw on a study by Kirby et al. (2003) on participation activities in the UK for a descriptive framework for various forms of participation. Kirby et al. distinguished six dimensions for children's participation in decision-making (p. 21): (1) level of participation; (2) focus of decision-making; (3) content of decision-making; (4) nature of participation activity; (5) frequency and duration of participation; (6) the children and young people involved.

These dimensions will be briefly elaborated on below, based on the report by Kirby et al. (2003, pp. 21-28), and they will be used for the case description thereafter. The first dimension (level of participation), however, will be dealt with more extensively, because it is the most commonly used way to characterize youth participation, and because it informed the design of our project to a large extent.

(1) level of participation

The level of participation pertains to the degree of active engagement of young people, often in terms of the relative amount of power shared between adults and children. Hart (1992) made a clear distinction between non-participation (in three levels) and genuine participation (in five levels) that he depicted in his well-known 'ladder of participation'. In his model, participation starts at level 4 'assigned, but informed' and goes up to level 8 'child-initiated, shared decisions with adults'. While Hart's model justly pointed out that not all forms of child involvement are participatory (but some can be labeled as manipulation, decoration, or tokenism), the ladder metaphor was criticized as well because it could suggest that higher steps are always preferable. Shier (2001) reworked the five participation levels of Hart's ladder to a model - 'Pathways to Participation' - that indicates which level of participation is appropriate for a specific task and to a series of questions and steps for developing and implementing participation in practice. Furthermore, he defined at what point in the 'pathway' the minimum obligations of the UN-CRC are met. Egg (2009) developed Hart's participation ladder into a double-legged ladder model, one for teacher initiatives and another for student initiatives.

A different approach was taken by Fielding (2001), who focused on the variation in roles and responsibilities that students have in the activities. His model is made up of four types of student participation: students as sources of data, students as active respondents, students as co-researchers, and students as researchers. More recently, Fielding (2011) has elaborated his model into 'patterns of partnership', six patterns that reflect different kinds of relations (listening to and learning with) between adults and children in educational practices. Fielding speaks of patterns in order to stress that participation cannot be understood as a once-only activity or project, but that it is - or should be - a coordinating principle of working and relating to each other. The term pattern emphasizes the continuing and recurring character of the activities over longer periods of time. Furthermore, the patterns are discernible in the behaviors and interactions of students, teachers, and school managers. This explains them as a way of working and relating and connects the patterns to school culture.

In all of these classifications, the 'student as (co-)researcher' approach is conceived as the most intensive form of participation. In addition, it is acknowledged that on all levels of involvement and decision-making "implementation of these decisions will require input from adults and is ultimately dependent on adult structures, responsibility and power" (Kirby et al., 2003, p. 23).

(2) focus of decision-making

The focus of decision-making distinguishes between "personal or individual decisions, and public decisions relating to matters which affect children as a group" (Kirby et al., 2003, p. 23). Kirby et al. mention that decision-making in private contexts has gained less attention than in the public domain: "The literature covers decision-making that relates to service delivery and development, those that are about public policy making, those that are about influencing policy (centrally or locally) and those that involve research or service evaluation where children may be involved either as users, as subjects or as co- or peer- researchers" (p. 25).

(3) content of decision-making

Participation can appear in different sectors (community development, urban renewal, juvenile justice system, school/curriculum development, etcetera), that have different cultures and styles of professional practice. Furthermore, the actual subjects of the decision-making can vary, including along the dimension of everyday decisions (e.g. – in education – what peers to collaborate with; what satchel to use) to more serious decisions (e.g. what school to attend; what school regulations to be applied; whom to appoint as a teacher).

(4) nature of participation activity

The way participation is translated into practice defines the nature of the participation activity. A distinction is made between formal and informal approaches and mechanisms. Formal mechanisms are set up to provide designated opportunities for children and young people to influence decisions (e.g. one-off consultations; regular group meetings; suggestion boxes). Informal approaches enable children and young people to voice their views, and be listened to, as and when they feel it is appropriate (on-going dialogue; observation; listening to spontaneous communication; engaging in joint activities).

(5) frequency and duration of participation

The variation in frequency and duration of different activities runs from regular to irregular events, time-limited to indefinitely continuing activities, and seldom to frequently occurring events. It is about the level of opportunity that young people are provided with to influence decisions about their own lives.

(6) the children and young people involved

The sixth dimension pertains to the characteristics and the number of young people involved, such as children of particular groups (e.g. gender, home, or social situation) or age ranges or within a certain area. The number may vary from small numbers (e.g. councils, social action groups), to higher numbers (e.g. larger consultations), to everyone (e.g. informal ongoing dialogue).

Student participation and the teacher

As applies to all reforms in educational processes and practices, enabling student participation requires the effort and commitment of all stakeholders and may take a long time before it consolidates into a

standing practice. New practices and ways of working have to be introduced and accepted, adults and young people have to be encouraged to support these participation activities and ensure they have influence, and new roles and responsibilities have to be negotiated and adopted. As explained before, student participation, especially in the more intensive forms, is not simply an extension of a good teacher's practice, and it is not an extra-curricular project. Adapting to students' needs and capacities and consulting them about various classroom issues characterizes a good teacher, but involving students in decision-making and reflecting on learning and teaching processes goes much further and is not commonplace. While several forms of participation can be found nowadays, examples of teachers and students co-researching their school and their teaching and learning processes are rare (Sol & Stokking, 2008). Student participation is not a product of a one-shot event; it can be seen as a process that mirrors itself in school culture and organization, and in teachers' beliefs, attitudes, and actions. This ongoing, developmental aspect is what Fielding and Moss (2011) capture in the use of the term 'pattern'. However, teachers operate within 'pre-figured' environments of circumstances, expectations, and standing practices that structure and largely determine and shape an individual's thinking and acting; and that to a certain extent 'resist' change. Numerous examples of unsuccessful educational reform projects have shown this over and over again. Often, among other factors, resistance to change as a characteristic of teachers and school organizations was identified as an important explanation for the lack of success, thus labeling this as a negative component in the process of change. However, Luttenberg et al. (2011) take a different position by arguing that the term *resistance* does not capture the reason for unsuccessful reforms in education. They plead for adopting "teacher's search for meaning and cohesion" (p. 2) within their own frames of reference as a better concept for understanding the complexity of reforms. They draw attention to the interaction of external situational demands and teachers' personal frames of reference in adapting and redefining their work and workplace. With this concept, teachers are positioned not as resisting professionals or reluctant participants, but as positive and active agents in educational change, who are only cautious of giving up their professional autonomy. This resonates well with the shift in focus on professional development programs, described by Clarke and Hollingsworth (2002, p. 948): "The key shift is one of agency: from programs that change teachers to teachers as active learners shaping their professional growth through reflective participation in professional development programs and in practice." In terms of the framework for understanding praxis (Ax & Ponte, 2008), presented in the introduction to this Special Issue (Ponte & Smit, 2013), the teacher's scope for autonomous action shifts from 'system' to 'lifeworld', meaning that they are less driven by anonymous mechanisms, but can organize their own reality, set their own aims and follow their own preferences, and can enter into dialogue with others about their practice.

The terms 'search for meaning and cohesion', 'teacher autonomy', and 'agency' might suggest that mainly the teachers are responsible for educational change or the lack of it. Such a view, however, would wrongly focus only on the teachers' side and the personal and psychological aspects, while ignoring that they are framed by national and political measures and situational demands. In consonance with this personalized view of the teaching profession, Luttenberg et al. (2011) point to the contextualized nature of educational change and the essential importance of adjusting and adapting new practices to personal needs and perspectives.

Literature on the effectiveness of teacher learning and professional development programs clearly has shown that most top-down, planned, isolated, training-based approaches to teacher development are not successful (Glazer & Hannafin, 2006). And even irrespective of the planned or unplanned (formal or informal) nature of teacher development, has it been found important not to limit teacher development to knowledge transfer, reflecting on experiences, and discussing problems and approaches. In action research, precisely the cycles of defining the problem, planning, implementing, and monitoring actions for improvement, are meant to overcome this issue and to establish mechanisms for change in which acting in practice is paramount. We find this line of thinking also in the 'interconnected model of professional growth' (see Figure 3Figure 3. The Interconnected Model of Teacher Professional Growth (Clarke and Hollingsworth, 2002).) for analyzing teacher change, a model proposed by Clarke and Hollingsworth (2002) that distinguishes four domains that encompass the teacher's world and that identifies two crucial processes:

> the personal domain (teacher knowledge, beliefs and attitudes), the domain of practice (professional experimentation), the domain of consequence (salient outcomes), and the external domain (sources of information, stimulus or support).
>
> [….] This model also identifies the mediating processes of reflection and enactment as the mechanisms by which change in one domain leads to change in another. (p. 950)

The three first-mentioned domains together constitute the individual teacher's professional world of practice. The model locates 'change' in any of the four domains.

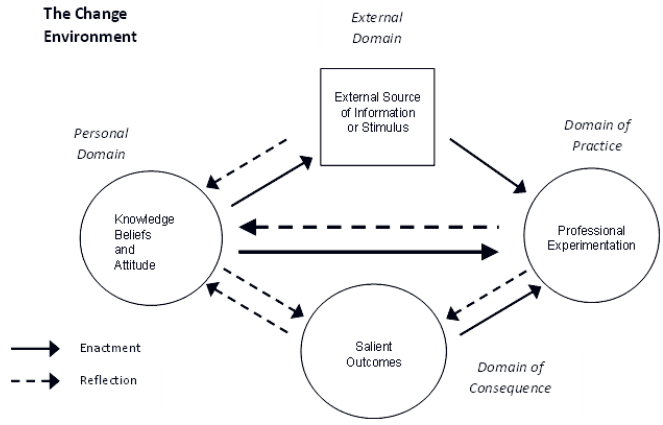

Figure 3. The Interconnected Model of Teacher Professional Growth (Clarke & Hollingsworth, 2002)

This model has particular characteristics that renders it attractive for describing our action research project as a teacher development strategy, as well as for thinking about how to design and research teacher development in follow-up projects. First, the model has a non-linear structure that, as Clarke and Hollingsworth (2002, p. 965) state, "provides recognition of the situated and personal nature, not just of teacher practice, but of teacher growth: an individual amalgam of practice, meanings, and context". Next, in the model, the domain of practice is not restricted to classroom experimentation but encompasses all forms of professional experimentation. Furthermore, besides reflection,

enactment is incorporated as an essential mechanism in the process of teacher change professional growth, which aligns with the crucial action component in the action research approach. Moreover, the consequences of changes (perceived as salient outcomes) are positioned as equally important as, and connected to, changes in the personal domain and the domain of practice. Through this, not only changes in teachers come to the front, but changes in students as well, who are the stakeholders *par excellence* in a student participation project. And finally, the model fits well into a perspective of teachers' professional development in realistic contexts and of teachers as learners.

In the next paragraph, we will turn to the description of a specific student participation project in the Netherlands as an example of an advanced level of student participation, that is 'students as co-researchers', and of the combination of teacher development, student participation, and action research. A participatory action research approach that actively involved the students and teachers in collaboratively investigating their own practice and in learning within that practice was considered pre-eminently appropriate and powerful for our project, this being a search for intertwining student participation and teacher development. Such an approach would allow for a combination of systematically investigating an issue in the actual practice from a 'first-person' or 'insiders' perspective, with the participation of all stakeholders, deliberate designing and implementing changes through experimenting with new practices and roles (enactment), and careful reflection on and evaluation of the outcomes (not only in terms of achievements of students but also in terms of improvements on a personal, relational, and social level within classrooms, schools, communities). Furthermore, it would offer opportunities to enlarge participants' autonomy by enabling them to decide on the research questions, methods, and conclusions and, as a result, by incorporating new practices geared to local circumstances and fitting in their personal 'frames of reference'.

The case shows how the views of students can be honored, from a first-person perspective, and how students of different capacities are included in researching educational issues. Moreover, it demonstrates changes in educational practice on a personal (student and teacher) and organizational level as a consequence of involving students in authentic issues concerning their school lives. For characterizing and evaluating the case, we will make use of the above-mentioned six dimensions of student participation (Kirby et al., 2003). The model by Clarke and Hollingsworth (2002) will serve as a structuring framework for interpreting several aspects of teacher professional development in this specific case.

A student participation project in the Netherlands

Context

From the nineties onwards, participation of young people in designing their life-world got much more attention, but in the Netherlands not so much in educational policy; not nationally, besides the formal obligation for secondary schools to involve students as school council representatives, and not on school level, as Sol and Stokking (2008) report. They argue that student participation is potentially influential but insufficiently used. Realization is, due to the lack of school policy on this issue, largely dependent on the views and attitudes of individual teachers. Moreover, in general, much participation did not go further than the first level: 'being listened to' (Bragg, 2010; Fielding, 2011), and did not extend to taking part in actual decision-making. The Netherlands ratified the resolution of the

Convention for the Rights of the Child in 1995 and are therefore bound by it since then. Many of the basic human rights stated in the resolution and the obligations that follow from it were already met in the Netherlands, like in other Western-European countries. Access to education for all children, for instance, is legally founded and has become common practice long before 1995. However, in the field of education and teacher professional development, Dutch policy on children's civil, social and political rights has been poor with regard to children's participation and measures to implement student participation in educational practice have been lacking.

Based on these findings and in order to contribute to a higher level of ambition towards student participation, the research project 'Students and teachers as co-researchers' (2009-2011) was started. The project was aimed at an intensive form of student participation, namely research with and by students themselves.[6] Thomson and Gunter (2006) describe this form of student participation as an initiative in which "children and young people conduct a specifically designed inquiry to provide data to inform recommendations for change" (p. 413). The question was how such a participation strategy could be designed. In addition, the project was meant to be inclusive for all students, including very young students and 'vulnerable' students, such as children with special educational needs and not so verbally gifted children.

General description

Within the framework of the project 'Students and teachers as co-researchers', action research[7] was conducted on two levels. On the first level, research teams of primary or secondary school students aged 6 to 16 years, their teacher at school and an external educator conducted action research on student learning in an external educational setting, such as a museum or a library. The teams worked collaboratively at designing and conducting the investigation, and at formulating proposals for improvements to the learning in that setting. The proposals could refer to the design and organization of the setting, but also to the teaching methods, the educational goals and subjects, and the educational relationship between pupils, teachers, and educators. Consequently, they concerned the role of the educator, the role of the teacher, as well as the role of the pupil.

On the second level, facilitators and researchers of the Utrecht University of Applied Sciences (UUAS), and the participating teachers explored the question of how to design the participation strategy and how best to facilitate this. This was done in collaborative working meetings at the university. In addition, every step in the research project with the students was carefully prepared, recorded, and evaluated. Special attention was paid to the way the students were enabled to work on equal standing with their adult research fellows, for instance by educating and supporting them – and at the same time their teachers as well - in conducting research through a series of workshops adjusted to their age and level.

In periodical working meetings of teachers, facilitators, and project leaders, which were held in between each phase of the research project, and were led by an academic researcher and an external

[6] A documentary of the project is available online (El Ayachi & Willems, 2012).

[7] *Action research* in education can be conceived as a form of research into educational practice, conducted by teachers and other stakeholders themselves, aimed at bringing about improvements in the practice that are based on informed action (cf. Carr, 2007; Kemmis, 2009; Noffke, 1994; Somekh & Zeichner, 2009; Zeichner, 2003).

advisor, the teachers and facilitators were educated in designing and conducting action research. In addition, by discussing participants' perspectives on teaching and learning and by reflecting on their own and their students' roles, they were made sensitive to ways of actively involving students in matters that concern their own education. In each meeting, experiences, solutions, and suggestions of the earlier phase were evaluated, and questions, plans, and activities for the next phase were listed and discussed. In this way, the intended strategy could be designed in close collaboration with all stakeholders. Subsequently, at their respective schools, and with the guidance and advice of the facilitator, the students and the teacher adapted the overall steps to the local context. At the same time, the periodical working meetings served as a specific form for creating a supporting group, as a collaborative context that is found to be conducive to teacher's learning (Glazer & Hannafin, 2006).

Additional support came from a parallel PhD research project,[8] in which data were collected through group and individual interviews, logs of participants, audio recordings of meetings, and written and oral evaluations of the working meetings.

To sum up, the aim of each research team was: (1) to improve learning in the external educational setting; (2) to actively engage students in developing the education they receive; and (3) to enhance positive student-teacher behavior. The principal goal of the project was the development of a strategy for realizing a form of student participation in which the various stakeholders would be involved as researchers and co-researchers. Since this implies changes in the teacher's professional practice, it was also designed as a strategy for teacher professional development and school development towards genuine student participation.

Participants and roles

In total, ten research teams participated in the project, coming from five primary schools (one school for children with special educational needs) and one secondary school. Each team consisted of four to six students – as representatives of their class –, one teacher, and one educator of the institution that formed the research site (four museums and one library). All student members of the research teams voluntarily participated (and most of the students of the classes involved wanted to become a member) and they could opt out at any time (but none did). In the selection process, however, it was secured that not only the most extravert and verbally competent children were chosen and that perspectives of a diversity of students in terms of, for instance, learning motivation or style, cultural and social-economic background, and quality of the student-teacher relationship were represented. The other students of the respective classes took part in the preparatory workshops and were actively involved in the process of defining the research questions, interpreting the results, and providing ideas and input for the presentation at the end of the project. Peers of the teachers acted as critical friends. This way the action research project was positioned as an activity that was not 'owned' by the research teams but as a collaborative enterprise that served every stakeholder's interest.

Six of the ten teachers had five to twenty years of teaching experience; two of them were enrolled in a postgraduate Master's course SEN at UUAS. Two other teachers had just started their careers in

[8] The project of Leon Plomp, PhD candidate at the University of Gothenburg.

primary education. The last two teachers were regular student-teachers at UUAS, doing their practicum at a school for secondary education, with full responsibility for their respective classes.

Teacher educators at UUAS guided and facilitated the research process. Facilitators play a crucial role in the professional learning process (Krell & Dana, 2012; Ponte et al., 2004; Van Swet et al., 2009), for instance in structuring and managing the research process, providing resources, mediating conflicts, motivating the teachers, and acting as 'critical friends'. In addition, in this project, their role was to create and sustain a context in which teachers would not automatically take the lead, but would be enabled to work as co-researchers, side-by-side with their students.

An external advisor and an academic researcher were involved as project managers, facilitators of the working meetings, and informants on action research.

Set-up

The activities with and by the students started with a preparation phase of three to four months, a phase that included all students of a class, not only the members of the research team. In this period the general research question 'How can I learn and how do I want to learn in this extracurricular environment' was discussed and refined to researchable questions geared to the actual external setting that was chosen as the educational site under investigation.

At school, in five consecutive workshops, the students were prepared for their researcher's role. In these workshops, jointly given by the facilitators and teachers, the student-researchers and their peers explored concepts such as 'research', 'research questions', and 'collaborative learning'. In addition, they were instructed in 'researching with photographs and drawings' and they conducted a small-scale trial study within the school. Finally, the whole class visited the external institution that was going to be researched, in order to get acquainted with the site and to get input for discussing and finalizing the research questions and data collection methods. For instance, in the library setting, four specific questions were formulated by the students: "Whether we feel comfortable, and if so, where and why. Questions about the interior and the computers. And whether we can find everything properly."

After this preparation phase, the research teams collected data in the museum or library by means of photographs, video clips, drawings, notes, observations, and interviews with staff. At the end of this half-day site visit, the facilitator led a short discussion on the data and preliminary findings. In this discussion, particular effort was put into giving both students and teachers ample space for expressing their views. As an icebreaker and a starting point, each team member commented on one of his or her photographs taken at the site. Subsequently, back at school or in the office, they consulted their respective peers: students reported to and discussed with other students from their class; teachers with their colleagues at school; educators with their colleagues at the museum or library. Results of the site visit and of the peer consultation round were then taken together and jointly analyzed, which led to formulating of final results and recommendations. For example, some students reported that they learned most by doing and manipulating, and suggested therefore to reduce the number and length of textual explications in favor of computer animations and objects that they were allowed to touch. The team that researched the library concluded, among other things, that the library should be more recognizable as a library, but also praised the physical environment, in particular, the cosy

corners and comfortable seats and other places for children to seat or read, thus making it attractive as a learning place.

In festive meetings at the UUAS or at school, first in a plenary session and later on, in subgroups at a 'research fair', each research team of students and teachers presented the specific research questions, the data collection methods, the results, and the recommendations for improvement of student learning at the external site. The students were the leading presenters at these events, with side roles for the teachers and educators only to illuminate specific adult perspectives or to report on measures that were under consideration or that were already implemented on the basis of the recommendations. Several educators, for instance, explained that due to the requirements of different visitor groups (children of various ages, and adults with various interests) not always the best solution for supporting student learning could be implemented. However, several concrete recommendations had been realized promptly, such as lowering explanation signs and enlarging their font sizes in order to make them more easily readable for small persons. Furthermore, one museum educator had experienced great worth in co-researching with the children and had decided to involve children in the upcoming development of a new exhibition. She explained: "As an educator and exhibition developer you are mainly led by your own experience, literature, and educational goals. Sometimes, you lose sight of what it is really all about: the children." Besides the research teams themselves, the meetings were attended by museum and library educators, facilitators of UUAS, peer students of the student-researchers, parents, school managers, and teachers, and other interested persons.

Characteristics and outcomes

In this section, we return to the six dimensions of participation (Kirby et al., 2003) for characterizing the project mainly from the student's side, and to the four domains of teacher change (Clarke & Hollingsworth, 2002) for identifying relevant aspects of change in relation to the student participation in this project on the teachers' side.

Dimensions of participation

In this project, students actively participated in researching their own educational practice. In close collaboration with adults – their teacher and an educator –, they were involved from the start in deciding on the research questions, designing the research activities, and drawing up and presenting the conclusions. In an interview, one of the teachers reported

> Yes, they [the students] feel responsible for the research. They want to do it all well, preparing the whole study, discussing the data afterward, and attending to informing their fellow students about their research activities. Answers [to their questions] have to be found. They don't do it because the teacher tells them to. Now they are much more self-motivated. (teacher, female, primary school, Year 4/5)

Therefore, the *level of participation* can be categorized as Fielding's participation level 'students as co-researchers' (2001): "students co-research aspects of pedagogy/learning with teacher"; or as the participation pattern 'students as joint authors" (2011): "a genuinely shared, fully collaborative partnership between students and staff". Students were involved in the research process as equals to the adults and shared responsibility for decision-making and implementation with them (Shier, 2001; level 5). While, in Shier's terms, the project did offer an 'opportunity' for the students and teachers to

operate at this level, it did not yet become an 'obligation' for the school, that is, it was not yet built-in into the system as an agreed policy for all staff. The project was intended as the start of a continuous process of teacher and school development, by bringing the experiences of student participation in an external setting into the classroom and school practice and – in the long run – by developing a participatory school culture. In the project, the impetus for this process would come from the 'external domain', that is, from the arrangement of students, teachers, and educators as co-researchers as set up by the project management and from the support in developing student participation as an educational strategy. Most deplorable, however, due to an untimely termination of the project funding, further development of the participation strategy could not be realized. Nevertheless, a number of teachers informed us that they continued implementing and expanding student participation practices in their classrooms and kept on promoting them among their peers.

Secondly, the *focus of the decision-making* in the project was mainly 'public', since the decisions were about the learning of students as a group. The teams researched an authentic issue that was relevant to all participants, and the outcomes of the research were planned to be granted and implemented. In fact, even while the project still proceeded, the findings and recommendations actually led to improvements in the museums and the library, in exhibitions as well as in the interior design and the arrangements for educational guidance of students. For instance, many children mentioned the abundance of – bright – colors in the exhibition rooms as distracting for their learning, which was quite unexpected by the museum educators, as it was meant to appeal to young people. They followed up on this finding in the preparations for the next exhibition that were ongoing at the time of the research teams' work. Furthermore, while observing the students during the site visit, the educators noticed that the students were very able to recognize the learning goals in several sections of the exhibition, possibly even better than the adults. Therefore an educator commented: "Here at the museum, the idea goes round to develop a booklet for adults that explains what and how children learn in 'Het Rijk van Heen en Weer' [Dutch title of the exhibition about communication processes]."

In principle, student participation activities can pertain to topics, domains, and sectors outside education. In this case, the *content of the decision-making* was educational, although not restricted to school, focused on the what and how of student learning in an external educational context. The actual theme covered by the setting – the specific museum or exhibition and the library – was not particularly relevant from the perspective of student participation. It was, however, a motivating aspect for the students and – as an additional asset – it led to concurrent learning on the actual subject. . Thus, in this project, students learned about communication processes (significance of various non-verbal signs; communication over distances); manifestations of festivities in different cultures and times, their meaning in the context, and correspondences with other cultures; value and function of a library, and ways to find sources of information.

The project was initiated and set up as a framework for working in research teams. As such, it provided designated opportunities for the students to influence decisions, which categorizes the *nature of the participation activity* as a formal approach. On the other hand, due to the equal status of students and teachers in the teams and the collaborative character of the work over a longer period of time, much and intense student-teacher interaction took place, in which they were engaged in joint

activities and ongoing dialogue. Already in the first phase, the teacher and students talked about what role each student – and the teacher - would take up, and who would represent the class in the research team, which also led to class discussions of individual capacities and inclusive practice. Later on, in the workshops about learning and researching, teachers and students exchanged their own learning experiences and preferences. In the words of a teacher: "I notice that in this way teaching becomes more and more two-way traffic." In this respect, the project can be labeled as an informal approach.

The fifth dimension covers the *frequency and duration of participation*. The activities of the students in this project took place within a well-defined time frame. The research teams went through a series of phases that stretched over half a school year, including the final presentation. Still, the workshops were scheduled in a relatively short period of time – in most cases within a month – and also the site visits, the peer consultation, and the interpretation of the findings were held together. Within these periods the activities were frequent, but in between, they were irregularly scheduled.

To conclude this subsection, the *children and young people involved* were students of various age groups, capacities and backgrounds and from various school types. Furthermore, participation of all students was sought, not only of those students that became the class representatives in the research teams. Moreover, the differentiation in roles contributed to adjusting the activities to the needs, preferences and capacities of individual students. This way, the project formed an inclusive practice, in which "… differences between children are the norm and not the exception. It is 'Education-for-All-by-All' …" (Ponte & Smit, 2013, p. 456).

Domains of teacher change

Overlooking the project as a whole, and the activities of students and teachers in particular, we will now illuminate a number of specific aspects of the teacher's change environment (Clarke & Hollingsworth, 2002) and identify change sequences between domains and processes of enactment and reflection that mediate them.

In this project, the changes clearly started in the *external domain*. Teachers were invited to enter into an already set-up context of an action research project with their students, a practice that was new for them, they were informed about student participation and about the aims and global steps and activities in the project, and were stimulated to experiment with a new teacher-student interaction pattern. Changes in the external domain continued during the project, by means of the working meetings and the support of the facilitators and peers. The extent to which the school management approved the intended level of student participation and enabled the teachers to take part in the project was another element in the external domain.

Right from the start, through *reflection* on prior knowledge, beliefs, and attitudes of the teachers, changes in the personal domain came about, which were *enacted* again in (changes in) the specific planning of the project (the external domain). Explication and discussion of perspectives on education, learning, and classroom practices, and on children filled the first working meetings and subsequently shaped them.

The core changes, which were intended to influence all other domains, arose in the *domain of practice*, where planned action research activities were actually conducted. The teachers took on a

new role and experienced working with their students on a collaborative task in their own professional practice (enactment). An essential outcome of this was, of course, the mere fact that a specific level of student participation was realized: a salient outcome in the *domain of consequence*. Through the experimental way of working together, changes in the teacher-student relationship developed, which became apparent in, for instance, the enthusiasm and respect the teachers showed for the unexpectedly high levels of skill and motivation of their students, the increased trust they developed in involving them in the design of their lessons plans, and in the more friend-like way of working with and for their students. Students also changed with regard to attitudes (gained self-confidence and motivation) and knowledge and skills (research, writing, and presentation). Reflection on these outcomes informed the domain of practice again, visible for instance in more frequently and naturally involving students in lesson design, ways of conduct, and other classroom issues, and influenced teacher's beliefs and attitudes towards their students and the value of student participation (the personal domain).

The teachers participated on both levels of the action research process: as members of the research team and as developers of the participation strategy. They learned (change) about the value and methodology of action research (personal domain) and developed (enactment) ideas, activities, and arrangements to make students' voices heard and responded to in their daily practices and to involve students in decision-making processes (domain of practice). For instance, the teachers developed and exchanged educational materials for discussing aspects of learning with their students, adapted to their age and capacities; or, they introduced regular plenary class meetings about issues of learning and working in class and school The domain of consequence, in this project, is defined broadly, encompassing changes in teachers, in students, as well as in educational practices.

The analysis so far represents the picture that applies to the teachers in general. Most of them voluntarily participated in the project out of a strong belief in student participation on the basis of a positive attitude to changing their practice accordingly. However, some teachers felt 'sent' by their manager and were, therefore, more skeptical and reluctant at the start, or better formulated: they 'searched for meaning and cohesion within their frames of reference' (Luttenberg et al., 2011). The model can make clear what different paths they took. For them, the initial exchange of ideas in the working meetings did not change much in the personal domain. All the same, a stimulus (manager's pressure) in the external domain led them to take part in the workshops and to plan and conduct the research with their students (professional experimentation via enactment of the project set-up). At first, they held on to the established hierarchical positions and did not give their students enough space to act as co-researchers., which can be seen as an enactment mechanism between the personal domain and the domain of practice. For instance, at first, some teachers viewed it necessary for them to *lead* and *structure* their students learning and doubted if the (young) students would be capable of the research activities. It made them feel unsure about their own role as *co*-researcher. In their practice, they were reluctant to involve the students in deciding upon the research questions, and the activities needed to answer them. However, with further stimuli, information, and support (the external domain), for instance by the facilitator, the domain of practice did change as was intended, and students and teachers actually started working together in teams. Reflection on this adapted practice changed the attitudes of the teachers (personal domain). Now the outcomes (domain of

consequence) had changed as well because the effects of the changed practice became visible in the positive behavior and the skills of the students. Reflection on this again triggered the teachers to change their beliefs and attitudes towards student participation (personal domain).

Discussion and implications

The 'Students and teacher as co-researchers' project started from the conviction that children are not different from adults in the sense that they are all independent individuals, with individual personalities, capacities, and potential, who are in a life-long process of development. Seen from a rights-based approach to education, this means that all people – children, young people, and adults alike – share the right to an education "geared to tapping each individual's talents and potential, and developing learner's personalities…", as stated in the Education for All declaration in 2000. Combined with the UN-CRC principle that children have the right to express their views in all matters affecting them and for their views to be given due weight, enabling all students to be involved in decision-making in educational matters has become an imperative task and responsibility for all professionals in the domain of education. It also leads to the conclusion that student participation on an intensive level – such as students as co-researchers - should be common practice in all educational contexts.

A second argument that stood at the basis for advocating for students to co-researching with their teachers in this project, lies in an educational research issue, which can be summarized as follows. Educational research – and other social research - can be categorized into various strands, founded on diverging views on what counts as valid knowledge and what designs and methods are considered appropriate and trustworthy. On one end of the spectrum, the empirical-rationalistic type of research became criticized for its inability to capture meaningful social processes and phenomena, because of the disconnection with actual practice and the ignoring of the normative character of education, the stakeholders' perspectives and interpretations, and specific local context characteristics. Forms of teacher research and participatory action research are meant to overcome this kind of problems. However, involving the teachers themselves in the research process as the active agents, but not students, leads – in our opinion – to a similar problem again, and would not bring about changes that are worthwhile and relevant for *all* stakeholders. Teacher research in which students are treated as objects still uses a third-person perspective and fails to capture the meaning of education for them. Therefore, in the students as co-researchers project, action research by students and teachers together has been adopted as the inevitable approach to student participation. At the same time, by the active involvement of the students, the approach favors a process of active learning, which aligns with an interactionist and social-constructivist view on teaching and learning.

The question then was how to bring about the pursued student participation in actual educational practice, as it was not yet common practice and, consequently, it required changes in teachers' and students' attitudes and behavior. Action research as a tool for teachers' professional development has been documented many times (see Ponte, 2010) as a sound way for teachers to learn about their own practice. Not all types of research with or by teachers, however, include a clear idea of the way by which change will come about; it is assumed to happen automatically on the basis of gained insights, for example, in this project, the insight that even quite young children are able to reflect on and express their way of learning and what helps or hinders them in their learning. Experimenting with the insights

– that is acting them out in the teacher's practice – is an essential component of teacher learning. Clarke and Hollingsworth (2002) have recognized this aspect as well and have identified *enactment* as one of the two change mechanisms in their model. In addition, they add the notion that not only new insights can be enacted in the *domain of practice*, but also the changed practices and outcomes can be *reflected* on and can change the insights (*personal domain*). For this reason, creating a context for actual 'enacting' student participation through teacher-student partnerships in action research, was the key idea in the 'Students and teacher as co-researchers' project: create space for teachers and students to experience new ways of working (an *opportunity*, in Shier's (2001) model), so that knowledge, beliefs and attitudes could change accordingly, which would then drive further experimentation and change towards student participation. Through a process of collaboration, exchange, and discussion with others in school, the individual activities would help 'Building a culture of participation' (Kirby et al., 2003). Furthermore, in order to make it easier for teachers – and students - to experiment with behaviors and roles that differed from the established classroom practice, an external educational context was chosen as the starting point for the research. We realized that transfer from there to in-school contexts and embedding in school culture would require special attention and a longstanding effort and support. As said, however successful and generally applauded the project was, the follow-up stages could not take off due to an untimely end to the project.

The value of the approach in the 'Students and teacher as co-researchers' project lies first and foremost in the realization of the participation form 'students and teachers as co-researchers'. Teachers and students of various capacities and with various attitudes actually entered into the development of a new way of working that enabled them to participate in decision-making. Furthermore, teachers and students learned and changed in the process of co-researching. We saw changes occurring in practice – in the museum and the library -, in teachers' and students' knowledge and beliefs, and in their attitudes. Students showed great enthusiasm and dedication and increased motivation. They learned about research and gained insight into their personal preferences for learning and experienced having an impact on the system's processes. These types of changes and learning apply to teachers as well. They reported changes in the way they interacted with their students and improvements in the educational practice, first in the external setting and later on in the classroom setting as well. Still to be answered, however, is the question of how sustainable the changes are. As Rudduck and Fielding (2006, p. 76) observe, "an important concern for the longer term survival of student voice is building a coherent and secure school-wide foundation for the work. While there are often patches of exciting work on student voice, it can be difficult to move from these islands of risky commitment to the mainland of the school (…)". We had envisioned a path of development from single teachers and research teams, to multiple teams within a school and in a network with other schools, to the anchoring of the participatory practice in the school culture. Such sustainable changes could be based on long-standing collaborative partnerships between schools and university as "a meeting or confrontation between different fields of knowledge." (Rönnerman et al., 2008) and on teachers taking up roles as local facilitators for their colleagues (Rönnerman, 2008).

The project was not set up to research in detail what effects the student participation strategy might have on teacher and student learning, how this might be different for participants of various backgrounds, and how best to facilitate this. In addition, further research is still needed on the question

of the effectiveness of students as researchers in generating useful insider knowledge (Bland & Atweh, 2003) and how this differs from other types of research. The role of teacher education in the professional development of inclusive and participatory teachers and how to design it has been touched upon in this project but needs further elaboration and research as well. Teachers were involved in developing the strategy for this project and teacher educators participated as facilitators for the action research teams, which is a model that could be introduced and researched further, including the assessment of effects on teacher learning.

Questions remain and new ones are generated by the project. Important to note, however, is – in our opinion – that the approach in the 'Students and teacher as co-researchers' project opens an opportunity to steer away from schooling driven by 'system', and to bring education back into the lifeworld and realm of substantial rationality of teachers and students, and teacher educators, thus putting them back in charge of decisions that shape their shared practice on the basis of shared responsibility: an education not only *for* all but *by* all.

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Chapter 3

Source, respondent, or partner?

Involvement of secondary school students in Participatory Action Research

"In short, this research project has helped me look for ways to encourage learning, while also opening my eyes to the benefits of student participation and student voice more broadly."

Pre-service teacher Global Politics (Bilingual secondary school; class Year 4)

Abstract

This study addresses the nature and level of school student participation at various stages of participatory action research conducted by pre-service teachers (PSTs). PSTs' research reports were analyzed by means of the *SPinSTAR matrix*, in which four levels of student participation were distinguished: Inform, Consult, Participate and Collaborate.

Results show that student participation in PST research occurred mostly at the less intensive levels (Inform, Consult). Furthermore, they participated mostly in the preparatory stages of the research projects. However, most PSTs came to see their school students in a broader sense as worthwhile partners in an educational endeavor.

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Chapter 3 – Source, respondent, or partner? Involvement of secondary school students in Participatory Action Research

Introduction

In past decades, it became recognized that the perspective of young people has hardly played a part in the development of knowledge of their social environment. Children and young people have not been seriously listened to, consulted or otherwise involved in actions concerning themselves and have had limited influence on decision-making processes related to their own lives. More recently, initiatives to enable young people's voices have been introduced, including student voice and student participation in education (Bragg, 2010; Groundwater-Smith & Mockler, 2016; Kirby et al., 2003; Sol & Stokking, 2008). The notion that young people's views should be taken seriously has even achieved legal status by the United Nations Convention on the Rights of the Child (UN-CRC)[9] (OHCHR, 1989). Following this, participation models and strategies have been developed (Cook-Sather, 2014; Egg, 2009; Fielding, 2011; Hart, 1992; Shier, 2001).

Student participation extends to a wide range of aspects of the design and implementation of their curriculum and educational context, and may include having an active role in researching those aspects as well. This can contribute to improvements in educational practice on a personal, school and community level, in the best interest of all stakeholders. In many countries nowadays, teacher research has become an integrated part of teaching practice and the profession. It is seen as a meaningful activity for the professional development of teachers, and also for prospective teachers, in teacher education (TEd) programs (BERA-RSA, 2014a; Meijer et al., 2013; Snow-Gerono, 2005; West, 2011; Zeichner, 2003). Teacher research, and in particular participatory action research in education, can be described as a specific case of practitioner research and an interpretative research approach, in which stakeholders research their own practice (Ponte & Smit, 2007). Although much teacher research aims to improve student learning, the voices of students themselves in this form of research are largely missing (Groundwater-Smith, 2005). One approach to including student voice in educational research and curriculum and school development is through students as co-researchers in action research. Action research aims not only to study (describe and understand) the social practice, but at the same time to improve it even though the aims and criteria by which to judge 'improvement' may vary (e.g. from technical, practical, to critical purposes; cf. Kemmis, McTaggart, et al., 2014). Central in action research, and in particular in participatory action research (PAR) is the recognition of the capacity of all people who are part of the situation under scrutiny to participate actively in the research process (Kemmis, McTaggart, et al., 2014, p. 4). In educational research, that means that students almost always are consequential stakeholders and should be involved as sources of information and as partners in research. Student participation, then, logically, should be a part of such a PAR approach in TE, and can serve both purposes well: to prepare for teacher research, and to enhance student voice in educational decision-making. In this study, PAR is seen not so much as a method, but rather as the creation of a context for knowledge development and change (Galletta & Torre, 2019; Kidd & Kral,

[9] Additional abbreviations used in this chapter:
SPinSTAR student participation in student-teacher action research
UN-CRC United Nations Convention on the Rights of the Child

2005), and as a commitment to collaboration and partnership throughout the action research project (Brydon-Miller & Maguire, 2009), in which research in not done *on* but *with* the participants (Campbell & Groundwater-Smith, 2007). Furthermore, PAR implies a shift in the power structure between teacher and student from hierarchical positions in which the teacher decides about goals, content and methods, and norms and standards, to more equal positions as partners in a mutual learning process (Cook-Sather, 2006; Lefstein & Perath, 2014; Taylor & Robinson, 2009). Often, also in education, young people are taken as inadequate adults, not yet capable of sound reasoning and responsible decision-making (Quennerstedt, 2010). PAR, on the contrary, treats all stakeholders as valid and rightful participants, however with different qualities and interests. Participatory action research by students and teachers collaboratively, on educational issues of mutual interest can potentially serve multiple goals: 1) enhancing teachers' and teacher educators' awareness of and capacity for enabling student participation; 2) developing a participatory school practice by modeling democracy and citizenship in practice; 3) improving student-teacher relationships; 4) creating a rich context for teachers' professional development; 5) improving teaching practice through teacher action research in teacher education programs and schools; and 6) developing motivating and differentiated contexts for school students (cf. Bron, 2018; Gore & Zeichner, 1991; Kane & Chimwayange, 2014; Ponte, 2010; Toshalis & Nakkula, 2012; Ulvik & Riese, 2016).

Within the context of this study, a one-year postgraduate teacher education program, pre-service student teachers (PSTs) have limited space and possibilities for involving their school students in research and for enabling student voice. The aim of this paper is to gain insight into student participation in PST research, in an arrangement where PAR is incorporated in the TEd program as a prescribed approach.

The following research questions guided the study:

1. How do PSTs involve school students in their action research projects about school practice?
2. At what level of student participation are school students involved in the PST action research projects, and in which stages of the research process does this occur?

Theoretical framework

Student participation

Over time and in different contexts, the involvement of young people in decision-making processes in education and research has been labeled variously, as pupil/student voice, consulting pupils, agents-of-change, students-as-researchers, co-researchers, youth participation, student participation (e.g. Bahou, 2012; Bragg, 2010; Cook-Sather, 2006; Fielding, 2001; Groundwater-Smith & Mockler, 2016; Matthews, 2017; Quicke, 2003; Rudduck & Flutter, 2000; Smit, 2013; Thomson & Gunter, 2007). Notwithstanding differences in meaning and scope, these terms share the idea that education should be based on democratic principles, and that this should extend to all stakeholders in the education process, including students. This idea is grounded on legal motives (children's rights), social motives (including citizenship education), innovation motives (students' insights for educational change), and pedagogical motives (student personal development and teacher-student relationship) (Smit, 2013). It is assumed that student participation in this sense creates a 'learning democracy' environment in school (Biesta & Lawy, 2006), and contributes to student learning. Empirical evidence for the effects

of four major types of student participation (councils, class decision making, school decision making, temporary school working groups) on personal development, academic achievement, peer interactions and student-teacher relationship, is thus far, reported as moderate (Mager & Nowak, 2012). However, Mager and Nowak's focus was on "everyday decision-making processes that take place at schools" (p. 41) , not on involving students as co-researchers, and they did not include any PAR studies.

Continuing on the formulation of children's rights by the UN-CRC (OHCHR, 1989), in this study, student participation is understood as the involvement of school students in decision-making processes on educational issues that affect the school students, themselves. For the purpose of this study, the concept is specified in line with the chosen research context (the TEd program): school student involvement in the PST PAR assignment, insofar as it is carried out in school.

Models of student participation

In this study, we drew on two theoretical frameworks for describing, understanding, and designing student participation in PST research. First, the model of levels of student involvement proposed by Fielding (2001); and second, a framework to describe the way students act as partners to teachers (in higher education) by Bovill (2017).

Fielding's levels of student involvement

In his seminal article in 2001, Fielding advocated, then and in his later works (Fielding, 2004, 2007, 2011, 2018), for "approaches that have different starting points and quite different dispositions and intentions" and argued "for a transformative, 'transversal' approach in which the voices of students, teachers and significant others involved in the process of education construct ways of working that are emancipatory in both process and outcome." (2001, p. 124). On the basis of research in schools over a range of years, Fielding presented a set of principles and values for student participation in research and formulated a set of questions to evaluate conditions for student voice. Fielding's work conveys the importance of valuing the perspectives and expertise of both students and teachers, positioning the learning of all stakeholders as central in the process of learning, and linking research initiatives to action and change. Drawing on the work of others on student involvement, such as the *Ladder of Participation* (Hart, 1992), Fielding (2001) suggested a four-fold conceptual model to distinguish students in different participation roles: students as data source (recipients), as active respondents (discussants), as co-researchers (co-researchers), as researchers (initiators). In the first three levels, the teacher is mainly taking the initiative and activities are teacher-led, while in the last level, the student is the initiator and activities are student-led.

Bovill's descriptive framework Students as Partners

As partnership is frequently mentioned as a fundamental principle in student voice literature (e.g., Conroy & Harcourt, 2009; Edwards-Groves et al., 2016; Fielding, 2011; Holdsworth, 2014), Bovill (2017) warns against perceiving as universally positive "… to involve all students and that all situations call for partnership" (p. 1). Within the context of higher education, she argues that among the many possible levels of participation, "meaningful partnership requires a high level of equality and contribution from partners" (p. 2), which is not always attainable or desirable. She therefore proposes a participation

matrix framework that helps consideration of which students and staff should be partners, when and in what way. The matrix unfolds along two dimensions, each with several categories:

1. level of involvement (Inform, Consult, Participate, Partnership, Control)
2. action research stage: course design, evaluation design, conduct evaluation, analysis of results, dissemination.

The first dimension resembles the four levels in Fielding's model, with a category *Control* added to be able to identify if the teacher or the students are steering the process. The second dimension allows for mapping student participation to different stages in the research process and to identify and demonstrate that the type and intensity of student participation can vary over stages. Combined, the two dimensions cover the constituent parts of PAR: a process of integrated action and research, and the participation of stakeholders in this process, including the implementation of results.

In the present study, elements of both models were adapted for examining the way student participation unfolds in participatory action research projects conducted by pre-service student teachers (PSTs) in the context of a TEd program.

Method

The present study uses a mainly qualitative approach to identify and describe how school students were involved in PSTs' research in schools. The study describes characteristics of PAR projects by PSTs in terms of school student participation in these projects. It is a study of PAR projects in which PSTs and their school students – possibly – collaborated in conducting the research, but this study is not a PAR project itself; the authors (researchers) did not take part in conducting the PAR projects at school; and neither did the PSTs and school students in the present study.

Participants and contexts

The study was conducted in the context of a one-year postgraduate teacher education program at a research university in the Netherlands. Participants were PSTs from a special track of the TEd program, that aimed to prepare them for teaching in secondary bilingual and international schools. The program was structured as concurrent institutional courses and school practicum (i.e. 1-2 days per week at University and 2-3 days per week in school), with PSTs teaching in schools during the whole year. All PSTs within this TEd program were required to complete a capstone research project, designed as PAR, in order to enhance school student involvement in educational decision-making and to enable the development of teacher-learner partnerships, in schools. Right from the start of the TEd program, PSTs were gradually introduced to the idea of teacher research and student voice in various ways: through including relevant literature on action research and on non-hierarchical roles of teachers and students (see Appendix 1); by school-based assignments aimed at finding out about school students and their needs and perspectives; by developing research plans according to a planner that required PSTs to explicate how school students would be involved in the research[10]; and through university seminars specifically focusing on PAR and the PSTs' research projects. PSTs developed research questions for their projects during their internship, and in consultation with university based TEs; these questions

[10] E.g. by responding to the questions 'How will you pay attention to student voice and perspectives?', and 'Will you include students in data collection or analysis?'.

should be related to their own teaching practice, but not necessarily to the subject they taught, and they should be relevant for their school students as well. This could be achieved by, as recommended, involving the school students into the process of developing and formulating research questions. As usual in action research cycles, research questions could be expanded or added with the progression of the project. A requirement of the project was that PSTs include an actual try-out of a proposed change in the teaching practice. In their project reports, PSTs were required to reflect not only on the way this change had worked out for them and their school students, but also on how this had affected their professional development as a teacher.

Five teacher educators and one PAR facilitator were involved in the program. The first author was involved as instigator of the PAR approach, as informant on PAR as an approach in classroom practice, and as researcher of the PSTs' PAR projects, but not as educator, facilitator or supervisor.

All PSTs[11] from two consecutive study years who actually conducted a PAR project consented to participate in the present study: 18 PSTs from 2015-2016 (13 female, 5 male), and 14 PSTs from 2016-2017 (11 female, 3 male).

The PSTs conducted their PAR projects at their respective teaching practice schools, belonging to an established set of bilingual or international secondary schools in the western part of the Netherlands. At all schools, the PSTs were supervised by a subject coach and a school mentor; however, the supervision mostly concerned classroom teaching practice and did not necessarily include guidance of the research as well. Agreements between TEd institute and schools included enabling PSTs to conduct a research project in school, with their students, but schools had no formal involvement or responsibility with regard to design or implementation of the project. However, on an individual basis, some PSTs invited their school mentors or subject coaches to give feedback on plans and actions. PSTs could choose to conduct their research individually, or in pairs if they had corresponding research topics or questions and were teaching in the same school. These topics broadly covered: teaching (didactics/methods, general or school subject-specific); learning (school student learning, motivation, and engagement); content (content and language-integrated learning/bilingual issues, school subject matter); and classroom management.

Data collection

Data were collected from two iterations of the one-year TEd program: academic years 2015-2016 and 2016-2017. As part of their research assignment, PSTs were required to complete a research report to be submitted at the end of the one-year course. In their report, PSTs were asked to describe their experiences of the full action research process, from problem definition to outcomes and conclusions – sometimes including several cycles – although the report format was not fully prescribed. On average, the size of the reports, appendices not counted, lies between 5000 and 8000 words. Within the group of 32 PSTs from Cohort 1 and 2, 4 PSTs wrote a report in pairs; in total 30 PST research reports were produced. The authors/researchers were neither involved in guiding the PST projects, nor in grading them.

[11] In fact, 22 PSTs enrolled in Cohort 1, but 4 of them either did not start at all or stopped soon after the beginning of the program. For Cohort 2, 17 PSTs were enrolled; 2 PSTs stopped at an early stage, and 1 PST did not conduct a PAR project and did not finish the program. Those 7 PSTs were not included in the present study.

Data analysis

Qualitative data analysis was aimed at describing the PST PAR projects in general terms and at identifying the nature and level of student participation in PST PAR projects in various stages of the research process.

First, all PST PAR reports were individually analyzed, following these steps:

1. Identification of descriptive features such as research theme and research questions, and type and number of involved school students.
2. Identification and marking of all instances of research activities, either by the PST or by the school students. Within the context of this study, research activities included all cognitive and physical conduct by the PST or school students that relates to carrying out the PAR assignment, from thinking about a possible research topic and research questions and developing a research plan, to trying out new teaching and learning practices and, finally, writing up conclusions and recommendations. Furthermore, in the analysis of the research reports, research activities were not restricted to those activities that involve school students For example, analyzing data by the PST herself, reading research literature, and consulting peer teachers with regard to the PAR project, were interpreted as research activities as well.
3. Coding of all marked instances along the dimensions *Level of student involvement* and *Action research stage*, in accordance with definitions of levels and stages (see Table 2 and Table 3) and corresponding decision rules (see Appendices 3 and 4). Project activities at various action research stages were coded in all relevant levels of student involvement, not only at the highest level of a specific stage as identified in the data.

Subsequently, single project descriptions and assigned codes were aggregated into an overall table of occurrences of student involvement (Table 4) and into a table of types of student participation at the various levels of student involvement and action research stages (Appendix 5).

For the development of the coding framework and procedure, the first two authors independently coded the research reports. Disagreements were then discussed until consensus was reached and code descriptions and coding rules were re-formulated. Finally, both researchers again independently coded one third of the data (10 reports). After cross-checking, no further disagreements occurred.

Dimension Level of student involvement

For coding the instances of research activities as one of the five levels of student involvement, definitions were used as shown in Table 2 (adapted from Bovill, 2017; Fielding, 2001, 2011, 2018). Level of involvement (or participation) pertains to the degree of active engagement of school students in pre-service teacher students action research projects and their role in the decision-making processes during or based on the research project.

Table 2. Level of student involvement

Level	Definition
None No student participation	School students themselves are neither actively nor passively involved in the PST research and information from or about them is not being used for the action research project.

Inform Data source	Use of information from or about school students (e.g. student data on progress or well-being) without further interaction (such as explanations). Also: PST informs school students, e.g. presents results to school students.
Consult Active respondent	Use of school student's explanations, views, opinions, or suggestions.
Participate Co-researcher; knowledge creator	school student is actively involved in the research process and in the creation of new knowledge (results, insights)
Collaborate Researcher; joint author; shared decisions	school student and PST jointly conduct (parts of) the research activities and both participate actively in decision-making on research activities and processes.

Dimension Action research stage

Seven action research stages, a-g, were distinguished (Table 3), in line with a usual sequence of stages in social research and educational design research. The design stages b (Intervention design) and c (Research design) were purposefully taken up as separate stages, because we anticipated to find differences in student participation for these two design purposes. In an action research approach (as well as in design research), the project typically has a cyclical character. Frequently, action research stages do not appear in the strict order as suggested in Table 3 (and as is usual in other strands of research), and they can appear more than once within a project, or as overlapping stages.

Furthermore, school students might be involved in all stages, but the nature and level of their participation can differ in subsequent cycles or phases within one project, e.g., in terms of different numbers of involved students or in different combinations or groups.

Table 3. Action research stages

Action research stage	Definition
a. Problem definition (RQs)	Exploration, development and definition of the problem and formulation of project goals and research questions.
b. Intervention design	Formulation of design criteria and development of an intervention (tool or instrument, teaching-learning method or approach, classroom or school practice, teaching-learning materials, lesson planning, etcetera).
c. Research design	Development of research steps, methods, instruments, and procedures.
d. Conduct intervention	Enactment of the intervention in classroom or school practice.
e. Data collection	Collection of existing or new data contributing to answering the research questions.
f. Analysis of results	Analysis of collected data aimed at answering the research questions, interpretation of results, and drawing conclusions in the light of theory and practice.
g. Formulation of suggestions / recommendations	Providing tips, suggestions, recommendations for designing the research or for changes in the teaching and learning practice.
h. Making public	Reporting, presenting, publishing, or disseminating of available research outcomes, results, products, conclusions, and recommendations, in any form (oral, written, visual, material, other) to teacher educators, participants, stakeholders, or others.

Matrix SPinSTAR

Based on Fielding's model of student participation and Bovill's matrix of student involvement, the matrix *Student participation in student teacher action research* (SPinSTAR; see Appendices 2-4 for further explanation and coding rules) has been designed within this study to describe and analyze school student involvement in pre-service student teacher action research as found in the specific context of this study.

The matrix *Student participation in student teacher action research* (SPinSTAR; Appendix 2) has been designed within this study to describe and analyze school student involvement in pre-service student teacher action research as found in the specific context of this study. This scope has two characteristics that determine the matrix design. First, the action research project is conducted in a one-year postgraduate setting, which allows for only a relatively short time-span for the whole research process and in particular for actually conducting the research steps (about one half-year). Second, the teacher education context requires the PST to carry out a research assignment and to conduct the research according to the TEd program's requirements and standards, for instance on research approach and time schedules. Consequently, in these respects, the matrix *SPinSTAR* deviates from Fielding's (2001) model of student participation and Bovill's (2017) matrix of student involvement.

Findings

Investigating the extent and nature of school student participation in the PST action research projects was the driver for this study; furthermore, the TEd program had been modified to enhance such participation; and also, teacher education staff guided the PSTs to plan and conduct their research with participation of their school students. Nevertheless, it remained to be seen if, within the school internship context, the PSTs would actually involve their students in any way in their research, and if so, in what manner (see RQ 1). Furthermore, we were interested in which levels of student participation would occur in the projects and if this varied along various stages of the action research process (see RQ 2).

Below, findings on the occurrence of student participation and type of student participation at various action research stages are presented along the dimension *Level of student involvement*: None (no student participation), Inform, Consult, Participate, Collaborate. In the two-dimensional format of the matrix *SPinSTAR* (see Appendix 2), Table 3 shows the number of PST PAR projects in which a research activity could be identified at a specific level of student involvement, at a specific action research stage. For instance, the number 14 in table cell *Inform/Problem definition* means that in 14 out of the total of 30 research reports at least one research activity was found that included school students as data sources in the stage of problem definition and development of research questions. The qualitative outcomes presented below, are based on Appendix 5, which is the data table of descriptive labels of the nature of the research activities. It uses the same two-dimensional format as in Table 4.

After Table 4 follows a description of, first, the four levels that actually involve school students, *Inform, Consult, Participate, Collaborate*; and thereafter, the non-participation level *None (no student participation)* will be addressed.

Participation of school students in the PST projects occurred in a range of types of activities and contributions. Partly, they were common to most of the action research stages, partly they were found more specifically in one of the stages.

Occurrence and type of student participation

Table 4. Occurrence of student participation in PST action research projects

	Level of school student involvement				
Action research stage	**None** (no student participation)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
a. Problem definition (RQs)	26 I: 20; P: 19; L: 12; S: 3	14	10	3	3
b. Intervention design	20 I: 15; P: 6; L: 12	11	14	3	8
c. Research design	24 I: 21; P: 5; L: 3	5	2	1	2
d. Conduct intervention[12]					
e. Data collection	4 I: 1; P: 3	27	24	4	2
f. Analysis of results	29 I: 28; P: 4; L: 4	5	2	2	2
g. Formulation of suggestions / recommendations	24 I: 24	[13]	11	3	2
h. Making public	30 I: 30; P: 7	1		1	

n = 30

Cell frequencies stand for the number of project reports that described a research activity within the particular combination of the two dimensions, *Level of school student involvement* and *Action research stage*; cell frequency maximum = 30.
I: individual; P: peers (teacher, coach, peer PST/critical friend, supervisor); L: literature/theory; S: school/curriculum

Inform: school students as mostly passive data sources

At the most common, but least intense level of student participation, *Inform*, school students had a rather passive research role in which they only provide data, or, in a few cases, were given some information. At this level, there was an exchange of information about or from the school students (e.g., student data on progress or well-being) without further interaction with them (such as giving explanations). The typical practice was the PST using any form of school student data, either already available or newly collected, for informing the research project. Conversely, also activities in which the PST merely informed school students, provided them with data, or presented results were categorized as *Inform*. This level could be traced in many of the PST projects. Obviously, at the stage of data collection, in almost all projects school student data were collected in one form or another (27 out of 30 projects). However, also in the early phases of the PAR process, such as the definition of the problem (14 projects) and the design of the intervention to overcome the problem (11 projects), school students played a role as data sources. In contrast, in the design of the research (5 projects), and at

[12] In the context of this study, the intervention was always conducted by the PST. Therefore, this row is not used for coding the level of student involvement.

[13] This combination of dimensions is logically impossible, because any research activity by school students that included formulating suggestions or recommendations would by definition belong to the level 'Consult' or higher.

the stages following data collection, student participation on the level of *Inform* did not occur much (Analysis of results: 5 projects; Making public: 1 project) or not at all (Formulating suggestions / recommendations: 0 projects[14]).

The most obvious instances of such a form of school student involvement were found when the PST research was informed by school student test scores or grades, either gathered before the project, or as part of the data collection stage. School students' work and materials, produced as part of tasks and assignments, form another category. At the *Problem definition* stage, these data sources helped the PST to identify school student's learning difficulties or problem areas in the curriculum. At later stages, such as *Intervention design* or *Research design*, they served as sources for specification of criteria for the development of approaches and lesson series to address the problem under research, and to design data collection instruments and methods that would allow for detecting the sought-after aspects of the problem and improvements in the practices due to the intervention. Furthermore, at this level of student involvement, school student questionnaires/surveys were often used as well, in the form of closed questions, such as tick boxes and Likert-scales. This type of student involvement occurred at the levels *Problem definition*, *Intervention design*, and of course *Data collection*. Not only data generated by school students themselves were used in this stage; also, the PSTs undertook class or lesson observations or made field notes of class discussions, and so doing, involved their school students as data sources.

Beside these more generic types of student involvement, found at several stages, some were specific for one stage. At the *Intervention design* stage, PST's use of findings on school students from previous research cycles, PST's assessment of interests or characteristics, and PST's explanation to school students of content, procedures, or criteria for the intervention, are examples of this. At the stage *Analysis of results* only a teacher-directed way of involving school students was reported: PST sharing results with school students. At the stage of *Making public,* students participated in the projects under study in a single form: reading the PAR report that the PST wrote. Both last named forms did neither include evaluation or feedback, nor exchange of views on the side of the school students, at least not at this level *Inform.*

Consult: school students expressing views and opinions

Activities at the level *Consult* are those in which the school students express their views and opinions, give explanations, or give suggestions. In the PST reports these activities were found mainly at the stage of data collection (24 projects), and of course also at the stage where suggestions and recommendations based on the research were formulated (11 projects). Furthermore, in quite a few projects, school students were consulted at the stage of *Problem definition* (10 projects) and *Intervention design* (14 projects) as well. Only a few projects included involvement of school students at the level *Consult* at the stages *Research design* (2 projects) or *Analysis of results* (2 projects).

The level of school student involvement *Consult* implies a more active way of participation in the research process than at the former level, although still initiated by the PST. This is clear in the type of

[14] The level *Inform* at the AR stage *Formulating recommendations/suggestions* is impossible by definition. According to the coding rules for the matrix, recommendations or suggestions by school students would always be coded as either the level *Consult*, or *Participate*, or *Collaborate*.

activities and sources that were described in the PST reports. On the one hand, various oral forms of communication were reported, used by the PST to elicit school students' views, opinions, ideas and suggestions. This could take a planned and more formal character in PST-school students interviews, after-lesson reflection-and-feedback sessions, or scheduled whole group or subgroup discussions; or an informal character in casual chats or unplanned talks during lessons. On the other hand, school students were consulted via written forms of communication, such as questionnaires/surveys and evaluation and feedback forms with open questions, that allowed for self-formulated answers or remarks. Also, small-scale, unobtrusive methods were applied to obtain school students responses, such as exit-tickets and post-its, and multimodal forms of graphics and words, such as in mind maps. Both, oral and written forms of student involvement at the level *Consult* were reported for most stages, except for the stages *Research design* (only oral, in one project as a meeting to negotiate partaking in a PAR research group), and *Data analysis* (oral, as an evaluative discussion between the PST and class on survey results and the PAR process).

Participate: school students actively involved as co-researchers

Activities in which school students are actively involved in the research process and in the creation of new knowledge, for instance by participating in generating findings or new insights, are conceived as the level *Participate*. This type of activities did occur at all action research stages, but only in a small minority of the PST projects (1-4 projects; see Table 4).

The more intense character of the level *Participate* is reflected in the type and focus of activities described in the project reports. Outstanding is the occurrence of research groups (as subgroups of selected school students to assist the PST in the PAR process) and cooperative developing of ideas, plans and procedures, or producing insights to stimulate the research progress. However, at this level, decisions about such steps were taken by the PST. Participatory types of activities occurred at all stages. Brainstorms and try-outs/pilots typically at the stages *Problem definition* and *Intervention design*; school student-led activities in some projects at the stages *Data collection* (student-led discussions; student-conducted observations), *Data analysis* (student-led interpretations of results), and *Making public* (school students presentation of findings to their classmates).

Collaborate: schools students and PST as research partners

In this study, the level *Collaborate* is the most intense level of school student participation in PST research projects; at this level, school students and the PST jointly conduct (parts of) the research activities and both participate actively in decision-making on research activities and processes. Distinctive for this stage is that school students are involved in jointly deciding on a course of action, either at stages preparatory to the conduct of the intervention, or at following stages in which data are collected and analyzed, and recommendations are formulated. Even though activities at the level *Collaborate* are hardly found in the PST projects, when they did occur, they appeared at almost all stages (2-8 projects); and among those, mostly at the stage *Intervention design* (8 projects). Only at the final stage, *Making public*, no school student involvement occurred at the level *Collaborate*.

At the initial stage of an action research cycle, activities at the level *Collaborate* occurred in the form of class or research team discussions to decide on which problems to address or what research questions to formulate. At later stages, joint PST-school students sessions occurred to agree on aspects

of the intervention like methods and strategies, and content and procedures; joint construction of research instruments; or the appointed or chosen school student-research team taking a survey among their fellow students. At the stage *Data collection,* two types of student participation were found: one joint PST-school students activity (a collaborative discussion of the results, within the research group of PST and school students); and a school students-only activity (school students created categorizations of data). Such a joint PST-school students meeting was also found at the stage *Formulating suggestions / recommendations*. Joint or independent school student activities at the stage *Making public* did not occur in any of the projects.

None (no SP): no research involvement of school students

Many of the research activities were carried out *without* actual involvement of school students. If school students themselves were neither actively nor passively involved in the PST research and information from or about them was not being used for the PST action research project, then the activity has been coded as *None (no student participation)*. The activities without student participation were traced at all action research stages, and in all, or in almost all, projects. Most strikingly this was the case at the stage, *Making public* (all 30 projects), although, as described above, 2 out of the 30 projects included an activity in which school students did have a role in making research findings public, respectively at level *Inform*, *Consult*, and *Participate*. The stage *Data collection* stands out here by the low number of projects with activities in the category *None* (4 projects).

When school students were not involved in any way, the type of activities that PSTs performed was distinguished as (see Appendix 5, column *None/no student participation*): *Individual* (PST by herself/himself); *Peers* (others at school: peer teachers, subject coach, school mentor; or at the TEd institute: peer PSTs (mostly as critical friends), supervisor, facilitator); *Literature/theory* (educational research; didactics and school subject literature); *School/curriculum* (school practices, national education policy). Most reported individual forms were: PST own experiences in teaching or with the class; self-conducted research steps, such as fabrication of materials or instruments to be used for research purposes; independent selection of school students for interviews or research teams; decisions on research procedures; analysis of data. However, at the stage *Making public*, all PST projects appeared as an almost exclusively non-participatory activity in individually writing the PAR report. None of the projects involved schools students in actually writing or co-writing the report, not even parts of the report. It should be noted (see previous section) that in one project, school students presented some research findings to their own classmates, which is a form of making public at the level *Participate*. Dissemination of results within the school or to an audience outside school did occur as well, but not with the involvement of school students.

Conclusions and discussion

This study explored the involvement of school students in PST participatory action research projects, in particular the occurrence of the research activities in which school students played a role, at various levels of student participation and research stages. Our interest was not so much in the actual portion of the research that could be defined as student participation activities, but in the question of whether student participation *would* occur in this context of PST research, and if so, *in what form*? The object of this descriptive study is participatory action research (PAR) in the context of a teacher education

program, focusing on how PAR can be realized in school practice as student participation in PST research projects, and seen from a PST's perspective. Even though it is conceivable and potentially interesting to design a study as PAR, that is as a collaboration of school students, pre-service teacher students, teacher educators and academic researchers, this study is not PAR itself.

Results show that such school student participation did occur in all PST research projects. Considering the levels of student involvement *Inform* and *Consult* as more towards the less intensive or passive end of the level of participation dimension, and *Participate* and *Collaborate* towards the more intensive or active end, then it is observable that school student participation was found much more at the two less intensive levels. School student participation at these levels usually took the form of the PST using test scores, grades, or student work, taking surveys or having chats, or leading classroom brainstorms or discussions. These activities resemble more commonly reported practices as data-driven instruction or teaching, and formative assessment or assessment for learning. However, albeit in a minority of the PST projects, school students were involved also at the two more active levels, and were in that sense acting more as partners to the PSTs. Typical forms that were found here include students research groups or pilot groups that help the teacher in planning, setting up, or conducting the research, and teacher-students research teams that jointly decide on research questions, content and procedures, or recommendations. Activities at these intensive levels were found more at the preparatory stages (a, b) than at later stages (f, g, h). Furthermore, regardless of the level, student participation was scarcely found at the stages *Research design*, *Analysis of results*, and *Making public*.

Although the reports did not systematically contain information about the number of school students involved in the various activities, it can be inferred from the type of participation that at the more intensive levels mostly a subset of schools students and not the whole class was participating or collaborating. They would either fulfill a role as representatives of their classmates, or were invited by the PST to take part in the research project as a whole (e.g., in a research team) or in a specific activity (e.g., a focus group meeting to work out suggestions for the lessons, or a pilot group to conduct a try-out of the proposed intervention).

From the perspective of the project overarching this study, which aims at enabling, stimulating, and building forms of teacher-learner partnership in the long term, beyond that required for a research project during an internship, it can be concluded that some PST projects indeed showed activities and forms of collaboration in PST research that can be considered as initiating phases of a development in that direction. They can be considered as openings and opportunities on the *Pathway to Participation*, as Shier (2001) has coined it. Nevertheless, many of the PST projects did involve school students, but in rather distant or passive forms, in which it is not clear as well to what extent the school students were aware of their participation and their possible impact on decision-making with regard to the research process or the teaching and learning practice. Furthermore, a distinction can be made between activities through which school students partake in decision-making in, on the one hand, matters related (only) to the PST (or joint) research project, and, on the other hand, matters related to class and school practice, such as pedagogy, class climate, school rules, school environment, student representation. Both types can bring about student participation at various levels of involvement, and add to the relevance of the research questions and results for democratizing the teaching and learning

context and students' school life. However, the latter type is potentially more beneficial to the students themselves, because it would have a longer-lasting effect on learning conditions, beyond the PST research period, and might even have an impact on other teachers and school in general (cf. Groundwater-Smith & Mockler, 2016; Shier, 2001).

An explanation of the found differences in the extent to which school students were involved by their PSTs and in the form this took, cannot be drawn from data in this study. However, some factors could be assumed to influence the way student participation played out in practice. Research on development stages of PST and beginning teachers (Fuller, 1969; Louws, 2016; Watzke, 2007) suggests that teachers in early phases of their teaching career tend to focus on themselves and to approach teaching problems they encounter from their personal perspective, and not so much from a student's perspective. Furthermore, classroom management and being in control of educational and social processes is for many PSTs a major issue that consumes a large part of the PST energy and capacities. Complicating the situation by, for instance, implementing differentiated teaching and learning or by involving school students in research and decision-making, might be too much for some or many PSTs. This was well recognized in this study, but still the aim was to find out what kind of student participation could be realized under these circumstances, and also to create an experience with student participation that could serve as a starting point for beginning teachers. The personal, social, and academic qualities that a PST brings to the program, might form another cluster of influences. PSTs with some former experience in teaching situations, and with greater self-confidence in classroom settings, might be better equipped and more prepared to elicit school students' views on their teaching and to share control with them, also in designing lessons and conducting research in class. Certainly, student participation comes with a change in power dynamics between teacher and students (Cook-Sather, 2006; Taylor & Robinson, 2009). However, willingness to share responsibility for teaching and learning, and recognition of students' and teachers' expertise, does not imply, as some PSTs tend to believe, giving full control to school students (Trent, 2003). Such an interpretation, however, might jeopardize a teacher-student partnership. How PSTs define themselves as teachers and their views of academic and teacher research, on pedagogy and didactics, and even deeper, on childhood and child-adult relations, either stimulates or constrains student participation. A subject of discussion is to what extent the PSTs' and school students' activities could be labeled as PAR, in the sense of meeting criteria for participatory research with young people (Lansdown, 2005), on issues of collaboration, ethics, and knowledge generation (Groundwater-Smith et al., 2015). Informing and consulting young people runs short of participation when they are not involved in identifying the relevant questions, do not have input into the research methods, do not take on the role of researchers, but follow the agenda of the teacher, and are not engaged in discussions on results and implications (Lansdown, 2005). Clearly, these criteria were not fully met in all projects, nor at all research stages. Nonetheless, overall, PSTs adhered to principles of research with children, such as informed consent/assent, privacy and safety, and representativeness. In various cases, and at various stages, participatory and collaborative activities by school students could be identified and the research did have a real impact on their lives and their agency in school, at least in classes taught by the PST during the internship.

To conclude, it can be said that a form of student participation did occur indeed in all PST projects, but that involving school students as partners with their teachers, appeared to be a step too far for many of the PSTs in this initial teacher education context.

However, as was hoped for, most PSTs came out of the action research process with unexpected and positive experiences, which led to the insight that it is sensible and beneficial not only to involve school students in research, but to see them in a broader sense as partners in an educational endeavor. This may stimulate a PAR-oriented disposition with regard to their future teaching career.

Limitations and further research

For this study, PAR reports written by the PSTs were used as data sources. Therefore, findings are based on self-reported research activities. In that respect, data represent PSTs' perspectives on school student involvement in PST research and their account of that, and not actual practice per se. In a next study, for instance through observations in class and school, perceived and implemented practice could be compared. Also, other stakeholders' perspectives, in particular PST's school students, could be investigated, either as a descriptive study as the current study, or even as a PAR study of stakeholders at school and at the TEd institute, aimed at investigating, designing and improving participation in teaching and learning practices.

The current study was confined to the period the PST followed the one-year TEd program and conducted the research assignment. The reports were written and submitted at the end of the study year, after which the PSTs left their internship schools and the TEd program. Therefore, most reports did not contain information on planned future actions with regard to student participation, and none could report on actual continuation of a participatory teaching practice by the PST. Consequently, this study does reveal student involvement in teaching and research practices of PSTs, but not the impact of the program on the practices of beginning teachers. Subsequent studies could focus on school student participation and its impact after PST graduation by employing a cross-sectional or longitudinal approach.

Considering this specific teacher education context of this study – a bilingual/international track of a one-year teacher education program at a Dutch research university –, investigating student participation in other teacher education contexts would be a natural continuation. This could also include circumstances in which setting up the research assignment as PAR is not required by the program, but offered as an option, besides forms such as educational design research. Broadening the scope to other universities and types of TEd programs could shed light on the similarities and differences that would occur under different circumstances and with different groups of students.

Since the current study looked at research activities and school student involvement from the perspective of the PST and the TEd program, no data was specifically collected on school students' perspectives on the way they were involved and on their impact on decision-making, both actual and as preferred by them. Researching type and level of student participation at various action research stages and investigating how to enhance this in stages that showed little student involvement in this study, such as *Making public*, would inform future PST preparation on participatory research. As part of that, it might be advisable to require PSTs having their school students included as co-writers for at

least parts of the report, and as reviewers of the conclusions and recommendations, in order to further strengthen student participation. Due to the limited period for the PAR projects and small amount of weekly lessons during the internship, research training for school students was not included, but could have enhanced their participation.

Significance and implications

This study contributes to educational theory by a deeper insight in school student participation in PST action research in a teacher education context. It provides new knowledge through a more detailed description of the nature and level of student participation at various stages of the action research process. It also adds to educational research methodology through the development of the *SPinSTAR* matrix as an instrument for description and analysis of student participation practices in PST action research, and by providing examples of student participation at various action research stages.

Furthermore, some practical implications for teacher education programs can be derived from this study, mainly based on possible uses of the analytical matrix *SPinSTAR*. However, assessing the actual value and usability of SPinSTAR requires its application and further study and development in TEd programs, preferably in diverse circumstances. Further try-outs might include the following possible settings:

- First, the matrix could be used as a tool in the TEd program to show PSTs a view on teaching and researching that is different from what most of them are used to. Such an experience would presumably lead to transformative learning (Mezirow, 2009) by the PST through the internal conflict, perturbation or constructive friction that it evokes (Bronkhorst et al., 2014; Meijer, 2014);
- Next, PSTs themselves could use the matrix for planning and mapping student participation in their research; to analyze their own PST research practice; to get ideas for student participation in PST PAR assignment; to realize that student participation can vary along the way in content and level and that(differentiated school student input at various action research stages;
- Lastly, the matrix could serve teacher educators in: (a) introducing PAR to PSTs and in enhancing the uptake of student participation in PST research; (b) offering PSTs a scaffolding tool for the PAR process; (c) equipping them such that they can keep on doing PAR on their own, can find a suitable context for such research in schools, can speak out for PAR practice before colleagues and school. (N.B.: even in adverse contexts, a PAR-project can be carried out within the teacher's own class).

In adapted form, the above implications could also be valid for postgraduate settings, e.g., by using the matrix as an instructive or analytical tool in professional development courses and in learning communities.

Teacher-student partnership cannot arise from a one-off event, but is built up over a longer period of time, in a nurturing and sustaining context. Student participation needs embedding in the wider school context, both in research settings and in domains such as educational aims, teaching approaches, and school climate. Looking at issues of teacher induction and continuous professional development, teacher leadership, and school development can yield insight into conditions that foster student involvement and gradually develop this into commonly accepted and natural participatory school

practices, or, as Shier (2001) proposes, to go from “openings, to opportunities, to obligations”, and to genuinely transform educational practice into participatory praxis.

This study shows that school student participation in pre-service teachers’ research projects and development of the teaching practice is a realistic possibility, in the sense that a dedicated teacher education program and participatory research approach can allow pre-service teachers experience various and fruitful ways of school student participation. Through these experiences, pre-service teachers can then evaluate if and how participatory and democratic principles could become an integral part of their future teaching.

Chapter 4

Principles for school student participation in pre-service teacher action research

A practice architecture's perspective

"So, I did try to do as much as possible with their ideas, which also made them feel like: it makes sense what we're doing here"

Pre-service teacher (Biology, class Year 10)

Abstract

This study focuses on pre-service teachers' views of the conditions that foster their participatory action research practices in secondary schools and on how these conditions can inform the development of a teacher education program for a participatory approach. By using the *Theory of Practice Architectures* as an analytical lens, eight cases of participatory action research projects were studied at two interrelated sites of pre-service teachers' learning: the teacher education institute and the internship school. Findings shed light on the conditions for fostering participatory action research practices in a teacher education context in terms of three kinds of arrangements, i.e.: cultural-discursive, material-economic, and social-political. Based on the findings, a set of 17 principles for supporting participatory research practices is presented that can be used to assess the viability of preservice teachers' participatory action research within a within a teacher education program, and that also supports a well-aligned institute-school collaboration.

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Chapter 4 – Principles for school student participation in pre-service teacher action research: A practice architecture's perspective

Introduction

Practitioner research by teachers is valued as an important type of educational research (Crawford-Garrett et al., 2015) and therefore increasingly has become a regular part of the teacher education (TEd) curriculum (BERA-RSA, 2014a, 2014b; Taylor, 2017; Westbroek & Kaal, 2016). Practitioner research can be defined at a general level as: "the intentional and systematic inquiry into one's own practice" (Dinkelman, 2003, p. 8). Participatory action research (PAR) in education can be viewed as a specific case of such practitioner research in which teachers – or pre-service teachers – and school students collaborate in research into their own teaching and learning practice (Call-Cummings, 2018; Galletta & Torre, 2019; MacDonald, 2012; Torre et al., 2015).

School students are consequential stakeholders in educational research. It is observed that generally they are 'objects' of research, and they are scarcely involved in educational research as active participants (Groundwater-Smith, 2005). This is problematic, not only because research misses first-person perspectives and might end up with biased results and unpractical recommendations, but also because it denies young people the opportunity to participate in decision-making with regard to their own learning and school lives. Student participation in teacher research can contribute to improvements in educational practice on a personal, school, and community level, in the best interest of all stakeholders (Black & Mayes, 2020; Bland & Atweh, 2007; Cook-Sather, 2020; Fielding, 2007; Groundwater-Smith & Mockler, 2016; Sandoval & Messiou, 2020). Moreover, by doing so, it can add to developing a participatory school practice by modeling democracy and citizenship through participatory research practices (Biesta & Lawy, 2006; Call-Cummings, 2018; White, 2011). Furthermore, by integrating PAR approaches in the TEd curriculum for PST's research in their internship schools, pre-service teachers (PSTs) can be made acquainted with the concept of student participation. In this study, student participation is defined as the involvement of students in decision-making processes in school matters that affect them. And in the research context for this study, a TEd program, student participation is further specified to school student involvement in the PST PAR assignment.

The aim of the current study is to contribute to knowledge about how to design and integrate student participation in school and teacher education contexts. This is embedded in the broader ambition not only to enable practice-based research on classroom practices, and as a possible consequence, the transformation of those practices, but also to foster the transformation of the teacher-learner relationship towards a practice of partnership characterized by shared responsibility for learning and education (Fielding, 2011, 2018; Rudduck & Flutter, 2000). In this sense, this study joins former work on student voice and student agency, aimed at enabling students to exert influence in their own learning context. Listening to student voices is not enough (Lundy, 2007); student participation can only be taken as influential and agentic when teachers share power with their students and when students 'speak and act alongside credentialed educators as critics and creators of educational practice' (Cook-Sather, 2018, p. 17).

Within the context of this research project, a one-year postgraduate teacher education program in the Netherlands, PAR was introduced as a prescribed approach in the TEd program through pre-service teachers (PSTs) researching their teaching practice at their internship school in collaboration with their school students. Through this study, we aimed to develop insights into the way PSTs perceive this requirement to conduct research, the conditions they perceive as enabling or constraining their PAR projects in collaboration with their school students, and how these insights and conditions can inform further development of the TEd program for a participatory approach in teaching. Therefore, in this study, we focus on PSTs' PAR practices and on the conditions that foster them, based on PSTs' interpretations of those conditions.

Theoretical framework

The involvement of school students in PSTs' research activities, as they unfold in the PAR projects as part of the TEd program, can be understood as PAR practices. Torre et al. (2015, p. 540) describe PAR as "Rooted in principles of justice and democracy, participatory action research is an inclusive, collaborative approach to research defined both by participation and a determination to produce knowledge in the interest of social change". The social phenomena under investigation are viewed as historically located and produced and reproduced by particular social, linguistic, material, political, and cultural conditions (McTaggart, 1998). In this context, the stakeholders participate as subjects and as agents of knowledge. PAR is a social process in which the participants are interested in "whether they understand their practices and the consequences of their practices, and in whether the conditions under which they practice are appropriate" (Kemmis, McTaggart, et al., 2014, p. 6). PAR aims to bring about deliberate, informed, and justified change on the level of the language that is being used in the practice, in the activities, and in the relationships between the people in the practice (McTaggart, 1998).

To explore and explain these practices and the conditions that enable or constrain them, we specifically draw on the *Theory of Practice Architectures* (Kemmis & Grootenboer, 2008; Kemmis, Wilkinson, et al., 2014; Mahon et al., 2017). As a specific instance of the family of practice theories, the *Theory of Practice Architectures* shares "… the idea that a practice is an organized constellation of different people's activities" and that "… important features of human life must be understood as forms of, or rooted in, human activity – not the activity of individuals, but in practices, that is, in the organized activities of multiple people." (Schatzki, 2012, p. 13). Furthermore, while practice theories see practices as embedded in social structures, they also acknowledge individuals as agentic subjects (Buxton et al., 2015). The *Theory of Practice Architectures* builds on the above ideas by conceiving practices as embedded in social structures ('arrangements'), related to language, activities, and social relationships, which aligns well with the aims and characteristics of PAR. Since its first publication in 2018, the theory has been used in multiple domains and for various purposes. For instance, the *Theory of Practice Architectures* has served to study informal learning practices of refugee students (Kaukko & Wilkinson, 2018), to make visible the different kinds of actions and judgments in the everyday work of English teachers (Edwards-Groves & Grootenboer, 2015), to theorize on the concepts of recognition and partnership in education (Edwards-Groves et al., 2016), to understand teacher involvement and student participation in lessons, classrooms and school communities (Niemi & Loukomies, 2021), and even to analyze the collaborative research practice of researchers themselves (Pennanen et al., 2017).

Practice and the theory of practice architectures

The *Theory of Practice Architectures* (Kemmis & Grootenboer, 2008) understands a practice as "a socially established cooperative human activity involving utterances and forms of understanding (sayings), modes of action (doings), and ways in which people relate to one another and the world (relatings) that 'hang together' in characteristic ways in a distinctive 'project'." (Mahon et al., 2017, pp. 7-8). These bundles of sayings, doings, and relatings at the side of the practitioner are in constant interplay with the conditions under which the practice unfolds: the arrangements that make the practice possible (the practice architecture of the site) (Mahon et al., 2017, p. 13), but that can also, in a reciprocal process, be transformed by the people that enact the practice.

Furthermore,

> [b]eing social and situated, practices are not just shaped by the experience, intentions, dispositions, habitus, and actions of individuals (…). They are also shaped and prefigured intersubjectively by arrangements that exist in, or are brought to, particular sites of practice.
>
> That is to say that a practice extends beyond what the individual enacting brings to the site as a person (e.g., beliefs, physical attributes, and abilities); it also encompasses arrangements found in or brought to the site, arrangements with which the individual interacts, and without which the practice could not be realised. (Mahon et al., 2017, p. 9)

As explained by Edwards-Groves and Kemmis (2016), these arrangements that can either enable or constrain the practice, appear in three forms that are parallel to the sayings, doings, and relatings of the practitioner in the practice:

> (1) *cultural-discursive* arrangements that exist in the dimension of semantic space, and that enable and constrain how we can express ourselves in the social medium of language (and symbols) – for example, a shared language like English or Swedish, or shared specialist discourses such as knowledge of a discipline like physics or a profession like education;
>
> (2) *material-economic* arrangements that exist in the dimension of physical space-time and that enable and constrain how we can do things in the medium of work and activity – for example, a billiard table, a room, a home, a workplace, a town or a local region; and
>
> (3) *social-political* arrangements that exist in the dimension of social space, and that enable and constrain how we can connect and contest with one another in the social medium of power and solidarity – for example, the relationships between people in a family, a sports team, a work organization or a political entity like a municipality or nation, or between people and other living and non-living things in an ecosystem or a factory or a digitally-mediated social network. (o.c. p. 87)

The practice landscape as laid out in cultural-discursive, material-economic, and social-political arrangements, which together are defined as 'practice architecture', does not actually determine a practice, but shapes (prefigures) what is possible in the specific practice, and reciprocally, is being shaped by the practitioners enacting the practice. The impact of those practice arrangements on, for instance, the teaching and learning practice at school is not fixed but depends as well on the reception, understanding, and uptake by the practitioner. New ways of saying, doing, and relating can be introduced to a practice, and thus can lead to changes in the practice architecture of the site, or vice versa. Mahon et al. (2017, p. 12) state that: "Such a notion has implications for those wishing to change practices since it signals the role and importance of human *agency* in the transformation of practice conditions.". The *Theory of Practice Architectures* allows for investigating and understanding practices

at three different dimensions of human interaction, and identifying conditions of practice contexts (or *sites*), the way they 'hang together', and the way they are interpreted and acted upon by the practitioners, (in this study, the PSTs). 'Hanging together' is an important aspect of this theory as it represents the interdependence of the three dimensions of a specific practice, both with respect to the practitioner's activities and the arrangements that enable and constrain them (Kemmis, Wilkinson, et al., 2014).

The current study

In most initial teacher education programs, PSTs undertake learning tasks within two related contexts: the TEd institute and the internship school. This constitutes a dual learning environment for the PST. Ideally, the institute and school form a teacher-learning partnership in which both sites are attuned to each other and jointly comprise the full TEd curriculum that leads to qualification as a beginning teacher. However, this attunement cannot be taken for granted; the specific constellation of arrangements at both sites could support or strengthen the learning practice, but could also undermine or weaken it. Presumably, this would depend as well on the way PSTs experience and perceive the conditions they encounter.

In this study, applying and distinguishing three forms of arrangements aimed to better understand the PAR projects as sites of the interplay of the school context in which the PSTs conduct their research and the TEd environment.

The following main research questions guided the study:

- What do pre-service teachers perceive as enabling or constraining *conditions* for involving school students in their participatory action research?
- What *principles* for supporting preservice teachers' participatory action research can be derived based on these conditions?

Method

The present study used a multiple case study approach (Yin, 2003) to identify and describe conditions for school student participation in PSTs' research in schools from a PST's viewpoint, and to capture their variation across sites. The study consists of eight cases, which are the separate PST PAR projects, conducted at different schools. The study describes the perceived conditions in terms of arrangements of the two interrelated sites in which the PAR projects were designed and conducted. These two sites are, on the one hand, the TEd institute and program (Site A), which is the same across the cases, and on the other hand, the school and teaching practice (Site B), which is different for the separate cases (Figure 4). See Table 5 for an overview of generic arrangements (Site A).

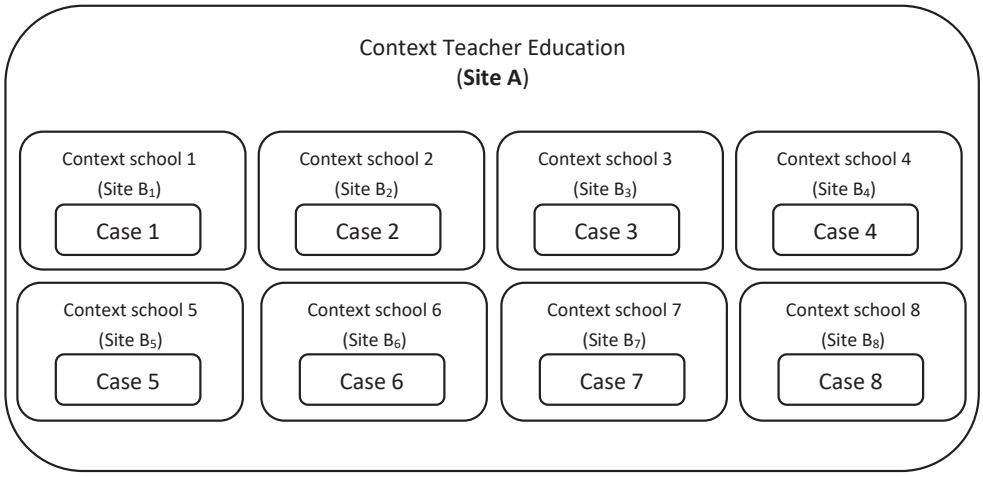

Figure 4. Multiple case study design with 8 cases

Subsequently, insights and conditions from PSTs were taken as the basis for deriving principles for supporting participatory research practices by PSTs.

Participants and sites

The context for this study is a one-year postgraduate teacher education program at a research university in the Netherlands (Site A in the current study; see also Table 5).

The PAR projects that are central here were conducted by PSTs from a special track of the TEd program, the *World Teacher Program*, that aimed to prepare them for teaching in secondary bilingual and international schools. An explicit part of this program was for all PSTs to design and conduct a PAR project, with the higher aim of enhancing school student participation in decision-making processes related to their education. The PAR projects thus served two broad goals in relation to the two sites: a) to introduce the PST into a teacher-researcher role, which includes developing the required knowledge, skills, attitude, and experience; and also, to develop a disposition to continue and expand these qualities in the PST's future teaching practice; and b) to enable and foster school student participation in decision-making processes in general, and specifically in and through actively involving them in the PAR projects.

From the start of the TEd program, PSTs were introduced to the idea of teacher research and student voice and student participation. PSTs developed research questions for their projects during their internship and in consultation with university-based teacher educators. Their research questions needed to be related to their own teaching practice, but not necessarily to the subject they taught, and should be relevant for their school students as well. This could be achieved by, as recommended, involving the school students in the process of developing and formulating the research questions. A requirement of the project was that PSTs actually trialed a proposed change in their teaching aligned with the participatory aim of the project to involve school students in decision-making processes.

At the university, five teacher educators were involved in the program. The teacher educators were the course leaders and PSTs' supervisors, and they were formally responsible for assessing and grading. In addition to the existing staff of the TEd program, an action research expert and coach was included

in the *World Teacher Program* staff; she provided PAR courses and advised on PAR plans of the PSTs, and acted as an assessor of the PAR reports. The first author was involved as the instigator of the PAR approach, as an informant on PAR as an approach in classroom practice, and as a researcher of the PSTs' PAR projects, but not as an educator, facilitator, or supervisor.

The PSTs conducted their PAR projects at their respective internship schools, belonging to an established set of bilingual or international secondary schools in the western part of the Netherlands (Site B in the current study; Figure 4). At all schools, the PSTs were guided by a supervising teacher (from the same school subject) and a school mentor; however, their supervision mostly concerned classroom teaching practice, and guidance of the research was not a requirement.

Table 5. Site A (TE/Program) - Generic arrangements (apply to all PSTs)

Site A (TE program/institute)
Cultural-discursive arrangements
Usual ways of talking, thinking, and exchanging through language:
– Teacher as a researcher, as one of the six roles that define the teacher's profession/practice
– Student-centered approach ('Focus on the learner') as the central theme for the program
– Decentering the teacher, as a way to change the power balance in the classroom
– Participatory Action Research, as a suitable and preferred research approach for investigating and developing your own teaching practice and for involving school students
– Student voice, as a desirable educational principle for democratic education
Material-economic arrangements
Usual ways of doing and organizing things:
– WTP: TE program aimed at teaching at bilingual/international secondary schools
– Seminars (general and PAR-specific): additional study hours for WTP, dedicated to WTP issues and PAR concepts and skills
– PAR assignment: obligatory part of the TE program
– International internship: obligatory part of the TE program; duration abroad: 3-4 weeks, to be planned within a pre-scheduled 6 weeks period in Semester 2.
Social-political arrangements
Usual ways of relating to each other:
– TEs as program designers, teaching experts, guides, and assessors (authority; TEs in charge)
– TEs as models, for learner-centeredness and student voice
– Facilitator, as action research (AR) expert, coach on AR assignment, assessor of PAR project report (mixed relationship with PSTs)
– Peers as CF's (student colleagues as advisors, fellow students; equal standing)
– Staff & PSTs Evaluation & Development Meeting/Participatory Program Design Session: PSTs as participants (partners to staff) in evaluating and re-designing WTP (both as experienced participants in the WTP; recognized equal 'experts' and mutual learners)

The present study focused on a subset of PSTs from two consecutive study years who conducted a PAR project. The PSTs were invited to participate in this study as cases in a multiple case study design, which 10 out of 32 of them consented to do (6 female, 4 male). This resulted in 8 cases for this study (Figure 4), because 2 research projects were conducted in pairs (see Table 6).

Table 6. Case descriptors

Case number	Cohort	School type	Subject	PAR project topic
1	2015-2016	Bilingual	Economics	Classroom displays as language scaffolding
2	2015-2016	International / Bilingual	English	English literature and motivation in IB and TTO classrooms: A comparative study
3	2015-2016	International	Biology	Code-switching in bilingual education: coding for success?
4	2015-2016	Bilingual	Economics	Giving up the monopoly: involving students in creating lesson plans
5	2015-2016	International	Spanish	"Miss…., Why?" Increasing meaningful learning in secondary education
6	2015-2016	Bilingual	History	History and the learner's identity
7	2016-2017	Bilingual	Biology	Relation between lesson approaches and student motivation and behavior
8	2016-2017	Bilingual	English	Student motivation / Imagining My Future English Self

Data collection

Data for this study were collected from the academic years 2015-2016 and 2016-2017, which comprise two iterations of the one-year TEd program. At the end of each study year, semi-structured interviews (see topics below, and Appendix 6) were held with all PSTs who took part in the case study. All interviews were conducted by the first author. The working language was either Dutch, being the native language of most of the PSTs and of the interviewer, or English if preferred by the PST. The interview duration was between 45-75 minutes; they were audio-recorded and transcribed verbatim. Since the study aimed to capture the PST's perspectives, the interviews had an open character in which only the general topics were formulated as initial questions and thereafter mainly followed the interviewee on views and issues the PST opened up herself/himself. Probing questions were at hand to keep track of aspects of PAR and student participation that were not mentioned spontaneously (Robson and McCartan 2016). The study covered two main topics, aligned with Site A and Site B, both with specific attention to school student participation (see Appendix 6):

1) Experiences with the PAR assignment and its unfolding at school (site B); that included, PSTs' current views on research, specifically on teacher research and participatory action research. Probing questions concerned interesting and challenging aspects of the PAR assignment; involvement of school students; perceived enablers and constraints for PAR and student participation; research competence and support; perceived value of PAR and student participation.
2) PSTs' current views on and evaluation of the content and set-up of the TEd program (site A). Probing questions concerned PSTs' voice in the TEd program; perceived enablers and constraints for PAR and student participation; support in learning to 'focus on the learner'; relation between the TEd program and school practice.

Data analysis

Qualitative data analysis was aimed at determining conditions that affect the unfolding of the PST PAR project, according to the PSTs themselves, in particular with respect to the level and nature of school student participation in this project. The interview transcripts were the main data sources for this study.

The data analysis consisted of the following within-case analytical steps (1-3), and a cross-case analytical step (4):

1) In the interview transcript, all instances of perceived conditions for either the PAR assignment and/or specifically school student participation were identified and marked with keywords or short descriptions, such as 'tight schedule at school'; 'difficult project planning'; 'less research done than intended'; 'period of interrupted class contact'; 'freedom in choice of research topic'.
2) The case descriptions and all identified conditions were paraphrased and transferred into a case matrix of conditions (for an example, see the text in small fonts in Appendix 9). All identified conditions were categorized as referring to Site A (institute) or Site B (school); also, they were assigned to one of the three arrangements (dimensions of practice architectures): cultural-discursive, material-economic, social-political (for a description of the category coding, see Table 7).

Table 7. Types of arrangements and applicable aspects, concepts, and terms

Arrangements[15]	Description	Aspects, concepts, terms
cultural-discursive	Semantic/conceptual aspects: Usual ways of talking, thinking, and exchanging through language	language, dialogue concepts, ideas, goals/aims beliefs, perspectives
material-economic	Spatial, temporal aspects: Usual ways of doing and organizing things	objects, spatial arrangements time and resources, program organization materials, study guides
social-political	Relational aspects: Usual ways of relating to each other; aspects of power and solidarity	roles and tasks agency, influence, recognition, rights status, position, hierarchy

For instance, the interview quotation that was indicated with 'PAR sessions very helpful for student participation' and 'student voice essential' was paraphrased as (originally in Dutch; translation authors): 'PAR sessions were enormously helpful for involving students: it was clear that student voice *had to be* included'; and categorized under *cultural-discursive arrangements* at Site A (TEd program, institute). The interview quotation labeled as 'tight schedule at school' was paraphrased as: "The IB curriculum at this school so fully packed that it leaves hardly any space or time for research", and, "No opportunity to discuss the questionnaire results with the

[15] The term 'arrangements' is part of the Theory of Practice Architectures (Edwards-Groves & Grootenboer 2015; Kemmis et al. 2014b).

students."; and categorized under *material-economic arrangements* at Site B (practicum, class, school). And, as a next example, the paraphrase "Communication with supervisors was super; feedback clear. Matches with own attitude/habit to ask for help when necessary" was categorized under *social-political arrangements* at Site A (TEd program, institute).

3) Next, and in order to facilitate cross-case analysis, the paraphrased, listed conditions were grouped into similar or related conditions and were reformulated on a more generic level. At this step, also all paraphrased conditions taken from interviews in Dutch were translated into English. Furthermore, the grouped conditions were labeled as either being an enabler (+) or a constraint (-) for realizing the PST PAR project (for a description of the category coding, see Table 8). For traceability reasons, two versions of the tables were generated: one with quotes in the original language, written beneath the generic reformulations (for an example, see Appendix 9); and another one, with those generic conditions only. The latter tables from all eight cases formed the result of the within-case analysis.

Table 8. Types of conditions

Condition type	Description / definition	Coding criterion
enabler (+)	resource, state, or circumstance that makes possible, stimulates, encourages, or enhances the realization of PST's PAR project	Anything that makes PAR **more likely** to happen, or to a **larger extent**, or with SP at a **more intensive level**
constraint (-)	resource, state, or circumstance that prevents, hinders, discourages, or lessens the realization of PST's PAR project	Anything that makes PAR **less likely** to happen, or to a **lesser extent**, or with SP at **a less intensive level**

For instance, the conditions 'Research in school not viewed as important' and 'School is very academic, but not so with regard to research; no-one talks about research projects' were combined into the more generic condition for Site B 'Research in school not viewed as important'. And in a similar way, the condition 'Combination of teaching practice and an international internship is very much; too little taken into account what is going on at the same time in the program', was reformulated as 'Packed curriculum; overlap of activities', which in this specific case relates to Site A.

4) Analytical Step 4 concerned aggregating the resulting eight case-specific tables of enabling and constraining conditions for PAR, as perceived by the PSTs, into an overall table of perceived conditions on both sites, Site A and Site B (Figure 4). For instance, the cultural-discursive enabler 'school student's enthusiasm for PAR/student participation' was aggregated into 'engagement; enthusiasm; willingness (PST, school students, school staff)'. In this process, all constraints were translated into (reformulated as) PAR-supporting terms, that is as resources, states, or circumstances that positively impact school student participation in PST PAR. The rationale for this translation into supporting terms is the purpose of this study, to identify and provide guidelines or instructions for better realizing student participation in PST research in schools. For instance, the material-economic constraint 'packed curriculum; little time and

space for research and student participation' was reformulated as the supporting condition 'good planning (schedules, alignment)'. By this, we used the distinction in dimensions of arrangements to (interpretatively) group the enabling and constraining conditions that PST mentioned as impacting their PAR practices into (productive) principles for enhancing PAR projects in a TEd context, on the same 3 dimensions as in the *Theory of Practice Architectures*.

We acknowledge the interwovenness of the arrangements in each practice, which implies that aspects can be viewed from various dimensions and then have different foci. We tried to place aspects where they were most prominent related to conducting PAR or in line with the main reason for being mentioned by PSTs.

The above data analysis procedure was performed by the first author. The quality of the steps taken was checked by means of an audit procedure. A second researcher who had not been involved in the data analysis traced back the results of each analytical step to the underlying data and assessed the analysis on criteria of traceability, applicability, and trustworthiness. The audit confirmed the analytical quality as good. Only minor changes were applied in the list of principles; for instance, the social-cultural principle *permissiveness/leniency* was deleted, because it overlapped with some of the other principles, such as *safety* and *equality*.

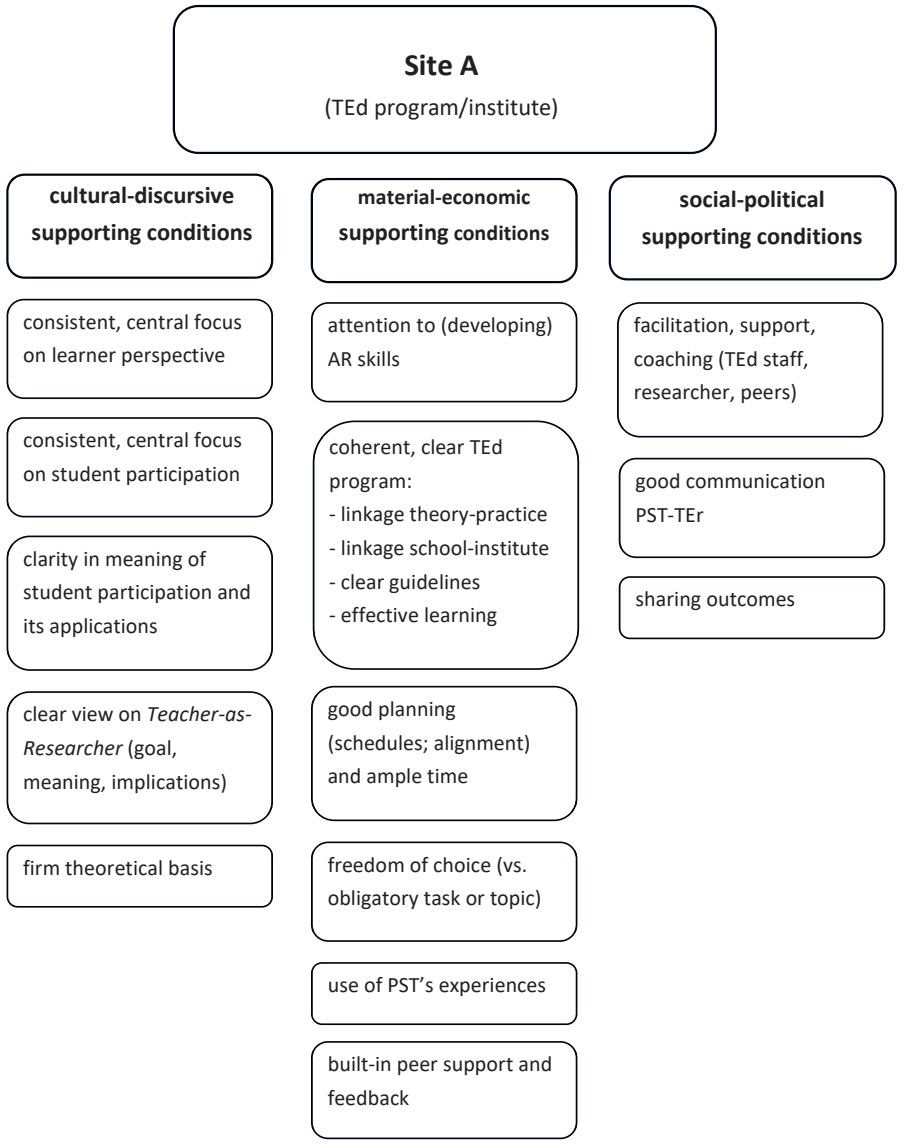

Figure 5. Perceived supporting conditions for PST PAR projects

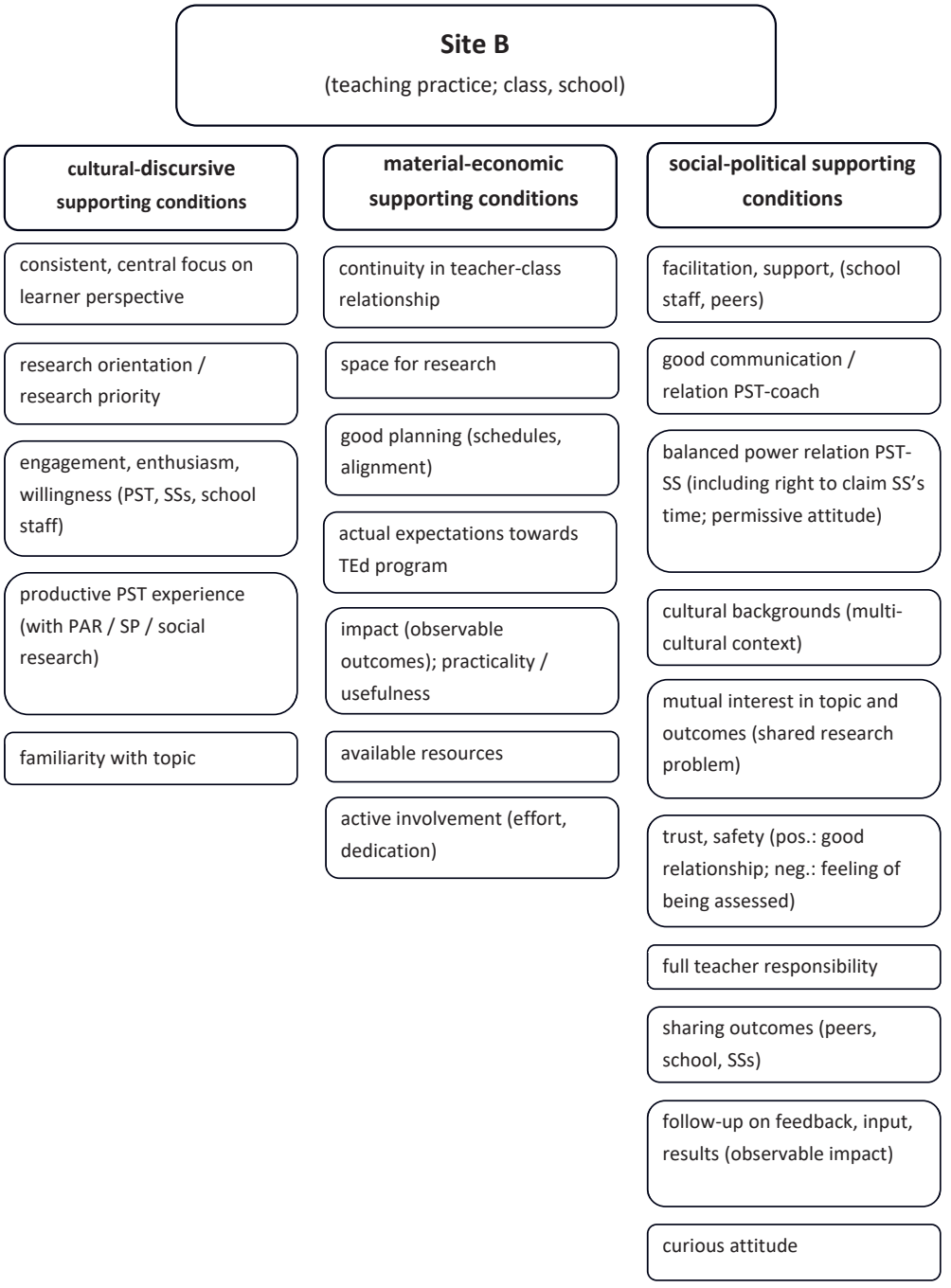

Figure 6. Perceived supporting conditions for PST PAR projects (continued)

Findings

In this study, we looked at arrangements of the sites in which preservice student teachers are prepared for their teaching practice, in particular for their role as teacher-researcher. The concept of arrangements, in its three dimensions, allowed for describing perceived conditions that shaped the PST PAR practice. In the analysis, we distinguished cultural-discursive supporting conditions, material-economic supporting conditions, and social-political supporting conditions, at both learning sites: the teacher education institute (Site A) and the school and teaching practice (Site B). However, the three dimensions are inseparable in practice and together prefigure what can be done by the practitioners.

First, supporting conditions for the PST PAR projects with the school students will be described. This will be followed by a presentation of a set of principles for PST PAR that has been derived from those conditions.

Perceived conditions for PAR

Reported elements of the practice architectures that affected the way the PAR projects were played out, either positively or negatively, covered a range of conditions. Clearly, not all conditions were mentioned by all PSTs, and not all of them were evaluated in the same way or as having the same impact. However, for each of the two sites that apply here (Site A, the TEd program and institute, and eight instances of Site B, the school and PST's teaching practice) an overall set of supporting conditions was determined, for each of the three dimensions of the arrangements (see Figure 5 and Figure 6).

Cultural-discursive supporting conditions

The language and terms that are used, and the thinking, policies, and orientations they are grounded in, form the cultural-discursive arrangements. For both sites, A and B, PSTs broadly and repeatedly expressed as a supporting condition building and communicating a consistent, central focus on the learner's perspective, and transmitting a clear, high-priority orientation on research and on the role of Teacher-as-Researcher. At Site B, this appeared also in the engagement, enthusiasm, and willingness of the PST, the school students, and the school staff for PAR and for an active role of the school students in this activity. While only a few PSTs had former experience with this type of research, or with social research in general, and with student participation, such research experience was regarded as a favorable, although not a required, condition. At Site A, the TEd program, PSTs mentioned clarity in the meaning of student participation and of the way it could be applied in teaching practice, as conditions that had a positive impact on their PAR projects. Also, they perceived teacher educators providing a firm theoretical basis on PAR and student participation as enhancing the quality and depth of the PAR assignment, and making it easier for them to grasp the purpose of the assignment and the way it could be translated to concrete research activities with their school students.

Material-economic supporting conditions

The organization of procedures and activities in school and in the TEd institute, the way the PAR projects are accommodated within their contexts, and the resources and materials that are at the disposal of the PST, form the material-economic arrangements for the range of activities and the actual work that is being done. For the PSTs, good planning of activities and assignments, including ample time for the research, a study and teaching schedule that fits the demands, and above all, a smooth alignment of planning at Site A and B, were reported as major supporting conditions. At Site A, the

PSTs perceived such aspects in the provision of a coherent TEd program characterized by clear links between theory and school practice; a good mutual connection between the organization and planning of the curriculum and learning activities at the TEd institute with those in the school; clear guidelines for conducting and reporting the PAR project; and effective learning activities to develop as a teacher-researcher and to acquire action research skills. Furthermore, integrating into the TEd program freedom of choice instead of obligatory tasks or topics, and acknowledging and using PST's experiences in planning and content of the program, were mentioned as supporting conditions as well.

Along with these conditions at Site A, several other supporting conditions at Site B emerged from the PST experiences. These conditions include:

- continuity in the teacher-student relationship, which is related to the planning of the classes the PST had to teach;
- active involvement of all stakeholders in the PAR project, visible in putting effort and dedication into it;
- availability of resources at school, such as time, spaces, materials, and some financial budget.

Furthermore, for both sites, support and feedback by peers were viewed as supporting conditions. Finally, having a real impact in terms of outcomes and changes that were observable, primarily for the school students, but also for the PST and other stakeholders at school, emerged as strongly supportive. Enacting the PAR assignment as intended for school student participation, and then having such an observable impact, was enhanced by PSTs viewing the required activities as practical and useful.

Social-political supporting conditions

The roles people perform, and the way people relate to one another, or are expected to, form the social-political arrangements at school and at the TEd institute that also shaped the PAR projects. Three of the many aspects of this dimension that were mentioned were similar for both sites, A and B. These pertain to the facilitation and support that is given by either school staff or PST peers (Site B) or by TEd staff, PST peers, and researcher (Site A); to the quality of communication between PST and school coach (Site B) and between PST and TEd supervisor (Site A); and to the existence of a practice of internal and external sharing of research outcomes (both sites). For Site B, several other conditions were perceived as fostering PAR. Largely, those were related to a more equal position of PST and school students. For instance, having a mutual interest in the research topic and the outcomes, which showed in a research problem shared between PST and school students, is a good indicator of this. PSTs mentioned other supporting conditions such as a climate of trust in each other's capabilities and commitment, and safety in communicating and performing their tasks. Both PSTs and school students need to feel assured that participating in the PAR project, unveiling some 'unwelcome truths', or proposing controversial changes, will not lead to negative consequences in any way, such as lower scores or bad reputations. Participation needs to rely on building and sustaining a good relationship. PSTs reported that taking full teacher responsibility for their class was a better condition than sharing the responsibility with an appointed teacher, as is usually the case with an internship, because of a more profound relationship with the school students and more autonomy in shaping the teaching context for conducting the PAR project.

Reflections on the findings: principles for PST PAR

It was found that PSTs valued a clear view of teacher research and clarity in the use of terms and the meaning of concepts, such as *student participation* and *focus on the learner*, as strong supporting conditions for their PAR projects, on both sites. For them, experiencing this in both the institute and the school helps to build a clear image of ways to involve school students in their research practice, and also to consistently keep this in mind during the whole internship period. On the material-economic dimension this should go along with good planning and coherence in the program and activities between the institute and the school; they should be strongly aligned. Furthermore, it was perceived as supportive to pursue continuity in curriculum and lesson planning and in the allocation of classes. This aspect is related to the social-political dimension of the arrangements because it has a positive impact on the relationship between teacher and school students if there is ample time to build a climate of trust and safety for school students. Being new for them as well, the PAR practice and the invitation to collaborate with the teacher might raise tensions and evoke reluctant behavior by school students. Therefore, it is even more important that student participation results in real, observable impact, which recognizes school students as capable and valuable partners; a supporting condition that is mentioned by the PSTs as well. Power is an important aspect of the social-political arrangement, and PSTs can feel uncomfortable sharing power with their school students. However, more equality in decision-making power could build a fruitful environment for student participation and, in the longer term, a culture of participation (Bahou, 2012; Fielding, 2011; Kirby et al., 2003).

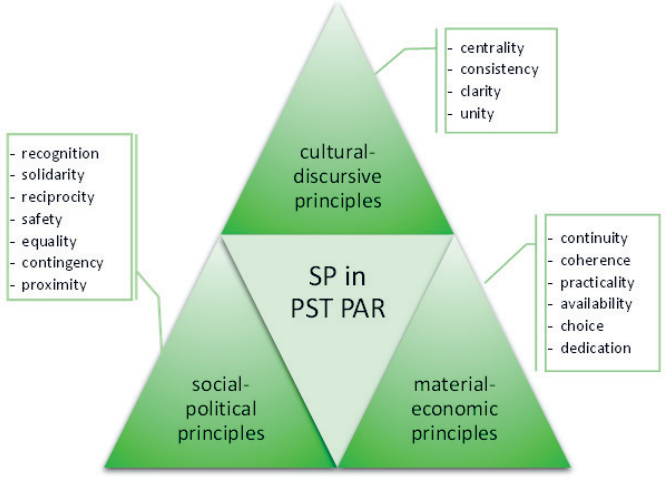

Figure 7. Principles for student participation in PST PAR

Table 9. Descriptions of PST PAR principles

Cultural-discursive principles	
- *centrality*	the participatory approach, in the form of student participation and focusing on the learner, is at the core of the program and is supported and propagated by all educators.
- *consistency*	the participatory approach is implemented and practiced throughout the curriculum and during the whole school year.
- *clarity*	the concepts, procedures, possibilities, and implications of SP and PAR and clearly defined and communicated.
- *unity*	the different program parts (courses and learning activities) are stemming from the same participatory ideas and approach, and are experienced as such; educators and coaches represent the same participatory goals in their teaching and support.
Material-economic principles	
- *continuity*	ongoing process of participation, not a one-off activity; uninterrupted teacher-class relationship (at least for the entire duration of the PAR project).
- *coherence*	logically consistent program, linking theory and practice of SP and PAR within an effective set of learning activities.
- *practicality*	(perceived) ease of incorporating PAR approach and PAR activities into the curriculum and extent to which educational goals can be reached without excessive effort or resources.
- *availability*	provision of resources and availability of needed research options for conducting the PAR project.
- *choice*	freedom of decision on several aspects of the PAR project: e.g., research topic, form and intensity of (non-)participation.
- *dedication*	investment of energy and effort in the PAR process; loyalty to conducting the PAR project and to its outcomes; enthusiasm of participants.
Social-political principles	
- *recognition*	all stakeholders (PSTs, SSs, colleagues, peers) are recognized as valuable participants in the teaching, learning, and researching activities and in decision-making processes that are related to the educational context.
- *solidarity*	awareness of shared interest and group responsibility for conducting the PAR project and for the fairness of the outcomes, recommendations and implementation.
- *reciprocity*	awareness that one's actions evoke and ask for equivalent actions by others, and vice versa.
- *safety*	atmosphere and feeling of mutual trust; openness to express oneself (or not) and to give opinions and ideas on teaching and learning issues (or not) without fear of being criticized or ridiculed, even if the ideas are unwelcome.
- *equality*	non-hierarchical interaction and communication of participants, as less as possible based on power, position or status; input of each stakeholder is explicitly sought/invited and equally valued.
- *contingency*	confidence that participation in PAR will be taken serious in its consequences, e.g. that input from stakeholders as well as research outcomes will be followed up as much as possible, and if not, that actions are satisfactorily justified. Participation must be based on reliability, fairness, and justice. SP is not just for the sake of the PST graduation, but aims at benefitting all participants.
- *proximity*	sense of relatedness to the PAR project and the research topic, and to the other participants; personal connection to SP and PAR.

On the basis of the perceived supporting conditions for PST PAR (Figure 5 and Figure 6), general principles for student participation in preservice teacher action research can be derived (Figure 7), again along the three dimensions of the practice arrangements. Partly, these principles apply to both sites. They are descriptive in the sense that they allow for determining the nature of the arrangements of both sites. In a normative sense, they can serve as criteria or guidelines for enabling and enhancing

PAR in teacher education settings. From the supporting conditions 'consistent, central focus on learner perspective' (Site A) and 'consistent, central focus on student participation' (Site B), for example, the general principles of *centrality* and *consistency* were derived. If the principle of centrality of the participatory focus and approach is consistently met at one site, but not at the other, then clearly there is a mismatch between the two sites which renders it difficult for the PST to set up a participatory form of research, which would also be visible as not complying with the principle of *coherence*. Likewise, the supporting condition 'follow-up on feedback/input/results' led to the principle of *contingency*. It should be stressed again that the principles, like the arrangements, are interconnected in practice and always work together in making possible and shaping the actual practice. Together they form the *practice architecture*, or - in terms of Clandinin and Connelly (1998) - the *professional knowledge landscape* in which (pre-service) teachers and teacher educators unfold their practice and relate to the people, places, and things around them. See Table 9 for short descriptions of the PST PAR principles.

Conclusions

In this study, arrangements with respect to conducting PAR were explored, from the PST's perspective, at two related practice sites: the teacher education institute and the internship school. The study focused on what PSTs perceive as enabling and constraining conditions for involving school students in PST action research, and from this, a set of principles for supporting PAR by PSTs was derived. Following the *Theory of Practice Architectures* (Kemmis & Grootenboer, 2008 and later works), the principles were distinguished along three dimensions: cultural-discursive, material-economic, and social-political. As such, the application of this theory facilitated looking at practice contexts in a detailed way by pointing to the characteristics of different types of arrangements and by appreciating the interconnectedness of conditions in the three dimensions of the arrangements. In line with the *Theory of Practice Architectures*, we acknowledge that descriptively the practice architecture of a specific project and site, and principles derived from that, can be differentiated into three dimensions, but that in real life (the teaching practice) they are inseparable and always occur and work together. For instance, in order to inhabit, find or create a viable *niche* for PAR in a TEd and school context, it would not suffice to develop a TEd program with a central and consistent participatory approach, if at the same time such an approach would not be supported at the internship school, or if program activities and curriculum planning would not add up to a situation that is seen as practical by the PSTs. Also, with regard to the principles, for instance, the principle of *dedication* – investment, effort, and loyalty – appears to be closely interconnected to the principle of *contingency* – taking the PAR outcomes seriously by carefully considering conclusions and following up on suggestions, insofar as possible and feasible. For instance, participants who feel that their input is sought and given due weight, their ideas and suggestions are welcomed and lead to an actual and visible change in the classroom or school practices (contingency), will put more energy into the partnership (dedication); and conversely, more dedication and enthusiasm from the participants, teachers and school students, enhance taking the results seriously and implementing suggested changes from the PAR projects. This way, the presented set of principles for PAR in a TEd context could be helpful not only to judge the extent to which PSTs' PAR can be successful but also to help develop a TEd program for PAR, based on or leading to a well-aligned institute-school collaboration.

What is possible to do in a practice, as stated in the *Theory of Practice Architectures*, is shaped by arrangements, and becomes visible in the *sayings*, *doings,* and *relatings* of the participants, but a practice consists of more than that. A practice also comprises dispositions of individuals in the practice, which include knowledge, skills, and values (Kemmis, Wilkinson, et al., 2014). This study, however, focused on the site of the practice, and only indirectly on the characteristics of the main practitioners in the practice, the PSTs, school students, and teacher educators. Obviously, their dispositions also interact with the arrangements and impact the way a PAR practice can unfold. Furthermore, the study was limited to PST research projects that were actually implemented within the time frame of a one-year TEd program, which did not allow research into the long-term impact of student participation in teacher research under current conditions or on the development of the practice architectures towards a participatory approach. This would be a desirable continuation of the present study. Also, the study's interest was in PSTs' viewpoints, and therefore data were collected from PSTs, and not from school students. This study aimed at gaining more insight into possibilities to prepare PSTs for a participatory approach by conducting PAR projects with school students and to find recommendations or instructions for developers of TEd programs with this participatory aim. Investigating PSTs' views on conditions that would enable them to enact or develop such a practice, was considered helpful for providing prospective teachers with options to genuinely collaborate with their school students. Further research into the perspectives of the school students would be needed to get a more comprehensive picture of the PAR practices during and after the TEd program. This would need more than just a single survey or interview, and would preferably extend over a longer period of time.

The TEd context of the study has been kept unchanged as much as possible, besides the specific intervention of a PAR assignment and the introduction of a learner-focused approach in the TEd program. Unmistakably, however, by implication of this intervention, both the added facilitator and the researcher have had an influence on the actual practice of the PSTs. Their presence by itself, although kept low-key mostly, reminded PSTs - and teacher educators - regularly of opting for collaboration with their students. Therefore, some of the conditions they perceived as enabling or constraining might be more relevant within these specific circumstances. Follow-up research on PST PAR projects in an established participatory TEd context could corroborate the conditions and principles found in this study.

In this study, we started from the idea that PSTs should be enabled to experience how student participation could become part of their educational practice, and how a participatory action research approach could create a TEd context for achieving this; a *practice landscape* (Mahon et al., 2017), or a *professional knowledge landscape* (Clandinin & Connelly, 1998) in which they would try out new behaviors, develop a professional identity, and create new stories for, and about, themselves and their colleagues in school. To us, the way the PSTs experience this context, in its various dimensions, seemed crucial for understanding their practice and for building a TEd program supportive of a participatory disposition.

The set of PST PAR principles that was derived from this study might be of practical use for multiple educational and research purposes, at various phases, including:

- Development, planning, and evaluation of a TEd program and a teaching practice that fosters PST PAR. This could start with discussing the PST PAR principles with stakeholders and determining which ones are the most important: first of all, for the school students; and furthermore, for a teacher's or teacher educator's own practice; for the PST's PAR project; for the TEd program and the teacher educators; for the internship school. From this, a preliminary version of the project could be developed and the intended setup of research/collaboration could be checked against the PST PAR principles to determine which are (easily) met and which are not much, or not at all. That would allow identifying what arrangements are needed to maximize the extent to which the PST PAR principles can be realized in practice but are not yet in place.

  All this could be done individually, but preferably - and so doing adhering to the spirit of PAR - as a collaboration of the various participants, for instance as a joint session of teacher educators and PSTs to evaluate the implemented program and as a co-design workshop for developing the program towards integration of the PST PAR-principles.

- During the project, moments of reflection should be planned for monitoring - by teacher educators as well as by PSTs themselves and by staff at the internship school - the unfolding of the PST PAR projects against the extent to which the principles are met, covering the cultural-discursive, material-economic, and social-political dimension; and if not deemed sufficient, considering which aspects should receive specific attention. PAR (and student participation included) can thrive under various circumstances but are more likely to thrive if principles are met at both sites of the PST's practices, as a student and as a teacher. This would increase the chances that PSTs become positive towards participatory practices and encouraged to sustain them after graduation.
- In a research context, teachers and educational researchers could make use of the principles to describe and analyze teaching practices in terms of participatory qualities in three dimensions; and possibly relate them as well to the experiences of students and teachers, as well as to several aspects of the PAR projects, the contexts (arrangements) and the level and nature of student participation.

In summary, this paper has aimed to illuminate conditions that foster participatory action research practices of PSTs and their school students in secondary schools, in a context of a TEd program. The unfolding of PAR in such PST practices can be enhanced if, in the development of a TEd program, PST PAR principles in all three dimensions are integrated into the vision of teaching and learning and in the curriculum.

Chapter 5

Teacher educators' views on educating pre-service teachers for participatory action research in secondary schools

"I noticed how much our students seemed to enjoy working together with the pupils towards an end product. Some of them really seemed to be glowing and one told me he had 'never felt so much like a teacher' "

Teacher educator (after a seminar near the end of the TEd program)

Abstract

Participatory action research can prepare preservice teachers for collaborating with school students in research projects. In the current study, principles for pre-service teachers' participatory action research are examined based on teacher educators' views and actions while they implement participatory action research in a teacher education program. Across three dimensions (cultural-discursive, material-economic, social-political), the findings shed light on how student participation and participatory action research can be implemented in a teacher education program as well as how preservice teachers can be prepared for and supported in collaborating with their school students.

This chapter is under review in adapted form as:

Smit, B. H. J., Tigelaar, D. E. H., Berry, A. K., & Admiraal, W. F. (under review). Teacher educators' views on educating pre-service teachers for participatory action research in secondary schools.

Chapter 5 – Teacher educators' views on educating pre-service teachers for participatory action research in secondary schools

Introduction

For decades now, research by teachers has been acknowledged as a vital part of the teaching profession; firstly, as a way to bridge the alleged theory-practice gap between academic research and educational practice (Admiraal et al., 2013), and, secondly, as a tool for the professional development of teachers (Leuverink & Aarts, 2021; Ponte et al., 2004). Consequently, preparing teachers for conducting research has been included in current teacher education programs, for pre-service teachers (PSTs[16]) in initial teacher education (TEd), and in-service teachers in continuing professional development programs and learning communities. Teacher research has been reported as relevant for effecting positive changes in teachers' classroom repertoires, knowledge of conducting research, and attitude, self-efficacy, and research interest (Cochran-Smith et al., 2009; Leuverink & Aarts, 2021; Oolbekkink-Marchand et al., 2020).

A related development concerns the position of stakeholders in research, from research *on* people to research *with* people, with an increasing emphasis in education on student voice and student participation in their learning (Fielding, 2001; Flutter, 2007; Jones & Hall, 2021). Children are no longer seen as incapable adults, but as people engaged in a continuous process toward self-responsible personhood (Ponte & Smit, 2013; Quennerstedt, 2010) and as social agents capable of contributing to key decisions impacting their lives (Lansdown, 2005; Lundy, 2007). Student participation in educational matters and school life has become promoted in various forms (see, for example, Bland & Atweh, 2007; Fielding, 2001, 2011; Fielding & Moss, 2011; Groundwater-Smith, 2005) and models of participation have been proposed to describe, develop and promote student participation (Fielding, 2001, 2011; Hart, 1992; Mitra, 2006; Shier, 2001), including recognition of students as valuable research partners. However, these ideas and principles have been slowly realized or not realized at all, and student participation appears to be a difficult concept to put into practice (Padilla-Petry & Miño Puigcercós, 2022). Nevertheless, there have been developments of good practices of student participation, and positive outcomes of participatory approaches and student agency have been reported (see, for example, the concise overview in Cook-Sather, 2020).

Action research has been proposed and applied as a suitable and effective approach to introduce PSTs and teachers to understanding and conducting teacher research and to the participation of stakeholders such as their school students (Bendtsen et al., 2021; Bergmark & Westman, 2018; Flutter, 2007; Ponte, 2012; Ponte et al., 2004). Participatory action research (PAR), as a form of action research, is based on principles of social justice and democracy and implies an explicit focus on collaborative inquiry aimed at social change: "Indeed participatory research, informed by principles of inclusive democratic participation, explicitly engages the politics of collaboration, positionality, power, and accountability that are too often not addressed in traditional research practices." (Torre et al., 2015, p. 541). However, in the one-year academic TEd program that is the context of this study, almost all

[16] *Additional abbreviations in this chapter*
CD cultural-discursive
ME material-economic
SP social-political

PSTs enter without specific knowledge and skills of educational research generally, nor teacher research in particular. This holds even more so for action research approaches, especially concerning the concept of student participation in teacher action research, which is an essential component of PAR.

Therefore, a pilot one-year TEd program for enhancing PSTs' understanding of student participation in research and for facilitating PAR with secondary school students, was set up. In the context of this pilot post-graduate program, cases of PST PAR projects have been studied (Smit et al., 2020). This resulted in the identification of characteristics of student participation in PST research (in terms of nature and level of student participation in various phases of teacher research) and a set of principles for conducting and supporting PAR, from a PST perspective (Smit et al., 2022). Recurrently, the perspective of the learners has been reported as missing in education research and design (e.g. Burke, 2007; Cook-Sather, 2014; Groundwater-Smith, 2005; Rudduck & Flutter, 2000). Therefore, in this study, we drew upon the principles based on PSTs' experiences and practices that were developed from the previous study. The extent to which the PST PAR principles are manifest in the current TEd program was anticipated as a marker for the potential of such a program for facilitating and enabling student participation in and through PST PAR projects.

Collaborative research practices

Forms of collaborative research in schools, such as PAR, can be described as human activities conducted in a specific situation and site, in a social and material environment, and in relation to other people. This description of research activities denotes a 'practice' as defined in current practice theories; theories that examine 'how practices happen, how they are mediated, and their role in the constitution of social life' (Mahon et al., 2017, p. 4). Unraveling the range of conditions that constitute the context for the practice is important for understanding what the practice looks like, and how it 'unfolds' within arrangements of enablers and constraints. Through this study, we aimed to unpack collaborative practices of (pre-service) teachers and their school students in the specific context of a one-year TEd program. Specifically, in this study, we focused on the way a TEd program can introduce and support PSTs in conducting such a collaborative practice, as a PAR project of pre-service teachers and their school students.

As a framework relevant to studying these TEd program practices, the *Theory of Practice Architectures* (Kemmis & Smith, 2008; Kemmis, Wilkinson, et al., 2014) was applied. This theory stems from a site-ontological perspective on practices, which are seen as enacted by individuals in a practice in their *sayings*, *doings*, and *relatings*, but which are also intersubjectively shaped and prefigured by conditions, or *arrangements*, in three dimensions: a cultural-discursive dimension; a material-economic dimension; and a social-political dimension (see Table 10; and, (Mahon et al., 2017, pp. 9-10). A distinctive element of the *Theory of Practice Architectures* is that it makes explicit the relational aspect of a practice, and in so doing 'points towards the dimension of solidarity and power that also permeates practices' (Mahon et al., 2017, p. 9). For this reason, the *Theory of Practice Architectures* seemed suited for unpacking collaborative (and thus inherently relational) forms of research. In this project, therefore, we drew on the *Theory of Practice Architectures*, and the three dimensions of *arrangements*, as an analytical tool to look at the PST PAR practices and the TEd program. In a former study (Smit et al., 2022), this theory has been used for developing a set of principles, along these three dimensions, for TEd programs to enable such PAR practices by PSTs; in the current study, the theory

substantiated the analysis of the concrete manifestations of the principles in the characteristics of the program and the views and activities of the teacher educators. The concretizations allow teacher educators and program developers to use the ideas in educational practice.

Table 10. Types of arrangements and applicable aspects, concepts, and terms

Arrangements	Description	Aspects, concepts, terms
cultural-discursive	Semantic/conceptual aspects: Usual ways of talking, thinking, and exchanging through language	language, dialogue concepts, ideas, goals/aims beliefs, perspectives
material-economic	Spatial, and temporal aspects: Usual ways of doing and organizing things	objects, spatial arrangements time and resources, program organization materials, study guides
social-political	Relational aspects: Usual ways of relating to each other; aspects of power and solidarity	roles and tasks agency, influence, recognition, rights status, position, hierarchy

The current study

In this study, we were interested in the way PSTs were prepared for research collaboration with school students through conducting PAR projects at the internship schools; and, how the PSTs were supported in this. For us, the perspectives of the participants in the program – here, the PSTs – were important starting points for educational development; therefore, the principles for enabling such projects that were derived from PSTs themselves in an earlier study were taken as markers for looking at characteristics of the one-year TEd program for secondary education that the PSTs were enrolled in. Since this TEd program was being developed and implemented by the TEd staff, in this study, we looked at manifestations of the PST PAR principles in the views and actions of the TEd staff.

The following research question guided the study:

- How are principles for pre-service teachers' participatory action research in secondary education manifest in the teacher educators' views and actions?

Method

Participants and sites

For this study, teacher educators from a one-year postgraduate teacher education program at a research university in the Netherlands were involved. More specifically, the study focused on a distinct track of the TEd program, the *World Teacher Program*, that aimed to prepare pre-service teachers for teaching in secondary bilingual and international schools. An explicit part of this program was for all PSTs to design and conduct a participatory action research project, aiming to enhance school student participation in decision-making processes related to their education. The PAR projects thus served two broad goals: A) to introduce the PST into a teacher-researcher role, which includes developing the required knowledge, skills, attitude, and experience; and also, to develop a disposition to continue and expand these qualities in the PST's future teaching practice, and B) to enable and foster school student participation in decision-making processes in general, and specifically through actively involving them in the PAR projects.

Table 11 shows the characteristics of the TEd program, described as arrangements and ordered along the three dimensions of the practice architecture of the program: cultural-discursive arrangements, material-economic arrangements, and social-political arrangements.

Six teacher educators and one PAR facilitator were involved in the program at the university. The teacher educators were the course leaders and PSTs' supervisors and were formally responsible for assessing and grading. The facilitator acted as an action research expert and coach, by providing PAR courses and advising on PAR plans, and as an assessor of the PAR reports. The first author was involved as an instigator of the PAR approach, as an informant on PAR as an approach in classroom practice, and as a researcher of the PSTs' PAR projects and TEd practices, but not as an educator, facilitator, or supervisor.

Table 11. Generic characteristics of the TEd program; along with three kinds of arrangements

TEd program/institute
Cultural-discursive arrangements
Usual ways of talking, thinking, and exchanging through language: – Teacher as a researcher, as one of the six roles that define the teacher's profession/practice – Student-centered approach ('Focus on the learner') as the central theme for the program – Decentering the teacher, as a way to change the power balance in the classroom – Participatory Action Research, as a suitable and preferred research approach for investigating and developing your teaching practice and for involving school students – Student voice, as a desirable educational principle for democratic education
Material-economic arrangements
Usual ways of doing and organizing things: – WTP[a]: TEd program aimed at teaching at bilingual/international secondary schools – Seminars (general and PAR-specific): additional study hours for WTP, dedicated to WTP issues and PAR concepts and skills – PAR assignment: obligatory part of the TEd program – International internship: obligatory part of the TEd program; duration abroad: 3-4 weeks, to be planned within a pre-scheduled 6 weeks period in Semester 2.
Social-political arrangements
Usual ways of relating to each other: – teacher educators as program designers, teaching experts, guides, and assessors (authority; teacher educators in charge) – teacher educators as models, for learner-centeredness and student voice – Facilitator, as action research expert, coach on PAR assignment, assessor of PAR project report (mixed relationship with PSTs) – Peers as critical friends (student colleagues as advisors, fellow students; equal standing) – Staff & PSTs Evaluation & Development Meeting/Participatory Program Design Session: PSTs as participants (partners to staff) in evaluating and re-designing WTP (both as experienced participants in the WTP; recognized equal 'experts' and mutual learners)

[a] WTP = World Teacher Program

Data collection

Data for this study were collected from two academic years, 2015-2016 and 2016-2017, which comprise two iterations of the one-year *World Teacher Program*. At three times within this period (at the start of the period and at both ends of the consecutive study years), semi-structured interviews were held with the teacher educators. The interviews comprised two main topics: 1) teacher educator's general views on student participation and PAR; 2) teacher educator's specific views of the *World Teacher Program*, and about the concept of student participation and their role, in particular.

All interviews were conducted by the first author. The interview duration was between 45 and 75 minutes; the interviews were audio-recorded and transcribed verbatim.

Besides the facilitator, six different teacher educators were involved in the program; the facilitator and two teacher educators for the entire period and four teacher educators for part of the time (due to staff replacements and re-allocation of staff). A total of 12 interviews with these seven people were conducted; 5 at the beginning of period 1 of this study, 5 at the end thereof, and 3 after two years.

Data analysis

The interview transcripts were the main data sources for this study. Qualitative data analysis was aimed at determining if and how the PST PAR principles were manifest in the teacher education program that affected the unfolding of the PST PAR projects and the incorporation of a participatory approach in the TEd program. The PST PAR principles that were used as the framework for analyzing the teacher educators' views and the characteristics of the TEd program, were developed from the PSTs in an earlier study (Smit et al., 2022). So, the TEd program and teacher educators' views are in focus, but by applying these principles to the data, the perspectives of the PSTs guided the analysis.

Data analysis consisted of the following analytical steps:

1. In the first round of reading, relevant fragments (paragraphs or sentences) in the teacher educator interviews were marked and then coded with PST PAR principles (see Table 12), based on the three dimensions of practice architectures. The qualitative data analysis software package *ATLAS.ti 9 Windows* was used for the coding and analysis process. As a coding rule, unless missing out on a crucial aspect of a fragment, no more than one principle/code per dimension was applied to a single fragment. Since the *Theory of Practice Architectures* assumes interwovenness of the three dimensions, when needed, coding a fragment with principles from more than one dimension was allowed as well.

2. In the second round of reading, short descriptions of the reasoning for applying the specific codes were added to the coded fragments. These reasonings helped to identify common aspects in the teacher educator interviews related to the principles.

3. A co-occurrence table of codes (principles) was generated in *ATLAS.ti*, showing the frequencies of the separate codes for the three dimensions and the frequencies of fragments that were coded with principles from two different dimensions (see Table 13).

Table 12. Descriptions of PST PAR principles (Smit et al., 2022)

Cultural-discursive principles	
centrality	the participatory approach, in the form of student participation and focusing on the learner, is at the core of the program and is supported and propagated by all educators.
consistency	the participatory approach is implemented and practiced throughout the curriculum and during the whole school year.
clarity	the concepts, procedures, possibilities, and implications of student participation and PAR and clearly defined and communicated.
unity	the different program parts (courses and learning activities) are stemming from the same participatory ideas and approach, and are experienced as such; educators and coaches represent the same participatory goals in their teaching and support.
Material-economic principles	
continuity	an ongoing process of participation, not a one-off activity; uninterrupted teacher-class relationship (at least for the entire duration of the PAR project).
coherence	a logically consistent program, linking theory and practice of student participation and PAR within an effective set of learning activities.
practicality	(perceived) ease of incorporating the PAR approach and PAR activities into the curriculum and the extent to which educational goals can be reached without excessive effort or resources.
availability	provision of resources and availability of needed research options for conducting the PAR project.
choice	freedom of decision on several aspects of the PAR project: e.g., research topic, form, and intensity of (non-)participation.
dedication	investment of energy and effort in the PAR process; loyalty to conducting the PAR project and to its outcomes; enthusiasm of participants.
Social-political principles	
recognition	all stakeholders (PSTs, school students, colleagues, and peers) are recognized as valuable participants in the teaching, learning, and researching activities and in decision-making processes that are related to the educational context.
solidarity	awareness of shared interest and group responsibility for conducting the PAR project and for the fairness of the outcomes, recommendations, and implementation.
reciprocity	awareness that one's actions evoke and ask for equivalent actions by others, and vice versa.
safety	atmosphere and feeling of mutual trust; openness to express oneself (or not) and to give opinions and ideas on teaching and learning issues (or not) without fear of being criticized or ridiculed, even if the ideas are unwelcome.
equality	non-hierarchical interaction and communication of participants, as little as possible based on power, position, or status; input of each stakeholder is explicitly sought/invited and equally valued.
contingency	confidence that participation in PAR will be taken seriously in its consequences, e.g. that input from stakeholders, as well as research outcomes, will be followed up as much as possible, and if not, that actions are satisfactorily justified. Participation must be based on reliability, fairness, and justice. student participation is not just for the sake of the PST graduation but aims at benefitting all participants.
proximity	sense of relatedness to the PAR project and the research topic, and to the other participants; a personal connection to student participation and PAR.

The above data analysis procedure was performed by the first author. In a few cases, feedback on coding by a second researcher who had not been involved in the original data analysis resulted in reducing the used codes to the most essential one(s) for the fragment, or to splitting some fragments into separate ones that captured different aspects. The quality of the steps taken was checked through an audit procedure. The second researcher traced the results of each analytical step to the underlying data and assessed the analysis on traceability, applicability, and trustworthiness. The audit confirmed the analytical quality as good.

Table 13. Co-occurrences of principles across three dimensions; number of fragments

Principles/dimensions[a]	CD-centrality	CD-clarity	CD-consistency	CD-unity	ME-availability	ME-choice	ME-coherence	ME-continuity	ME-dedication	ME-practicality	SP-contingency	SP-equality	SP-proximity	SP-reciprocity	SP-recognition	SP-safety	SP-solidarity
CD-centrality f=56; #comb=37					0	2	9	1	2	2	1	5	1	3	10	0	1
CD-clarity f=85; #comb=43					0	1	11	0	3	5	4	0	1	0	13	4	2
CD-consistency f=45; #comb=26					1	2	5	0	0	4	1	2	2	2	7	0	0
CD-unity f=53; #comb=25					1	0	7	0	0	5	0	1	3	0	6	1	2
ME-availability f=10; #comb=5	0	0	1	1							0	2	1	0	0	0	0
ME-choice f=18; #comb=23	2	1	2	0							0	3	1	0	9	5	0
ME-coherence f=62; #comb=48	9	11	5	7							1	1	3	0	9	2	1
ME-continuity f=4; #comb=1	1	0	0	0							0	0	0	0	0	0	0
ME-dedication f=17; #comb=17	2	3	0	0							0	0	4	0	5	1	2
ME-practicality f=43; #comb=28	2	5	4	5							1	2	1	0	7	1	1
SP-contingency f=11; #comb=8	1	4	1	0	0	0	1	0	0	1							
SP-equality f=20; #comb=16	5	0	2	1	2	3	1	0	0	2							
SP-proximity f=21; #comb=17	1	1	2	3	1	1	3	0	4	1							
SP-reciprocity f=10; #comb=5	3	0	2	0	0	0	0	0	0	0							
SP-recognition f=87; #comb=66	10	13	7	6	0	9	9	0	5	7							
SP-safety f=22; #comb=14	0	4	0	1	0	5	2	0	1	1							
SP-solidarity f=17; #comb=9	1	2	0	2	0	0	1	0	2	1							

[a] CD: cultural-discursive; ME: material-economic; SP: social-political
f: the overall number of fragments coded with this code/principle; #comb: the total number of fragments coded in combination with another dimension
Grey-shaded cells: the most frequent principle within a dimension.

Findings

Coding of the 12 TEd staff interviews resulted in the identification of 541 fragments that could be related to the PST PAR principles. The left-hand column of Table 13 shows the frequencies of those fragments coded with individual principles and the number of fragments that were coded with principles from two different dimensions.

As can be seen in Table 13, left-hand column, all 17 principles were found in the data set, although the relative prevalence differed from only a few instances (e.g. continuity, f=4; availability, f=10; reciprocity, f=10) to quite a large number (clarity, f=85; recognition, f= 85; coherence, f=62).

The body of Table 13 shows that in many instances fragments were connected to principles from more than one dimension. This was expected, because of the theoretical interwovenness of the three dimensions of practice architectures. As described before, from the viewpoint of the *Theory of Practice Architectures*, a particular practice always unfolds within a particular practice architecture: a constellation of enabling and constraining conditions that prefigure the practice. The conditions form a three-dimensional set of practice arrangements (cultural-discursive, material-economic, and social-political), and these interwoven dimensions are therefore reflected in the results of the data analysis as fragments coded with principles from multiple dimensions.

For each of the three dimensions, Table 13 shows the frequency of fragments that were also coded with a principle of one of the other two dimensions. Focusing on the most frequent principle per dimension (in italics and bold font) and the most frequent combination with a principle from another dimension (frequency 5 or higher; 15 cells), the table shows that the CD principle *clarity* was mostly found in combination with the ME principle *coherence* and the SP principle *recognition*. Furthermore, combinations of *coherence* and *unity* occurred relatively often, as well as combinations of *recognition* with *coherence* and *choice*.

Below, for each of the three dimensions, we describe how the principles were found to be manifest in the teacher educator views and TEd program with a focus on the most frequent or relevant ones. Manifestations of all 17 principles are summarized in Table 14.

The cultural-discursive dimension (CD)

The cultural-discursive dimension (see Table 13) concerns the usual ways of talking, thinking, and exchanging through language. This includes the central concepts of the TEd program, the terms and ideas that are commonly used among staff and students, and within current educational policies at a national or local level. The set of 17 PST PAR principles comprises 4 CD principles, in order of most to less frequently manifest in the data: clarity (85 in total; 43 combined with another dimension), centrality (56; 37), unity (53; 25), and consistency (45; 26).

Clarity

On the cultural-discursive dimension, the teacher educators' interviews related frequently to one of the four principles, but most often to the *clarity* of the concepts of student participation and PAR and the approach and research steps of action research in schools. Being clear about what student participation entails, and what it does not, was seen as important by teacher educators, because PSTs are mostly unfamiliar with participatory practices and are unlikely to be able to draw on their own

experiences in education to picture what this could look like or anticipate the benefits of collaborating with their school students, either for the school students or themselves as teachers. To introduce PSTs to the idea of student participation, even with very young people, for instance, PSTs were provided with two articles about a decentered position of the teacher and participatory research with school children, and genuine and non-genuine forms of PAR were discussed.

The principle *clarity* pertains as well to the observation by teacher educators that many PSTs regard action research - and social science research in general - not as real, robust research. Most PSTs enter the postgraduate program with limited knowledge of educational research, compared to the kinds of research and research domains they are familiar with from their master's studies, and even more so of action research. Therefore, teacher educators in the *World Teacher Program* talked about it being important to be clear throughout the program about the notion that action research is a serious and rigorous form of research (combined principles of CD-*clarity* and ME-*coherence*).

Centrality

The principle of *centrality* indicates that the participatory approach, in the form of student participation and focusing on the learner, is at the core of the program and is supported and promoted by all educators. In the TEd program, teacher educators mentioned regularly explaining what (P)AR is about and what scientific methods are being used; thus tackling possible misconceptions or lack of knowledge of the PSTs. However, besides enhancing clarity as much as possible, the *centrality* of the concepts of PAR and student participation, and the explicit theme for the program, 'Focus on the learner', were foregrounded clearly to the PSTs. One reason for this was because teacher educators observed that, especially at the beginning of the program, PSTs tend to act as consumers, following the lead of teacher educators instead of taking an active stance in what and how they want to learn.

> That is a partnership. It's not me telling them. Now of course one of the most difficult things is to enact a set of principles. So I can tell you that these things really matter to me, that learners should construct their own professional pathways for learning; that my job as a teacher is to support and extend and provoke their learning and to make them feel uncomfortable, but make them want to continue and just see that teaching is sophisticated knowledge and that it entails something about the growth and development of a human being in your classroom, not just the person whom you pour knowledge into the head of.

In the interviews, teacher educators talked about modeling an active stance and scaffolding this by having PSTs question themselves about what they are learning and how they want to develop. In their opinion, this helps put a 'focus on the learner', although it could be improved upon. The constant emphasis on the requirement of involving school students in the research project, which was evident in the teacher educator interviews, is one of the clear manifestations of the principle of *centrality*. Typically, the TEd program starts with management and classroom organization, but to enable a participatory disposition paying attention to the learners was mentioned as the most important aspect of the whole program.

> I feel very strongly that becoming a teacher is about understanding your own identity and what leads you to behave in certain ways, that then once you have a better understanding of who you are you're more ready to work with other people. So, knowing yourself is important, and knowing your learner. So

> maybe those things also are constructed at the same time. I was just telling students at the beginning: go spend some time with students. Get them to write you a letter about what they are interested in. Go talk with them in the corridor. They're often scary things for student teachers to ask because they're so busy protecting their sense of being a teacher.

A concrete suggestion was to consistently encourage seeing from a learner's perspective; for instance, when dealing with different educational theories and the teacher roles based on these theories, the perspective could be turned around by asking: "What would this look like for a student?".

Consistency

Concerning the principle *consistency*, the interviews revealed teacher educators' experiences with how they keep paying attention to their students' voices and how they encourage the PSTs to pay attention to their school students' voices. According to the teacher educators, the consistency in this approach had been greatly enhanced by the introduction of PAR as the standard for the research assignment, and by the presence of a researcher who kept the teacher educators deliberately thinking about how to build this theme into the curriculum. However, it was acknowledged that this had not always been achieved and that still "… a lot of the activities that we [the teacher educators] do, focus on the teacher, on the lesson plan, on the management, but actually not on the learner." Moreover, the link between the regular part of the TEd program with the courses that were specifically set up for this group of students was not always clear, and the central theme was not yet naturally included within the whole program, such as in the courses on subject methodology, theories on learning and instruction, or youth psychology.

> Well, I think …, I think it *is* more or less in the regular program as well, but it is…, it could be more explicit. And I think that, when you look at the subject methodology programs, I think we all try to make them more aware […] of who are your learners and what does it mean if you, if you …. you know, differentiate in your class.

> I ask my PSTs 'what are your questions?' and I try to incorporate their questions in our sessions […]. So I think we try, but we could be…, I could even say this more explicitly to them, you know, what I'm doing now, what does asking [PSTs] for questions mean in your practice? I could do that more. And I think that,… I think…, I dare say that in general, most teacher educators could do that more.

The material-economic dimension (ME)

The material-economic dimension (see Table 13) concerns the facilities, materials, resources, and the schedule and organization of the TEd program, the school, and the PAR assignment. The set of 17 PST PAR principles comprises 6 ME principles, in order of most to less frequently manifest in the data: coherence (62 in total; 48 combined with another dimension), practicality (43; 29), choice (18; 23), dedication (17; 17), availability (10; 5), and continuity (4; 1).

Coherence

The ME principle that appeared most frequently connected to fragments in the teacher educator interviews, was *coherence*; this principle is about the linkage between theory and practice of student participation and PAR in a consistent TEd program. Teacher educators stated for instance that they struggle with demanding circumstances in which PSTs are expected to teach whole classes from the very start of the program, or teach many classes without supervision, an issue that touches upon *practicality* as well.

> I think one of the issues that I struggle with a lot here is that student teachers are expected to teach whole classes from day one, and some of them are teaching many classes without supervision. So it's just hard to get any time to think. Naturally, then they come in wanting answers to questions that they're dealing with tomorrow, and they don't have anybody in school to talk to. So they don't really want to hear me say let's think about this together. The pressure to give, for me to give an answer is so strong. It makes that idea of let's have a participatory approach a little more difficult because they're so exhausted all they want to do is just sit.

To deal with such problems, teacher educators saw that alternating periods at the institute and school were helpful for PSTs to reflect on and make sense of their school experiences. And specifically, according to the TErs, the introduction of the participatory aspect in the PSTs' research assignment could invoke the PSTs to focus more on the learner instead of the teacher, and on the role of the teacher in getting to know the issues and questions of their learners, the school students.

> Maybe the research part will give us a mechanism to turn our thinking towards the learner in ways that we're not currently doing. Part of that is they are really focused on themselves, but part of it is, I think, that the program makes the learner slightly invisible in a way, and makes the learning in the teacher, because we talk about the roles of the teacher and what the teacher does. That's the guiding framework for the program: the roles of the teacher.

Modeling participatory teaching behavior and providing concrete examples of student needs, student experiences, and student questions were mentioned as bridges between theory and practice in PAR [coherence].

> I think it [modeling] is definitely one of the helpful approaches because I think, especially in the beginning, students tend to just follow your lead without thinking 'what lead am I following?'. They just …, you consume, because that's what you do. You learn …, you're used to being here and listening to somebody tell you 'let's do this, let's do that'. And as long as we don't say 'we chose this approach, because ..', or 'we think it is interesting to think about that ..' or what you already know about that or what you would like to develop, then they are not so aware of that. But that is a choice you can make. So I think, gradually they become more aware of it, I think.

The inclusion of a PAR assignment leads to coherence in the program, as one teacher educator said, because of the logic of cohesive activities throughout the program that follows out of it, the sustained attention to the approach that it generates, not being a one-off task, and the mentally merging of the participatory ideas (combined ME principle *coherence* and CD principle *unity*) by reporting about the PAR project and the way the school students were involved in that.

Choice

Freedom of decision (*choice*) on several aspects of the PAR project is a third most frequently mentioned ME principle for enabling student participation in PST PAR projects. More than with other principles, this principle was evident in combination with the SP principle *recognition*. Teacher educators felt that involving students in choosing content and tasks is worth striving for, also because thinking about an assignment invokes much learning. However, teacher educators sometimes felt hesitant about when, and to what extent, that fitted with PSTs' stage of development.

> Well, we know the autonomy of the student, it is related to motivation. So I'm always in favor of letting them influence the whole learning process as much as possible. Including yes, a kind of consideration for the possibility that they just aren't capable of that yet.

PSTs are developing as teachers and are often in a vulnerable position because they have to acquire new skills in front of young people and colleagues. Thinking about options, in the way the PAR project is conducted, and recognizing PSTs' interests and capacities, were identified as instances of the principle of *choice*, in combination with *recognition* (and *safety*).

> Is it a smart idea to do with that class? Or should I just not do it? Or maybe if they have parallel classes or do your research with the other class and do the same intervention but without making yourself too vulnerable. I think it really depends on the situation and how yes... Whether the student is willing to take that risk. … I think it really depends on the individual student. If the educators see that a student is very vulnerable, I don't think they should encourage that.

Safety was mentioned also in connection to *choice*. Teacher educators remarked that, on the one hand, some PSTs feel insecure because of the unfamiliarity with the kind of research they are supposed to do, and, on the other hand, were reassured by the idea that in the end and after a positive experience with PAR they could proceed with their future research projects in their way.

The social-political dimension (SP)

The social-political dimension (see Table 13) concerns the ways people relate to each other and to the extent they collaborate in changing a situation to benefit all stakeholders. The set of 17 PST PAR principles comprises 7 SP principles, in order of most to least frequently manifest in the data: recognition (87 in total; 66 combined with another dimension), safety (22; 14), proximity (21; 17), equality (20; 16), solidarity (17; 9), reciprocity (10; 5), and contingency (11; 8).

With regard to the PST PAR principles, the data reflect a positive evaluation of the action research approach that has been chosen for the research component in the TEd program [SP-proximity]: not only as a practical way of working [ME-practicality] but also as a means to accommodate the school students' preferences for working methods [SP-recognition]. Moreover, teacher educators experienced AR as yielding useful results for practice [SP-contingency], for which ideas and suggestions from school students are a valuable contribution [SP-equality; SP-recognition], and for PSTs to realize that their research is actual research and worthwhile to present to the outside world [SP-contingency]. A fruitful insight for PSTs from their collaboration with school students, was, according to the teacher educators, the experience that such collaboration is not threatening/dangerous [SP-safety] and helps improve classroom practices [SP-contingency].

Below, findings for three frequently manifested SP principles, i.e. recognition, equality, and proximity, are presented in more detail.

Recognition

The principle *recognition* pertains to the way PSTs, school students, colleagues, peers, and teacher educators are recognized as valuable participants in the teaching, learning, and researching activities and in decision-making processes that are related to the educational context. This implies recognition of the different roles and capacities of the stakeholders involved, as well as different preferences, developmental stages, experiences, expertise and skills, and responsibilities or duties.

For the principle *recognition*, interview data reveal that teacher educators were aware of the importance of school students being recognized as sources of learning and as participants in the PAR process. Therefore, it was felt that PSTs need to be guided towards such a practice; for instance, by activities in the institute and school that force a focus on the learner and that allow PSTs and school students to express their perspectives and preferences.

Teacher educators also attempted to model such a practice in their TEd practice, by acknowledging the PSTs as rightful participants in the program and learning context. PSTs were encouraged to give their opinions on and suggestions for the content and set-up of the program; and teacher educators felt that the PSTs sensed they have that right and that PSTs valued that.

> And so I can think of a couple of examples recently of how you can begin to co-create the curriculum together, when for example, we then, between me and [another teacher educator] and [a PST], we started quite a long conversation, over email, about what are your expectations of the program, and then what do you think is reasonable, and how could we do a better job of working on things? And he came up with some suggestions about what could be possible to do. And I think, actually, that is co-creating the curriculum. That is being responsive to students.

However, teacher educators also struggled with the way students can be recognized as participants in the TEd program, either because of uncertainty about the concept of participation or because of practical reasons, as a teacher educator expressed:

> I'm still looking for that myself. How that could turn out. […] In the sense that we see them as partners in designing the program? […] Yes, there are some bottlenecks, because of course we have fixed themes and sequences and yes, we do try. Of course, schools have exams and curricula to which they are attached. […] I'm just looking for where to find that participation element. They bring things up, they come up with examples, they work in that meeting on things that are important to them… I'm just looking for that. I need to think more about that too.

Being aware of differences in roles and responsibilities is another aspect of recognition; for instance, the role of the teacher educator versus the role of the PST. From a view of learning as a process of self-responsibility, but based on group activities, a teacher educator concluded that learners should be actively involved in their learning, and teachers and students then negotiate about lessons and activities. Conditional for this is rejecting the idea of a teacher or teacher educator as the sole expert, or the student as the receiver of knowledge, but seeing both as stakeholders in a teaching-learning context.

> I think that if a teacher educator sees himself primarily as an expert, it is more difficult to make use of that space. Or to create that space. While if you have the idea that you are one of the stakeholders in a learning process, you can perhaps more easily see that as a responsibility that you have to take. And that perhaps lies primarily with you, because you have to initiate the opening of that space. Even if the trainer is the expert. Yes, because you always are.

> I think the role of the student is to see yourself as a professional in development. And a professional who takes responsibility for his own development. So yes, there might be an expert there. But how can I make use of that expert and those other professionals around me to ensure that my teaching practice improves? I think that's the role of a student.

Proximity

The principle *proximity* refers to, firstly, a sense of relatedness to student participation and the PAR project and, more specifically, to the research topic, and the other participants; in addition, proximity also includes the aspect of having a personal connection to student participation and PAR.

A salient aspect of conducting PST research in a PAR-like manner is the direct connection to classroom practice and the applicability of the outcomes within the specific context. Problems and questions addressed in the project stem from the PSTs' and school students' own experiences and are near to their interests. Such manifestations of the principle of proximity, especially if combined with a practical solution [contingency], also lead to more dedication on the side of the participants.

> So yes, and I think by developing your own end product, you can increase engagement in the learning process as a result. So that would actually be that it has meaning to you, what's going to come out.

> Look, action research is in my opinion a very pleasant and practical way of working, it is something that connects with what is pleasant to do for a student in secondary school. […] the active aspect in it. So working on something that is also so hands-on concrete and clear, instead of being a purely theoretical thing. I think it is very pleasant for a lot of PSTs. There are some who theorize it of course, but I think for a lot of PSTs it's just: you're doing it, you're seeing results, you're applying it, you're watching how it goes, which makes it coming much closer to yourself.

Proximity to the teacher was seen as an inherent quality of conducting research on your practice, which supports continuous professional learning and better insight into the intricacies of a teacher's life and work.

> It helps, to continue to professionalize yourself, but also to see what you're up against. So also to be able to see better those struggles that also belong to it and also the sensitivities that can come to the fore.

teacher educators indicated that working together as a group [solidarity] was viewed as central for the learning processes of PSTs, and likewise for school students and teachers, even though PSTs bear individual responsibility for their learning. Related to this, affective involvement in the sense of being part of a learning community or feeling connected to the teacher or teacher educator [proximity], was mentioned as enhancing the learning of PSTs.

Equality

A non-hierarchical pattern of interaction and communication between participants in a PST PAR project constitutes the principle of *equality*. Uneven division of power, status, or position, should not determine the way the stakeholders, that is school students, PSTs, and teacher educators, are valued and should not prevent them from being taken seriously.

Equality in the TEd program was manifest in teacher educators' view on learning and on who contributes to learning to teach. For instance, teacher educators and PSTs can act as equal partners in giving mutual, albeit different, input in defining central concepts such as 'teaching', as can be seen in the words of a teacher educator:

> Because I think that's when the learning actually happens, not actually the things that you bring in. It's what happens in the moment and how you deal with it. That's what student participation is all about.

> Suddenly we're equal partners in trying to unpack this thing called teaching. I bring some theoretical frames. They bring experiences and feelings, and how can we together figure out what's going on. [….]

However, the principle of equality does not require all stakeholders to have the same responsibility. In a cross-related sense with the principle of recognition, it was acknowledged that personal qualities and stages of development should be considered. For instance, PSTs are potentially more able to negotiate with their teacher educator than school students with their teacher; however, both groups can be involved in such negotiations, or at least facilitated in learning to do so, as a teacher educator verbalized:

> I think for your own practice and my own practice I do notice that I actually expect more bargaining power from a PST who attends such a meeting. While again with a school student it may be that that attitude is the end product. And that you try to facilitate that. [….]

One of the teacher educators expressed that the ideals for equality and student participation, in general, and for co-creating the curriculum were more ambitious than could be realized in practice within the limited period. So, she adjusted her TEd practice to a less collaborative level, while keeping in mind the ideals she started with. In her words:

> [….] I think, […] that my expectations of the possibilities really were very ambitious, okay. [….] I felt, like, I should be able to do that and have that flexibility, in order to be able to co-create the curriculum with the students. And then, I think in hindsight, I am doing things to co-create the curriculum with students actually now, but within a more, sort of modest framework. So, I feel that I'm always not meeting my ideals. But I also think that I need to check my ideals, in terms of what is manageable and possible within this space, that is still consistent with my ideals.

Table 14. Characteristic manifestations of PST PAR principles[a], across three dimensions

Cultural-discursive principles	
centrality[b]	- Guiding principles in the program are: constant and mutual learning of students and teachers, in school and TEd program; being an active learner, and taking responsibility for your learning. - Creating curiosity in PSTs about how people learn compared to a theory-driven curriculum. Make them see their students as rich sources of learning. - Teacher educators as stakeholders in learning, besides being experts. - Keep reminding yourself about the implications of your learning experiences for your learners. - Research part of the program might turn thinking to the learner instead of the roles of the teacher; treat the project as a thread through the year.
consistency	- Use as many as possible opportunities for PSTs' rich experiences to challenge views on student participation. - Let PSTs ask questions about theory in various parts of the program: subject didactics, supervision, lectures; and subjects: classroom management, … - Link program to practice experiences in every week's meetings. - Build up the program to challenge a mental switch to think from a learner's perspective; make it a natural attitude. - Stimulate thinking about the teacher's role as a professional in putting the learner in a central position. - Densely packed curriculum and practical issues hinder the opportunity for reflection or playing with ideas. - Show PSTs the teacher educator's journal as a window on student participation, and keep up doing that. - Include PSTs' decision processes in the content and setup of the curriculum throughout the year.
clarity	- Setting up learning experiences and opportunities within the classroom that cause students to think about people's learning and change PSTs' perspectives on school students. - Providing and discussing articles on a decentered position of the teacher and participatory research with school children; providing examples of (P)AR. - Introducing the theme 'Focus on the learner' and modeling in your own classroom. - Being clear (and consistent) about the notion that action research is a serious and rigorous form of research. - Making explicit for PSTs what is exemplary for a participatory approach in teacher educator' (research) experiences, actions, methods, and materials; modeling action research steps, including reporting. - Having conversations with PSTs about their expectations and suggestions for the program. - Stimulating insight into teachers' professional identity by making PSTs – partly - responsible for lessons. - Explain to school coaches the concepts and goals of the TEd program concerning student participation and PAR.
unity	- Include PSTs' suggestions for a learner perspective in various parts of the TEd curriculum. - A shared feeling and understanding of the meaning and importance of student participation among staff, students, and school coaches; and in line with the school vision. - Discuss curriculum goals and methods concerning the participatory approach within the whole group of TEd staff; in particular in case of staff changes. - Organizing TEd staff meetings to think in similar ways about student participation, PAR, and the learner perspective. - Central goal for PST: developing a teacher identity that includes seeing yourself as a learner: this would then permeate the whole curriculum and the thinking of teacher educators and school coaches. - Combination of program and internship requires having organized a curriculum in advance. - Running the PAR project during the whole study year and involving an advocate/instigator for the approach stimulates the structuring of the PAR approach in the program.

Material-economic principles	
continuity	- Introduction of planning and content of research, and expected tasks for PSTs at the start of the curriculum: PAR comprises the whole program year. - Alternating 3-week periods at school and university, so PSTs just have time to think and process what's going on. - Internship abroad in the second semester is a break in the stream of the curriculum. It hinders finishing the assignments but also is motivating for PSTs and enhances their self-confidence.
coherence	- Explicitly connecting TEd participatory practices (teaching behavior) to PST experiences, both planned and unplanned (noticing opportunities). Asking PSTs to what extent they feel having a voice, and at which level of participation. Making them aware of parallels between TEd participatory behavior and their acting with school students. - Noticing activities to invoke looking from a learner's perspective, not only in hindsight (reflection) but also in preparing and conducting teaching in practice. - content and language-integrated learning elements in the TEd program force PSTs to look differently at teaching in general, which facilitates focusing on the learner as well. - Showing PSTs frameworks about learning when they need it and are receptive to it. - Let PSTs design tasks that are useful for themselves, only based on a given purpose or aim. - Having conversations with the PSTs about sensible assignments in class, instead of referring to given tasks in study guides. - Discuss with teacher educators, supervisors, school coaches, and subject coaches, about what is needed for a student participatory approach. - The research part in the TEd curriculum as a mechanism to turn thinking [of TEs and PSTs] towards the learner, forcing them to find out what their learners' questions are, and dictating other activities throughout the program; the roles of the teacher [including researcher] as the guiding framework for the program. The required PAR approach facilitates spending more time on 'focusing on the learner'; steering them to a systematic critical look at the meaning of student behavior. - Treating the PST's research project as a thread through the year, building up over time, will embed it in the program. - Extending the way of thinking about learners as participants to other parts of the program and in the PSTs practice; also, outside the classroom, in the role of a professional in a school organization.
practicality	- Time pressure and daily hassles (such as articles, assignments, and tasks) divert teacher educators from the emphasis on the learner and dilute their ideals. - actual context felt more disabling than enabling for PAR, especially related to lack of time and high workload, both at the institute and the internship school (many lessons to plan and give; assignments at the institute to finish in time). E.g. it prevents looking at what a school student can do in the learning process, e.g. regarding giving the responsibility of classroom management to school students. - TEd program and the school curriculum and exams give little space for input in decision-making, co-creation of the curriculum, or collaboration in research and attentive teacher-student interaction more generally. Communicate clearly to schools and coaches what practical affordances are needed for PAR. - Changes in the setup and content of the TEd program and in staffing, and the unmatched presence of staff with small part-time appointments hinders the implementation of the participatory approach. - Visibility of applicability in and improvement of your practice for PSTs and school coaches. - hands-on way of working with school students, applying 'ideas' and experiencing the results in practice enables PAR and also enhances the proximity of participants to the approach and the research topic. - PSTs participating in teacher educator research: difficult because of limited availability of PSTs, mixing up teacher educator's and own experimental settings, and research locations other than internship schools.
availability	- provide a physical set-up in the classroom for creating a communicative space, e.g. flexible seating, for instance sitting in a circle to facilitate equality in discussions. - teacher educators observed PSTs sometimes having difficulty in claiming space for conducting their research assignments and for collaborating with their school students, e.g. because of non-aligned working days and times of teacher educators and non-matched rosters. - Provision of learning theory so that PSTs become aware of how views and beliefs change. - Supervision meetings with PSTs were too few because of roster problems; which led to a suboptimal focus on the learners. - The second semester becomes more open for students to make suggestions. - Advise PSTs to connect to or use for their research an existing school task or discussion group. - Near the end of the school year, a lack of suitable opportunities in class and curriculum for conducting the PAR projects.

choice	-	Provide opportunities for PSTs for making relevant choices for their learning, e.g. in terms of designing their own assignments, and peer assessing their work.
	-	Allow PSTs to select a group of school students of their own choice to work with a group they feel comfortable and safe with.
	-	Allow experimenting and accept things going wrong; let PSTs feel free to do so.
	-	Some PSTs like to do what they know they can do already (i.e. traditional research); teacher educators can explain that PAR is not so different and involves the same thinking steps. Some want to have the option to do 'regular' research instead of PAR.
	-	School coach favors giving students maximal influence in the learning process unless they are not capable of that. However, giving complete freedom to school students is not preferable, because it would lower their grades even further.
	-	[Ask PSTs how they want to keep in contact with each other and let them choose the right way for their group].
dedication	-	PSTs' eagerness to know what their school students' questions are; teacher educators wonder if this is always the case.
	-	PSTs' interest and ambition to be part of such a participatory TEd program; the desire to be part of negotiation about curriculum; and teacher educators providing space for that.
	-	PSTs have to put effort into using the provided curriculum for focusing on the learner in the classroom, making theory work in practice. Feeling responsible for having your voice heard and contributing; being an active participant.
	-	PSTs are eager to do something in practice. Strong relation with practice. This fits doing PAR well.
	-	Familiarity with PAR-like research. Some PSTs find it difficult to accept it as real research.
	-	Contrast with former TEd practice in which the PSTs were involved in questions, but not really investigated them.
	-	A teacher educator as a respected model for conducting AR and for pursuing student participation.
	-	PAR/research differs from a mere reflection in making a plan, developing it properly, trying it out in practice, and improving further based on reflections on the outcomes.
	-	Both the mind and heart need to be involved. Attention and focus are needed to create a good teaching environment.
	-	School dedicated to the rationale and approach of the TEd program and of PAR and student participation. This is not aligned with giving them jobs with too much responsibility or lesson hours. PSTs working as employees instead of interns can make them hesitant to approach and collaborate with school students in a participatory way that might not be supported by the school or might jeopardize the school's curriculum.

Social-political principles	
recognition	- teacher educators intrigued by the idea of changing school students from an object of research to a subject (involvement in teacher research). Also searching for how to see PSTs as partners in designing the TEd program. - teacher educators seeing themselves as stakeholders in a learning process, not so much as the 'experts'; being responsible for opening up the space for negotiating. - Providing opportunities for bringing in personal experiences and challenging each other's views; valuing different perspectives and expertise. Comparing having responsibility, choices, and influence yourself, as a PST/teacher, to what you will do with your class/school students. - Collaboratively unpack what teaching is, as equal partners, bringing in theoretical frames, experiences, and feelings. Being responsive to PSTs (and school students), starting co-creation of the curriculum from little, concrete examples and experiences as they occur, notice opportunities for this. - Seeing yourself and all participants (PSTs, school students, teacher educators) as rich sources of learning. Start with thinking about what people bring into the situation and what they can offer. - Importance of having a collaborative approach. - Not teach from the book (passive/receptive), but have a conversation about a subject (active). - PSTs working with school students as subjects also learn about their pedagogical role and their interaction with school students. - PSTs in this group are very good in their subject and have more experience, which might allow them more to give space to school students. - Using several ways of involving students in your lessons; e.g. formative assessments as starting points for negotiations between teacher and students. - Showing PSTs that there are several ways and levels of involving school students and recognizing them as partners; also genuine ones, and tokenistic ones. Provide good examples of student participation and let PSTs be amazed about how far they can come with 'focus on the learner' in their research.
solidarity	- Including in your professional identity the attitude of wanting to give other people something they can build on, they can go forward with. - Strongly shared feelings of relatedness to students and willingness to invest in that. - Think of ways to present theory such that everyone can take advantage of that. - A PSTs' group atmosphere of belonging to a group; feeling a bit special in comparison to other TEd programs, and being part of something bigger. - Being committed to a learning community working towards a specific goal; joint responsibility for group learning, both in TEd and in school, with pupils, and between institute and school. - More joint activities, leading to tighter group cohesion and easier group discussions; working together with pupils on applications in practice. - Lack of supervision meetings caused less mutual involvement and cooperation than possible.
reciprocity	- Coming to realize that teacher educators and PSTs [and PTs and school students} are learning alongside each other, albeit different things. - Mutual connectedness of institute and school is the foundation of TE. - In educational research, very often the teacher is central but it is important as well what the student does and thinks.
safety	- Some teachers and students show resistance out of fear of letting go of control, which is not the case. - Facilitate PSTs in the 'art of failing' and allow them to make mistakes. - Ensure that PSTs feel comfortable and safe in collaborating with the school student group. - Acknowledging anxiety in teachers in learning to teach, is working with your learners as well. - Some schools feel sensitive about really collaborating with school students and are more protective. - In the case of vulnerable PSTs, teacher educators should be reticent in making them take risks with certain classes. - At the end of the TEd program year, a remnant fear might be taken up by PSTs to develop later on; others might be relieved to be able to return to something [just teaching or regular research] they feel safe with.
equality	- Not the teacher educator telling PSTs how to act, but finding ways for that in a partnership. - Important to have a collaborative approach, with responsibility for your own learning. - Being equal partners in unpacking teaching, even having conversations about your own teacher's teaching. This can be weird to them. - Negotiating [about the curriculum] implies a different relationship between teacher and student. This can be expected a bit more from a PST than from a school student. - Physical set-up (circle) can facilitate looking at each other and equal positioning. - teacher educator co-creating the curriculum with PSTs, but within a more modest framework

contingency	- PAR by PSTs with their school students is appealing because it implies an application and a visible result in practice. - The PAR method and the participatory approach that is propagated by the TEd program should be acted upon, also in feedback and assessment of the PSTs' research reports. - Requests by external persons for using research results. - Important element of (P)AR is sharing research results and showing that something interesting has been tried and investigated, in a systematic way, even in the case of non-success. Important as well to convey this message to the PSTs.
proximity	- Some (group) characteristics of the PSTs in the TEd program are favorable for PAR and student participation: more open to differences because of international experience; more life experience leading to more space for school students' influence. - PSTs choosing to become teachers are practice-oriented, eager to carry out something, not only working on theory. - Giving a concrete example of an action research project that was recognizable for the PSTs triggered – critical – interest in PAR. - PAR connects with what is pleasant to do for a student in secondary school. Being hands-on, concrete, and clear brings PAR closer to the school student. - Having self-confidence in the ability to do PAR and work with your school students and being responsive, even at the beginning of the teaching career. - Not all teacher educators have an affinity with research and can support the PSTs in conducting PAR.

[a] For a description of the principles: see Table 13.

[b] Principles in boldface are described in more detail in the Findings section.

Discussion and conclusions

This study aimed to shed light on the way student participation and PAR were planned and implemented in a TEd program and how PSTs were prepared for and supported in collaborating with their school students. For this, a set of 17 principles for PST PAR (as developed in a former study (Smit et al., 2022)), was used for analyzing teacher educators' interviews on manifestations of those principles in their views and actions and in the TEd program. In the set of principles and subsequently, in the analysis of this study, the three dimensions of the *Theory of Practice Architectures* (Kemmis, Wilkinson, et al., 2014) were distinguished: cultural-discursive, material-economic, and social-political.

The findings reveal how within the TEd program, as planned or implemented in the two academic years for this study, teacher educators attempted to address the task of preparing PSTs for student participation and in particular, for involving school students in their action research projects. This appeared to be a challenging task. The principles for enabling student participation in PST PAR and for supporting PSTs in that endeavor were found to be partly manifest in the actual program, that is, already realized to an observable extent. However, they were also partly formulated as ideas and intentions for including or further developing program elements aimed at enabling student participation in education and PAR projects by PSTs. Finally, in some other cases, principles were not put into practice or not to the desired level.

The observation that not all principles were fully realized at the time of investigation, should not be taken as a negative evaluation of the program. It was in a state of development towards including PAR as a central element of the program and student participation as the focus of the curriculum. Moreover, the set of PST principles was not available for the teacher educators at that time, because it was developed afterwards, in the phase of data analysis. Furthermore, teacher educators have different concerns, tasks, and obligations than PSTs, so it was expected that not all PST principles would be found equally in teacher educator data.

On the *social-political dimension*, the principle *recognition* was manifest most frequently, and in many instances occurred in combination with a principle from one of the other two dimensions. This principle *recognition* stresses the importance of valuing all participants as having worthwhile and useful capacities, views, and suggestions, and as such forms the basis for genuine student participation as well. Data showed that much effort was put into clarifying what the concept of student participation in PAR entails, and into developing a shared and consistent way of talking and implementing this in practice. teacher educators felt this to be needed because recognition of students as useful sources and as participants in a research process and in teaching and learning was not found to be a natural habitus of PSTs. Furthermore, issues of *safety* of PSTs in conducting teacher research and in collaborating with their school students emerged from teacher educators experiences, for instance, feelings of loss of control in class and of fear of failing to achieve curriculum demands. Positive PAR experiences might help PSTs overcome distress, but this will need careful scaffolding by teacher educators. Combinations of the principle recognition with principles from the ME dimension, such as *coherence*, *choice*, *dedication*, and *practicality* show that ambitions and circumstances can sometimes collide and hamper the extent to which student participation and PAR can be realized. For instance, differences in demands and expectations of PST's relation with school students between the TEd institute and schools (lack of coherence) invoke dilemmas for PSTs in how much and for what they can or should involve their students. Fixed lesson schemes (lack of practicality) can prevent PSTs from responding to school students' suggestions for participatory changes in class. Furthermore, data indicated that social-political principles such as *recognition*, *reciprocity*, and *equality* are neither naturally embedded in the TEd program, nor in the internship schools. A practice based on these principles would consistently and seriously involve PSTs (in TEd) and school students (in schools) in matters of learning conditions and would actively seek input from all stakeholders as a shared basis for the improvement of the educational practice. That seemed not to be realized yet.

On the *cultural-discursive dimension*, this showed in the efforts of teacher educators to overcome misunderstandings and feelings of discomfort in PSTs by putting forward principles for student participation and PAR as central elements in the program, and by clarifying concepts and procedures to PSTs and among themselves. Teacher educators acknowledged that PSTs were not familiar with participatory approaches in teaching and research, and, therefore, activities to provide PSTs with *clarity* and *coherence* in the concepts of the program, were deemed specifically important. This could be done by providing and discussing successful examples of PAR from literature and by challenging the central role of the teacher in classroom practices. However, not only the concept of student participation appeared to be confusing for PSTs, but also the value of and meaning of teacher research in general was not obvious for all of them, and not in the case of action research. Teacher educators indicated that the *centrality* of a 'focus on the learner' in the program, being *consistent* about this theme and the approach, and striving for *unity* in views and practices of TEd staff and school staff, were connected to enabling PSTs to achieve student participation in their PAR projects.

On the *material-economic dimension,* the importance of *coherence* was clear. The teacher educators expressed that the incorporation of an explicit assignment to involve school students in PSTs' research led to a logical set of cohesive activities for PSTs throughout the program and for a sustained period. On the other hand, it was noted that issues of *practicality* occurred because of unaligned or even

conflicting demands from the TEd institute versus internship schools. Aligned with research on teaching practices (e.g. Meister & Melnick, 2003; Rajendran et al., 2020), excessive workload and lack of time were mentioned as problematic; in this case, it was connected to constraints for conducting PAR and for collaborating with school students stemming from school curriculum requirements and the reluctance of PSTs to deviate from those. To support PSTs in obtaining or creating more space for their PAR projects and student participation in their classes, teacher educators saw it as helpful to discuss ideas and concepts of the desired teacher education approach between teacher educators and school coaches and to organize courses that tackle not only subject-specific topics but specifically focus on enabling PAR and student participation. By connecting practice experiences with theoretical knowledge, coherence in the program could be further enhanced.

From the findings, it can be inferred that the multiple layers in a teacher education program aimed at enabling PSTs to conduct participatory research in schools, add to the complexity of realizing school students' participation. Simultaneously, the usual doubleness of teaching and learning in a TEd program and teaching and learning in an internship school must be addressed, as also the doubleness of partnerships between teacher educator and PST, and between PST and school students. Particularly the PST is confronted with different roles at different levels, under different conditions; developing conditions that support PSTs in coping with these layered practices is a crucial task for teacher educators, as for schools (Capobianco & Ní Ríordáin, 2015; Cochran-Smith et al., 2009; Ping et al., 2018).

Research indicates that PSTs don't particularly see value in doing TR as part of their TEd program (van der Linden et al., 2012) nor envision themselves as researchers (Taylor, 2017), but this approach to doing research that is embedded in the program and seeks to support participants as more empowered in their learning seems to have been well received by these teacher educators as well as the PSTs. One of the most difficult aspects will be connecting with teachers and coaches in schools - for consistency of messages, coherence of the program, and provision of opportunities for PST research and participation of school students. The design of the *World Teacher Program* as an intensive course and with a large portion of teaching and researching in schools has both positive and negative implications. PSTs spend a great deal of time in practice so they are better able to connect with their students and understand issues relevant to student voice, but they are also so busy with practical requirements that this task may seem like just another 'burden'.

Implications for TEd practice and further research

The central idea of this study is to introduce or strengthen a democratic approach in education by preparing PSTs for collaborating with their school students in their participatory action research projects. It is an ambitious effort to include PAR into a one-year TEd program, for teacher educators and PSTs, but even in such a short period, PSTs can at least *begin* to experience how school students can be seen as partners in research and how this experience can benefit teaching and learning. This study provides insight into the complexity and multi-dimensionality of student participation in education and TR, but also into what can and needs to be paid attention to if such an approach is to be considered or implemented. The findings, as evident in the three dimensions of arrangements, invoke deep thinking through the TEd programs for inclusion of student participation/PAR and for

scaffolding and supporting PSTs in understanding student participation and in conducting PAR. Subsequently, this supports building an approach for individual and collective development and a context for enabling school students to engage in decision-making in class and school issues.

A participatory practice has many more aspects than could be handled in this study. Further research could focus on several topics. First, because this study looked at *pre-service* teacher education only, research on the sustainability of the approach after graduation would be advisable. Also, the impact of the PAR approach and the student participation practices on other teachers in schools would add an interesting layer to the current results. Furthermore, a closer investigation of the alignment of the program, the school practice, and the PAR project seems worthwhile because coherence was identified as a problematic principle. The way TEd programs and teacher educators can support PSTs effectively in coping with the double-layers practices of institute and school, and teacher and student, concerning issues of participation in research also needs further investigation. Finally, the PST practices could be studied from a school student's perspective, by looking at the micro-politics of PAR in class: school students' views and practices, and the inclusion or exclusion of specific school students' voices or perspectives, and by including the aspect of contingency (follow-up) of school students' input and suggestions.

This study leads to suggest evaluating existing TEd programs that aim to support democratic approaches and develop new programs based on all three dimensions: the terms and language that are being used around student participation and PAR; the materials that are needed and the organization that supports PSTs; and the issues of relations and power that will come up and might be challenging for PSTs and their school students. The set of principles can be helpful to determine aspects that are found to need attention. Even though the dimensions cannot be separated in actual practice, in the development of a PAR-dedicated program some principles can be considered before others. Attempting to address all 17 principles and all 3 dimensions at once, will probably prove too complex. As a feasible approach, it is suggested to begin with – collaboratively – discussing and developing a program dedicated to this purpose, which includes conducting a participatory research project, however small and limited in scope, and which invokes imagining school students as partners in the educational context. The observation that PSTs must enter unfamiliar ground and can feel reluctant to involve their students, suggests the need to make it easy and inviting for PSTs to collaborate with school students. Advisable would be to start with a small and non-stressful task such as observing or teaching a couple of students or a very small group of them and then interviewing them on their experiences, and from there to gradually build up to a PAR project that is worthwhile for all partners/stakeholders. Based on findings about the principles of *clarity*, *coherence*, and *unity* between institute and school it is recommended, where possible, to reach out to the internship schools to develop collaborative practices and language related to the goals of PAR and student voice.

Since teacher educators and PSTs show enthusiasm for the approach after having had a first-hand glance at the opportunities and benefits, one can be ambitious in the setting of goals, but also be prepared for small steps and long-term development. If consistently explicitly and implicitly advocated and modeled by those involved in the program, the approach will get momentum for teacher

educators, PSTs, and school staff, and can become a sustained participatory practice for teachers and their school students.

Chapter 6

General discussion

"Because then..., then you are not just researching something that you *think is important, but also something that teacher education students think is important, or school students think is important."*

Teacher educator (interviewed about the TEd program)

Chapter 6 – General discussion

Introduction

Central to this dissertation is the notion that young people are entitled to be involved in decision-making processes about issues that affect them, including in their school education, and to be taken seriously in their views and suggestions on these issues. Since this is not a common idea in education, neither in schools nor in the preparation of teachers, this research takes up the need to investigate an approach to prepare pre-service teachers (PSTs) for enabling student participation in decision-making in schools. More and more, teachers are supposed to be involved in research, as informed users or as practitioner researchers, and teacher education (TEd) programs include research activities for those roles. So, if PSTs are conducting research within their internships, involving school students in that experience creates an opportunity for enabling student participation. In combination with the (current) development of including stakeholders, such as teachers and students, as primary actors or collaborators in educational research, in this dissertation, participatory action research (PAR) has been introduced as an approach that pre-eminently prepares PSTs for participatory practices in schools.

The four studies included in this dissertation explore two projects in which PAR has been implemented to enhance school student participation in decision-making on school and classroom issues: one project focusing on collaborative school student-teacher research on student learning conditions in external settings (museum or library); and another project focusing on a one-year post-graduate TEd program in which PSTs were required to involve their school students into their PAR projects on an issue in their internship school, preferably negotiated with their school students.

Through the findings and recommendations, this dissertation seeks to contribute to the high-level goal of social justice and the enhancement of democratic approaches in education. Specifically, as one way to get closer to this higher goal, the studies consisted of an exploration of student participation in decision-making processes through teacher-learner partnerships in research, and more specifically, for this dissertation, of school students' involvement in PAR by PSTs as a means to enable student participation in schools. The practical aim then is to provide schools and TEd institutes with a way to implement or further develop student participation in decision-making processes, while considering opportunities and intricacies that can be expected to occur.

Findings per chapter

Before turning to overarching issues and topics related to the theme of this dissertation, and implications for research and practice, first, the main findings per chapter will be summarized.

Chapter 2 – The exploratory study

The research project 'Students and Teachers as Co-researchers', reported in Chapter 2, included teams of primary or secondary school students, teachers, and external educators who conducted collaborative research on student learning in an external educational setting (museum or library). An external setting as the site under investigation was deliberately chosen to create a more equal starting position for school students and teachers and to maximize school student participation in the investigation.

The study findings showed that school students in this context worked at a relatively high participation level. In terms of Fielding's models, school students acted as co-researchers or researchers (Fielding, 2001), or as co-enquirers, knowledge creators, or joint authors (Fielding, 2011, 2018). They did this at

all research stages, from formulating research questions to reporting findings. In general, the school students experienced a feeling of responsibility for the research. As intended, the projects involved a variety of school students (and teachers), not only the ones conducting the data collection, but also their peers in class (and school or museum/library). Those who were not members of the research teams were still explicitly part of the process as consulting peers. The setup of the projects can be labeled as a formal approach because they were designed to enable school students' influence on decisions, on conducting the research, and on shaping the external learning context. They were, however, also informal, because of the shown engagement of school students and teachers in joint activities and dialogues, during the research stages and in school. This can be understood as two-way teaching, from teacher to school student and the other way around.

Importantly, the PAR projects led to genuine changes in the external setting, due to perspectives and subsequent recommendations of the school students – sometimes unexpected by the teachers and educators. Furthermore, it struck teachers how capable and motivated their school students appeared in designing and conducting the research activities, and how that boosted their self-confidence. This transformed their idea about the mutual roles of teacher and student in class; the collaboration changed the teacher-student relationship based on increased trust in the involvement of school students in the development of lessons and resulting in a more friend-like way of working with and for their students.

Chapter 3 – Occurrence and nature of student participation

The three studies reported in Chapters 3-5 pertain to the consecutive project in the post-graduate TEd program, which included the requirement for the PSTs to involve school students in their PAR projects. It was not prescribed what form the participation of school students should take, although it was suggested and supported to strive for a genuine and more intense form.

The study of Chapter 3 aimed to gain insight into the extent and nature of school student participation in the action research projects of the PSTs in the internship schools.

This study showed that, in this TEd context, student participation occurred much more at the two less intensive levels (*Inform* and *Consult*) than at the two more intensive levels (*Participate*, *Collaborate*). Less intensive levels appeared, for instance, in the form of the PST using test scores, grades, or student work, taking surveys or having chats, or leading classroom brainstorms or discussions. The more intensive levels, *Participate* and *Collaborate*, were observed only in a few cases. The typical forms of collaboration that were identified at these levels included student research groups that supported PSTs in the PAR process and student research teams that worked together to create research instruments and collect data. Furthermore, these teams engaged in collaborative discussions about the results within the PST and school student research group. Activities at these more intensive levels were found more in the preparatory stages rather than later stages of the projects. Furthermore, regardless of the level, student participation was scarcely found in the stages of *Research design*, *Analysis of results*, and *Making public*. However, as expected, the level of student participation was found to vary over the research stages.

Still, the goal to realize student participation in the PAR projects was achieved, albeit not always on a level that may be regarded as active involvement in decision-making. Many of the PSTs in this stage of preparing for a teaching career found it too difficult to engage school students as genuine partners with them.

Finally, it was found that many of the research activities were conducted without the active participation of school students. This trend was evident at all stages and in nearly all projects. Although noteworthy, it was understandable as a consequence of the PAR project also being a PST's assignment in the teacher education program. PSTs felt pressured by the time frames for the assignment and for being graded, which made many of them more reluctant to add activities perceived as complicating and time-consuming, particularly involving school students. Additionally, it is worth mentioning that no PSTs enlisted school students in co-writing or writing parts of the report, including individual sections.

Chapter 4 – Principles for school student participation in pre-service teacher research

Drawing on the *Theory of Practice Architectures* (Kemmis, Wilkinson, et al., 2014)[17], the study reported in Chapter 4 explores the involvement of school students in PSTs' research activities, as they unfold in the PAR projects as part of the TEd program, as PAR practices: socially established cooperative human activity involving sayings, doings, and relatings, and prefigured by arrangements in three dimensions (see Table 15). Practices are organized activities of multiple people but still, individuals are acknowledged as agentic subjects in practices and therefore can have a role in the transformation of practice conditions (the arrangements). The objective here is to gain an understanding of how PSTs view the research requirement and the factors that facilitate or hinder their PAR projects with their students. The study specifically examines PSTs' PAR practices and the conditions that encourage them, as perceived by the PSTs themselves. From these perceived conditions, the study derives a set of 17 principles to support PSTs in their participatory action research.

Table 15. Types of arrangements and applicable aspects, concepts, and terms

Arrangements	Description	Aspects, concepts, terms
cultural-discursive	Semantic/conceptual aspects: Usual ways of talking, thinking, and exchanging through language	language, dialogue concepts, ideas, goals/aims beliefs, perspectives
material-economic	Spatial, and temporal aspects: Usual ways of doing and organizing things	objects, spatial arrangements time and resources, program organization materials, study guides
social-political	Relational aspects: Usual ways of relating to each other; aspects of power and solidarity	roles and tasks agency, influence, recognition, rights status, position, hierarchy

The findings of this study indicate that PSTs value being provided with a clear view of teacher research and *clarity* in the use of terms and the meaning of concepts used in the TEd program, such as *student participation* and *focus on the learner*. They felt that experiencing this clarity in both the institute and the school setting assists in developing a comprehensive understanding of how to engage students in research activities and serves as a constant reminder throughout their entire internship period. Furthermore, the PSTs stressed the importance for their PAR projects of good planning, and *coherence* in the program and activities between the institute and the school, and to pursue *continuity* in curriculum and lesson planning and in the allocation of classes. The derived principle of *contingency* links to the view that student participation should result in real, observable impact, which recognizes school students as capable and valuable partners. Since PSTs can feel uncomfortable sharing power

[17] See Chapter 4, p. 68, Theoretical framework, for a more elaborate description of the *Theory of Practice Architectures*.

with their school students, they need ample time to build a climate of trust and *safety* for school students and themselves.

Chapter 5 – Manifestations of PST PAR principles in a teacher education program

The set of principles derived from PSTs' experiences and practices (Chapter 4) was utilized in this study. We anticipated that the degree to which these PST PAR principles are manifest in the current TEd program, either in a positive or negative sense, would serve as an indicator of its potential to facilitate and promote student participation in PST PAR projects. In this study, we examined interviews with the TEd staff on their views and actions to identify manifestations of PST PAR principles, as they were responsible for developing and implementing the TEd program.

First, it was found that preparing PSTs for student participation and specifically, for involving school students in their action research projects appeared as challenging for the TEd staff, as it was for the PSTs, albeit for different reasons. However, this participatory approach to doing research was well received by both teacher educators and PSTs.

The attainment of principles in the TEd program showed a varying picture. Some were already evident in the program and could be observed, while others were in the form of ideas and intentions for incorporating or enhancing program elements that facilitate student involvement in education and PAR projects by PSTs. However, some principles were not implemented or not fully realized to the intended extent. On the *social-political dimension*, the principle of *recognition* was manifest most frequently, often in combination with a principle from one of the other two dimensions. Yet, also in the view of the teacher educators, recognition of students was found not to be a natural habitus of PSTs. The TEd staff reported they had to put much effort into clarifying the concept of student participation in PAR and developing a shared and consistent way of talking and implementing this in practice. They were aware of issues regarding the *safety* of PSTs, for instance, their feelings of loss of control in class and of fear of failing to achieve curriculum demands. Furthermore, also their data indicated differences in demands and expectations of PST's relation with school students between the TEd institute and schools (issues of *equality* and *recognition*, in combination with a lack of *coherence* and *unity*), which impedes the degree to which student participation and PAR can be achieved. The TEd program and internship schools do not inherently incorporate social-political principles such as recognition, reciprocity, and equality. Findings on the *cultural-discursive dimension* point to teacher educators' efforts to put forward principles for student participation and PAR as central elements in the program. They acknowledged the unfamiliarity of PSTs with the approach and therefore the need to include activities to provide PSTs with *clarity* and *coherence* in the concepts and procedures of the program. Teacher educators' data emphasized the importance of the *centrality* of a 'focus on the learner' in the program and maintaining *consistency* in this approach for empowering PSTs to facilitate student participation in their PAR projects. Lastly, on the *material-economic dimension,* the importance of *coherence* between TEd and school staff perspectives and practices was clear. TEd staff stated that the explicit assignment to involve school students in PSTs' research led to a logical set of cohesive activities for PSTs throughout the program and for a sustained period. However, issues of *practicality* occurred because of unaligned or even conflicting demands from the TEd institute versus internship schools.

Reflections

This dissertation aims to investigate how PSTs understood and enacted collaborative research practices with their students, as well as the conditions within TEd settings that impact the unfolding,

and developing of such participatory practices. The intention is to provide an account of these practices and conditions and to derive analytical and practical tools which can aid schools and teacher education institutions in implementing or enhancing student involvement in decision-making processes, in particular through PST-school student collaboration in research.

For the studies, PAR has been suggested and implemented as the approach to enable student participation and create experiences for stakeholders that can foster participatory practices. As Torre, Cahill, and Fox (2015, p. 540) describe, "Rooted in principles of justice and democracy, participatory action research (PAR) is an inclusive, collaborative approach to research defined both by participation and a determination to produce knowledge in the interest of social change". In terms of the *Theory of Practice Architectures* (Kemmis, Wilkinson, et al., 2014), this social change can pertain to all three dimensions of the teaching and learning practice, and to both the practice as conducted on-site - in the classroom by teacher and school students - and the conditions (arrangements) that enable or constrain them.

In light of this general aim and the findings of the four studies, three issues of particular interest will be discussed below.

Realization of student participation in school

The impetus for this dissertation, besides personal views on childhood and democracy, can be characterized with reference to Percy-Hazan and Somech's (2021) recently published *Integrative model of student participative decision making*. They focus on the school as a system of actors and institutional and social structures. In their model, taking elements of student participation in decision-making from several other models, four components are distinguished (p. 6):

> (1) rationales for student participative decision making (pragmatic, moral, developmental/pedagogical), (2) dimensions of student participative decision making (decision domains, level, structure, target), (3) outcomes of student participative decision making and (4) school's organizational culture (individualistic/collectivistic, high power distance/low power distance).

Looking through the lens of the first component of this descriptive model, in hindsight, the rationale for this dissertation categorizes as both (a) a moral (humanistic, legal) rationale, granting young people the right to involvement in decisions affecting their lives, which includes their school lives; and (b) a developmental rationale, "relating to agency, belonging and competence […]", and pedagogical rationale, "relating to civic skills and critical thinking" (Perry-Hazan & Somech, 2021, p. 7) and schools as a practice ground for democratic processes (Print et al., 2002; Rinnooy Kan et al., 2023). The latter rationale is linked with discussions on the aim and role of education in developing democratic attitudes and skills in students. Print and colleagues (2002) distinguish two mutually dependent and reinforcing perceptions of democracy in the discussion on democratic teaching: (1) democracy as a form of government; and (2) democracy as a philosophy for and the basis of a way of living. They characterize the first as essentially a technical, institutional perspective and the second as a dialogical perspective, based on a "willingness to listen to and be influenced by arguments" (Print et al., 2002, p. 190). The aims of this dissertation – enabling student participation in decision-making and preparing PSTs for that – are connected to the second perception of democracy, a form of social-political practice in daily life, including school life. In Chapters 4 and 5, this perspective is visible in the social-political dimension, as distinguished in the *Theory of Practice Architectures*.

A major first question is, of course, was student participation in decision-making processes achieved in or through the PAR projects that were conducted as part of the studies in this dissertation? The answer to this question depends, firstly, on what is taken as student participation and what elements

are essential for this and, secondly, what ambition level has been adopted for the projects in this dissertation. Even though in this dissertation's studies, there was no strict requirement as to the form or level of participation of the school students, the aim was to enable them to collaborate with their teacher at an as intensive level as attainable, not just being listened to, and to have a genuine, observable impact on decisions made during the research project and on resulting changes in practice. In this respect, we followed a transformative approach to student voice (Fielding, 2004, 2007) and a dialogical approach to research in education, which characterizes critical participatory action research as "a way of opening up spaces for dialogue and conversation about states of affairs in our worlds" (Kemmis, McTaggart, et al., 2014, p. 28). This approach of action research is not so much about 'getting things done' or doing them more efficiently (a technical approach), but striving for intersubjective agreement, mutual understanding, and unforced consensus (Kemmis, McTaggart, et al., 2014) and creating communicative spaces to openly explore how current practices can be transformed. It is a democratic and participatory conceptualization of educational action research, coined by Salo and Rönnerman (2023) as 'action research for being' in contrast to 'action research for doing'. In line with research and literature on student voice and participation (e.g. Lundy, 2007; Mitra, 2006; Rudduck & Fielding, 2006), school students just having a voice, and being able to express views, would fall short of being really listened to, and taken seriously in decision-making processes. We were striving to develop teacher-learner partnerships that could extend beyond the scope of a research project during an internship and be integrated into everyday school practices. Based on this perspective of 'democracy as a philosophy for and the basis of a way of living' (Print et al., 2002), it can be concluded that certain PST projects demonstrated activities and collaborative forms in PST research that represent the initial stages of development towards achieving this goal. Data from the studies show that even within restricted time frames and contexts, a form of student participation - in the sense of having a real influence on decisions being made for educational practice - is possible and has been achieved. School students participated in designing and conducting the research projects, be it at various levels, and their views and suggestions contributed to changes in their teaching and learning content or conditions.

A consecutive question then is: can the projects' results and experiences lead to a culture of participation in schools? Not surprisingly, the answer to this is, not in the short term. As could be expected from the literature on innovations in organisations such as schools (e.g. Fullan, 2007), changes in culture form the most difficult part of sustained educational change. Building such a participatory culture goes beyond a single participatory research project and requires broad support from school leaders and teaching staff. This was not achievable within the restricted context of the studies. In their overview of three periods of educational change, Hargreaves and Goodson (2006) mention claims that can be drawn from educational reforms, namely (p. 5):

> "[…] that practice changes before beliefs (Huberman & Miles, 1984), that it is better to think big but start small (Fullan, 1997), that evolutionary planning works better than linear planning (Louis & Miles, 1990), and that the most effective change strategies are top-down and bottom-up (Hopkins, Ainscow, & West, 1994) and combine both pressure and support (Fullan, 1993)".

In our studies, these claims resonate, not asserting that these have been fully realized. Experiences in school practice, through relatively small instances of collaborative research, were supposed to change the dispositions of PSTs. Through conducting the PAR projects, we intended to create for PSTs and teachers real experiences about student participation that could demonstrate the value of democratic and participatory processes in classrooms and schools. This could form a basis for developing and

establishing a "pattern of partnership" (Fielding & Moss, 2011) between school staff and students, in which both can have a lead in investigating current practices. The enthusiastic responses of school students to participating in the PAR projects and the reported positive attitudes of most PSTs towards student participation and PAR can be taken as markers of local successes. Presentation of results and recommendations and discussing them with various stakeholders can broaden a positive view to others than the co-researchers, as was observed in the exploratory study. However, also results from both contexts – the exploratory study, and the consecutive studies – show the difficulties of involving all voices and the impact of the practice architecture of the specific site in the scope for enabling active student involvement in decision-making. Involving school students in teacher research has a significant relational character, as reflected in the social-political dimension of the practice arrangements. The set of PST PAR principles (see Chapters 4 and 5) points to important aspects in this respect. Collaboration on the level of co-researcher requires teachers and school students to recognize each other's perspectives and capacities, however different, and build on a basis of equality and safety in a dialogue on educational issues. This seemed to be easier to accomplish in the context of primary schools than in secondary schools, because teachers in primary schools teach one class for most of the scheduled school hours and can spend more time on relation-building with their school students. Teachers in secondary education and the PSTs in our studies teach specific subjects only for a few hours a week, which limits the time to get to know each other's preferences, perspectives, and capacities. In the exploratory study, a more intense student participation form than in the consecutive studies in initial TEd appeared possible: school students were involved in the setup of the PAR project by deciding on research questions and methods, collecting and discussing data, and formulating and reporting results as the main presenters. Also, informing and consulting peers who were not actively involved in data collection was generally practiced by all stakeholder groups, school students, teachers, and external educators.

Ethical issues of student participation in educational research

Social research involving humans is intricately loaded with issues of ethics, not only in the case of adults but even more so when young people are involved. Commonly, regarding ethical conduct in research, we think of the use of appropriate methods and instruments, careful data collection and management, and fairness in drawing conclusions. These issues play an important role in participatory research with students too, and ethical standards for such educational research were approved by ethics assessment boards and adhered to in conducting the studies. However, in this dissertation, we focus on specific issues in research with young people and in relation to the specific context of a PAR project assignment and an internship during a TEd program. In these PAR projects, adults (in-service and pre-service teachers and educators) involve young people (school students) in researching their educational practice, which poses ethical questions around topics such as collaboration and power dynamics, inclusion and representativeness, vulnerability and safety. Concerning the participation of young people in practitioner/teacher research, criteria for ethical conduct have been formulated (e.g. Farrell, 2005; Groundwater-Smith & Mockler, 2007; Kemmis, McTaggart, et al., 2014; Lansdown, 2005; Matthews, 2017; Mockler, 2014; Osler, 2010; Thomas & O'Kane, 1998), which are all grounded on the recognition of children as rights-holders and active agents and the responsibility of adults to ensure the conditions through which children can act as social and moral agents with rights (Mayall, 2000; Quennerstedt & Quennerstedt, 2014). In terms of the *Theory of Practice Architectures* and the set of PST PAR principles from this dissertation, this pertains to the three dimensions of the practice architecture of the practice: the cultural-discursive dimension (language, perspectives, and concepts),

the material-economic dimension (facilities, materials, and organization), and the social-political dimension (relations, positions, agency, and power). Student participation needs to be seen and talked about in clear and supportive terms; students should be facilitated and supported by appropriate mechanisms and procedures; and they must be regarded as essential and serious partners in decision-making, whose views are habitually sought and used for constructing, examining, and possibly transforming the practice. Often, in educational practitioner research, this takes the form of teacher-student collaboration through action research approaches, as was the case in our studies. As Groundwater-Smith and colleagues put it: "In collaborative action research, researchers aim to co-research with research participants to transform inequitable and unjust knowledges, structures and practices" (2013, p. 112). However, such collaborations start from or build on a relational re-centering of the educational process and a dialogical approach to student voice (Fielding & Moss, 2011), a practice that "draws together children's capabilities from all facets of their life to enhance their self-concept as agentic learners in educational settings." (Bourke & O'Neill, 2022, p. 7).

Realizing genuine student participation in this ethics sense, therefore, goes beyond informing and consulting students and following the agenda of the teacher. It includes being involved in the role of researchers, as manifested in participating in the identification of the relevant questions, choice of research methods, and discussions on results and implications (Lansdown, 2005). The question then is, to what extent did the PAR projects exemplify an ethical practice of student participation? Were the school students' perspectives taken seriously, and whose voices were heard? From all students in the class? Whose questions were being investigated? Who decided on that? Did school students' input have any visible impact on recommendations and changes in their school lives? And so on. These are questions that point to fairness in teacher-student collaboration. Regarding answering these questions, a difference occurs between the exploratory study and the consecutive studies. In the former study, research was purposefully planned to be conducted in and about external settings, which was supposed to moderate existing hierarchical teacher-student relational patterns. Furthermore, a longer period of preparing the participants for research was available, compared to the projects in the consecutive study. The projects in the consecutive studies were bound to an existing TEd program and requirements and to standing practices, curricula, and regulations in the internship schools. Consequently, these projects were conducted within a shorter period, and obligatorily linked to the specific teaching practice and the school subject, which put the PST almost automatically in a central, leading role. It could be observed that school students in the exploratory study started from the given topic for the project but were guided to formulating their own research questions and collecting data themselves, while the teacher's role in this was more of a follower. Moreover, the class decided on peer students as members for their research, from candidates who applied for it, which did include not only the most vocally skilled students or popular persons, but a fair representation of the class population.

Action research, student participation, and PST learning in the context of teacher education

Following up on the complexities of conducting PAR in PST-school student partnerships and the affordances for this in schools, an issue arises concerning the value of integrating PAR into TEd for developing teaching and learning practices in schools that involve school students in decision-making processes. Action research by teachers on topics related to their educational practices has been promoted to overcome disappointing experiences with school and curriculum development programs by generating practical solutions to context-based problems while extending the knowledge base of teaching in general. Also, action research has been suggested and implemented in TEd programs as a

means for PSTs to gain positive dispositions toward practitioner research, acquire knowledge and skills in conducting research in schools, and develop a sustained inquiry stance. Furthermore, action research is seen as an approach or tool for teachers' individual and collective professional development (e.g. Admiraal et al., 2016; Bendtsen et al., 2021; Capobianco & Ní Ríordáin, 2015; Leitch & Day, 2000; Noffke, 1994; Oolbekkink-Marchand et al., 2020; Ponte et al., 2004; West, 2011). Many times, positive outcomes of action research have been reported for the improvement of educational practices and student learning, also in the context of initial TEd. Action research in TEd is reported to contribute to PSTs' knowledge construction, gaining practical teaching practices, building confidence in teaching their subjects (Chou, 2010), and providing a deeper understanding of practices through, for instance, unforeseen discrepancies between expectations and observations of classroom events (Ulvik & Riese, 2016). However, for the attainment of these outcomes of action research, having ample time and space for conducting the research and reflecting on the process and outcomes, and finding an open, safe, and supportive research culture in the internship school is deemed conditional. Regularly, these conditions were not met in this project. In a post-master TEd context, as in this dissertation, PSTs are bound to a relatively short period in which to conduct their action research projects, which conflicts with the cyclic and developmental aim and character of AR. Moreover, the PSTs' projects were an assessed part of the TEd program and could be taken more as an inevitable assignment than as a critical investigation aimed at the improvement of educational practices (Darwin & Barahona, 2018; Reis-Jorge, 2007). PSTs perform a double role as a student-teacher, working for assessments and towards graduation as a qualified teacher, and as a – temporary and pre-service – teacher, working for student learning and practice development. This dual role adds a substantial level of complexity to the position of PAR in TEd: it can place PSTs in an uncomfortable position in school because PAR can challenge and disrupt the existing practices of teachers. Involving school students in research and wider decision-making can be perceived as unsolicited breaches of the school culture by 'outsiders' or as threats to student outcomes when teaching departs from the standard curriculum content and planning.

The findings from the PAR projects in the TEd context correspond with these issues to a large extent. They were single projects and not necessarily part of or leading to a sustained culture of participation. They were confined in time and could not run several cycles of action research. Several schools, and the international schools in particular, used a generally prescribed curriculum and gave little room to deviate or to plan participatory research activities. School mentors were often not equipped with enough research knowledge and skills or enthusiasm for PST research to be of sufficient support. Furthermore, the PST projects were positioned in the TEd program as a capstone assignment and included an assessment of the research report based on standard rubrics. Consequently, the reports were composed by the PSTs without direct input from the school students, and the dissemination of the results outside of the TEd institute was limited. Even though we aimed to have the research topic and questions be of relevance for the school students, and preferably be negotiated in partnership, this was not always fully achieved. In the TEd program and internship school contexts, the PSTs students are in a dependent position and may experience having a lower status regarding their current skill level in teaching and research. This does not align well with principles on the social-political dimension, which require being recognized as a valuable partner.

Despite all these issues and complexities of involving school students in PST PAR projects, successful student participation in the research projects did occur at various stages of the projects, and improvements in educational practice were collaboratively implemented and examined. Considering that in the early phases of teaching, teachers are mostly confronted with practical issues such as

classroom management, student behavior, and suitable teaching methods, Mitchell and colleagues (2009) state that short PD courses or seminars will not address these specific and site-based problems. They argue that a collaborative action research model is the best approach in particular for beginning teachers. We support this position because of the close connection of such a model to the teacher's practice and the structure offered for experimenting. Since for teachers, a negative relationship has been found between years of teaching experience and interest in learning through experimentation with alternative lesson methods (Louws, 2016), conducting research is an advisable part of the pre-service and early career teacher job. Still, it needs to be considered that PSTs and beginning teachers work and are socialized in established school structures and teaching staff of various ages and career stages. This impacts the trajectory of induction into the teaching job, following Hargreaves (2005, p. 971):

> Teachers who experience easier beginnings often find themselves in mixed cultures of youth and experience, where mentoring is part of a wider culture of collegiality and commitment (Hargreaves & Fullan, 2000). This moral and technical support helps preserve their sense of mission and develop resilience to obstacles and difficulties.

We consider the experiences that PSTs had with planning, conducting, and writing about a PAR project as valuable and suitable ways to involve their school students and as powerful ways for PSTs to develop an identity as a researcher and as a partner to school students. This requires presenting practitioner inquiry to PSTs "as an ongoing, systematic, and collaborative process" (Rutten, 2021, p. 12), even though they conducted a one-off project during their internship. Furthermore, teacher educators can support PSTs in searching for other kinds of knowledge than just in the technical domain, as they tend to do when left to themselves (Ponte et al., 2004), but to extend this to the ideological and empirical domain, and in collaboration with their school students.

Limitations and suggestions for future research

In this section, three limitations of this dissertation will be addressed together with suggestions for further research related to that issue: 1) the target group of the studies; 2) the scope of the research topics in the PAR projects; and, 3) the research data that were collected.

Target group of the studies

The first limitation of this dissertation pertains to the target group. The studies focused on the PAR practices of pre-service and in-service teachers in professional development contexts, either as a master course or as a TEd program. Consequently, the studies were limited to the actual period of conducting the PAR project and did not encompass in-service teaching throughout the teacher's career. As reported by, for instance, Brouwer et al. (2018), in the first years of in-service teaching, research is not the main concern of teachers. A positive research disposition developed during TEd can remain after entering the teaching job, but actual research-related activities in the initial in-service period are commonly limited to critically reflecting on the practice and applying knowledge from research. Beginning teachers often stall conducting research themselves for some time and it is uncertain if it is taken up again and if so, in what form.

Further research could focus on the lasting impact of student participation in teacher research under current conditions and/or on the development of the practice architectures towards a participatory approach. This would broaden the research scope and give insight into the sustainability of the participatory approach after graduation or completion of the course and after an introductory period in professional life as a teacher. More specifically, follow-up research on PST PAR projects in an

established participatory TEd context could corroborate the enabling conditions and principles for PST-school students' collaboration in research found in this dissertation.

Scope of the research topics in the PAR projects

The second limitation pertains to the scope of the research topics of the PSTs' PAR projects. The studies encompassed a variety of school types, including primary education, pre-vocational secondary education, and upper secondary education, and both in-service and pre-service teachers, thus covering a broad range of educational contexts. However, all PAR projects were conducted as group-based activities - with respective research participants from one class or school student group - and focused on group-level research topics of learning and curriculum. Moreover, the projects did focus primarily on the primary process of teaching and learning and not on schoolwide issues for investigation, such as school policies for curriculum development, time schedules, allocation of budgets, and staff recruitment and development. This is understandable because PSTs conduct research as part of learning to become a teacher with a focus on teaching skills (and not so much on political or social issues that teacher education programmes could also include). Typically, learning to teach does not include consideration of these political or social issues. Also, school students' expectations of involvement in decision-making outside the classroom may not be a first priority in learning to teach. However, such issues are potentially within the domain of student participation in decision-making and are seen as fitting within the school's task to educate young people for democratic citizenship (Bron, 2018; Rinnooy Kan et al., 2023). Our findings on projects in classroom contexts might not be directly transferable to student participation in settings of collaborative research by mixed age groups and on broader or more structural school organization and policy issues. Such research potentially impacts more stakeholders and might face more initial resistance.

Further research is suggested on student participation in a wider school context than the classroom research practice of a specific teacher and the relation between student participation in individual teacher's research and school culture in decision-making. Consider, for example, class-transcending PAR projects on the physical design of the internal or external school environment or student experiences with behavioral rules in school and possible adjustments thereof. It can also be investigated as to what extent the participatory approach is shared or transferred to fellow school students and teachers and whether this is reflected in the way of collaboration in school. Results from such studies could point to opportunities for schools to develop from incidental activities towards a participatory culture. Looking at these issues from a practice architectures perspective and its three dimensions of arrangements supports finding enablers and constraints in school for connecting classroom and school-wide student participation.

Research data

As a third issue, limitations regarding the research data can be noted. There are two types of limitations of this kind. The first is the focus on teacher and educator data. Since school student involvement in collaborative processes of decision-making is still rare in the Netherlands, these studies concentrated on aspects of *preparing* PSTs for participatory practices. Therefore, data collection was focused on PSTs' views, roles, and actions and their preparation for participatory practices in a teacher course or program; the studies did not include systematic data collection on school students' PAR experiences.

For a comprehensive picture of the interplay between pre-service and in-service teachers and school students in the unfolding of student participation, further research into the school students' perspectives would be needed. This could include looking at the micro-politics of PAR in class, for

example on topics such as school students' views and practices, the inclusion or exclusion of specific school students' voices or perspectives, and by including the aspect of *contingency* (follow-up) of school students' input and suggestions. This would need more than just a single survey or interview, and would preferably extend over a longer period, which would also yield insight into the sustainability of the participatory practices.

The other limitation with regard to the research data concerns the idiosyncratic character of the data sources. The PSTs' research reports and PSTs' and teacher educators' interviews represent personal perspectives on school student involvement in PST research and their account of that; not their actual practices per se. One potential avenue for further research to address this limitation involves comparing perceived and implemented teaching practices through classroom and school observations. Additionally, it may be beneficial to investigate the perspectives of other stakeholders, such as PST's school students, through either a descriptive study similar to the current ones or a PAR study involving stakeholders from both the school and the TEd institute. A related research direction is to examine the dispositions of the key actors involved in the practice, namely the PSTs, school students, and teacher educators, concerning their knowledge, skills, and values related to PAR and school participation in decision-making processes in school. It would also be worthwhile to investigate the interaction of their dispositions with the arrangements in place, as well as the impact of these interactions on the unfolding of a participatory action research practice.

Implications for practice and research

The findings have implications for practice and research on teaching and teacher learning in different categories:

- methodological implications, pertaining to researching PAR and student participation practices and to using PAR as a research approach for investigating practices.
- substantive or content-related implications, pertaining to teaching in school from a participatory approach;
- developmental or design-oriented implications, pertaining to developing the PAR approach in TEd and schools;

Methodological implications

The underlying belief of this dissertation is that while experimental educational research is useful in discovering and evaluating teaching and learning methods on a general level, results from such research are not easily applied in specific local educational contexts, because of site-based conditions, preferences, and choices, and characteristics and dispositions of local stakeholders, including the school students. For these reasons, teacher research must involve school students' perspectives and involve school students as first-person actors in the research process. According to the studies in this dissertation, the use of action research methods that involve school students, as seen in the PAR projects, is an effective approach for student participation and teacher professional development. It can help to overcome the divide between theory and practice. PAR has a close connection with actual teaching and learning practice and considers the normative character of education, the stakeholders' perspectives and interpretations, and specific local context characteristics. Moreover, conducting PAR stimulates the understanding and negotiation of mutual needs and concerns, and helps work towards more just and democratic practices.

Substantive or content-related implications

Incorporating new educational insights through active implementation and reflecting on the results is crucial for teachers' ongoing professional development. In the case of student participation in decision-making processes in the classroom and school, a developmental implication is that it is necessary to establish an environment where teachers and students can collaborate as partners, such as through action research. Enacting a participatory approach through conducting a PAR project in collaboration with school students has shown to be a suitable approach to support PSTs in developing a positive disposition toward student participation. A content-related implication from the studies is to use the *SPinSTAR matrix* from Chapter 3 (see Table 16) for introducing PSTs to such a participatory practice. This matrix builds on four levels of student participation along eight stages in the research process. It has the potential to serve as a valuable tool in the TEd program, as it provides PSTs with a perspective on teaching and research that deviates from the norm. The *SPinSTAR matrix* could serve teacher educators in (a) introducing PAR to PSTs and enhancing the uptake of student participation in PST research; (b) offering PSTs a scaffolding tool for the PAR process; (c) equipping them such that they can keep on doing PAR on their own, can find a suitable context for such research in schools, and can speak out for PAR practice before colleagues and school.

Table 16. Matrix SPinSTAR (Student participation in student teacher's action research)

Action research stage	**Level of school student involvement**				
	None (no student participation)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
a. Problem definition (RQs)					
b. Intervention design					
c. Research design					
d. Conduct intervention[18]					
e. Data collection					
f. Analysis of results					
g. Formulation of suggestions / recommendations					
h. Making public					

(adapted from Bovill, 2017; Fielding, 2001, 2011, 2018)

Developmental or design-oriented implications

Facilitating the development of collaboration between PSTs and school students should be made simple and appealing. Therefore, it is best to begin with a small and low-pressure task that fosters teacher-student interaction. From there, the collaboration can gradually progress towards a PAR project that benefits all stakeholders involved. To initiate student participation in the PAR projects,

[18] Although conducting the intervention in class is part of the action research process, in the context of this study it is not related to school student involvement in decision-making processes concerning the action research project. Therefore, this row is not used for coding the level of student involvement.

PSTs need to get a good grasp of the participatory approach. Therefore, the set of principles for student participation in PAR (Chapter 4) can serve as the central element in the TEd program. Presenting successful examples of PAR from the literature and challenging the central role of the teacher in classroom practices provides PSTs with clarity and coherence in the concepts of the program. Furthermore, PSTs need sufficient space for conducting their PAR projects in the internship schools and support from their school mentors in involving school students. Dedicated discussion of ideas, concepts, and goals on participatory topics between teacher educators and school coaches and courses can create more coherence for PSTs, informed support, and availability of resources for conducting PAR in schools.

The results from Chapters 3-5 indicate that conducting PAR in a constrained context such as a research assignment in a one-year TEd program does not naturally evoke student participation at all research stages, which shows most obviously in the absence of school students in the presentation of findings.

As a design-oriented implication of this finding, it is recommended to require PSTs to have their school students included as co-writers for at least parts of the research report, and as reviewers of the conclusions and recommendations. The *SPinSTAR matrix*, again, can help make PSTs aware of such gaps in planning and mapping student participation in their research. They can use it to analyze their own PST research practice; to get ideas for student participation in PST PAR assignments; to realize that student participation can vary along the way in content and level and that teacher research can have differentiated school student input at various action research stages. During the PST project, it is advisable for teacher educators and PSTs to plan for moments of reflection and to use the set of PAR principles (Chapters 4 and 5) for monitoring the unfolding of the PST PAR projects against the extent to which the principles are met.

Another design-oriented implication is to introduce PAR as a permanent part of the curriculum in TEd to equip future teachers with research skills and attitudes that lead to a critical collaborative examination of teaching practices and meaningful and actionable changes in education. The set of PST PAR principles can be used to determine the nature of the arrangements and categorize and analyze observed or reported classroom and school practices. This can yield a more detailed insight, along the three dimensions of practice architectures, into the participatory qualities of the practices and the intertwined mechanisms affecting student participation.

For supporting PSTs and teachers in conducting PAR, the *SPinSTAR matrix* can be useful, as already indicated above. It can help them in identifying different options for the involvement of their school students at various research stages and becoming aware of possibly overlooked opportunities for such participation.

New ways of working (and thinking) for teachers need careful introduction and support. As a developmental implication of our findings on PST PAR principles, it is suggested to develop a TEd program based on a central and consistent participatory approach and explicitly supported at the partner school. Adherence to this approach should not be aimed only at the PSTs, but at teacher educators and schools as well. Applying Shier's (2001) model, facilitating novel work approaches can generate an opening and opportunity for teachers and students to explore their practices, resulting in potential modifications to their knowledge, beliefs, and attitudes. Such transformations can trigger additional experimentation and evolution toward greater student involvement. This way participatory approaches in education could evolve from an initial 'niche' activity to a culture of participation (Kirby et al., 2003). The set of PST PAR principles could be a starting point for determining the current nature

of arrangements at both sites, the TEd institute and the school, and discovering openings and opportunities for starting or developing participatory approaches. As suggested in Chapter 5, one possible strategy could be to initiate a collaborative process where participants discuss and create a TEd program aimed at involving school students as partners in their education. Incorporating a small-scale participatory research project into this program provokes in PSTs - and their teacher educators and school coaches - the imagining of school students as partners in the educational context. Since PSTs are dealing with layered practices of TEd programs and internship schools, developing conditions that support PSTs in coping with these layered practices is a crucial task for teacher educators, as for schools. It is, for instance, essential to ensure an open and neutral 'communicative space' (Aspfors et al., 2015; Kemmis, 2008; Sjølie et al., 2018) for the research, a space that allows for a genuine and open teacher-student dialogue.

References

References

Admiraal, W., Buijs, M., Claessens, W., Honing, T., & Karkdijk, J. (2016). Linking theory and practice: teacher research in history and geography classrooms. *Educational Action Research*, *25*(2), 316-331. https://doi.org/10.1080/09650792.2016.1152904

Admiraal, W., Smit, B. H. J., & Zwart, R. (2013). *Academisch docentschap in het basis- en voortgezet onderwijs: Aard en betekenis van onderzoek van docenten naar hun onderwijspraktijk*.

Arnot, M., & Reay, D. (2007). A Sociology of Pedagogic Voice: Power, inequality and pupil consultation. *Discourse: Studies in the Cultural Politics of Education*, *28*(3), 311-325. https://doi.org/10.1080/01596300701458814

Aspfors, J., Pörn, M., Forsman, L., Salo, P., & Karlberg-Granlund, G. (2015). The researcher as a negotiator – exploring collaborative professional development projects with teachers. *Education Inquiry*, *6*(4), 27045. https://doi.org/10.3402/edui.v6.27045

Ax, J., & Ponte, P. (2008). Praxis: Analysis of theory and practice. In J. Ax & P. Ponte (Eds.), *Critiquing Praxis: Conceptual and empirical trends in the teaching profession* (pp. 1-18). Sense Publishers.

Ax, J., & Ponte, P. (2010). Moral issues in educational praxis: a perspective from *pedagogiek* and *didactiek* as human sciences in continental Europe. *Pedagogy, Culture & Society*, *18*(1), 29 - 42. https://doi.org/10.1080/14681360903556780

Bahou, L. (2012). Cultivating student agency and teachers as learners in one Lebanese school. *Educational Action Research*, *20*(2), 233-250. https://doi.org/10.1080/09650792.2012.676288

Bendtsen, M., Eklund, G., Forsman, L., & Pörn, M. (2021). Student teachers' experiences of action research-based projects: two cases within pre-service teacher education in Finland. *Educational Action Research*, *29*(5), 707-721. https://doi.org/10.1080/09650792.2019.1684969

BERA-RSA. (2014a). *Research and the Teaching Profession: Building the capacity for a self-improving education system - Final report of the BERA-RSA Inquiry into the role of research in teacher education*. https://www.bera.ac.uk/wp-content/uploads/2013/12/BERA-RSA-Research-Teaching-Profession-FULL-REPORT-for-web.pdf

BERA-RSA. (2014b). *The role of research in teacher education: Reviewing the evidence - Interim report of the BERA-RSA inquiry*. https://www.bera.ac.uk/project/research-and-teacher-education

Bergmark, U., & Westman, S. (2018). Student participation within teacher education: emphasising democratic values, engagement and learning for a future profession. *Higher Education Research & Development*, *37*(7), 1352-1365. https://doi.org/10.1080/07294360.2018.1484708

Biesta, G., & Lawy, R. (2006). From teaching citizenship to learning democracy: overcoming individualism in research, policy and practice. *Cambridge Journal of Education*, *36*(1), 63-79. https://doi.org/10.1080/03057640500490981

Black, R., & Mayes, E. (2020). Feeling voice: The emotional politics of 'student voice' for teachers. *British Educational Research Journal*. https://doi.org/10.1002/berj.3613

Bland, D., & Atweh, B. (2007). Students as researchers: engaging students' voices in PAR. *Educational Action Research*, *15*(3), 337-349. https://doi.org/10.1080/09650790701514259

Bland, D. C., & Atweh, B. (2003). A Critical Approach to Collaborating with Students as Researchers. In E. McWilliam, S. Danby, & J. Knight (Eds.), *Performing educational research: Theories, methods and practices* (pp. 331-344). http://eprints.qut.edu.au/3016/

Bourke, R., & O'Neill, J. (2022). The rights of the child and what this means for teachers. *Set: Research Information for Teachers*(3), 4-9. https://doi.org/10.18296/set.1512

Bovill, C. (2017). A Framework to Explore Roles Within Student-Staff Partnerships in Higher Education: Which Students Are Partners, When, and in What Ways? [Opinion piece]. *International Journal for Students as Partners*, *1*(1), 1-5. https://doi.org/10.15173/ijsap.v1i1.3062

Bragg, S. (2007). "Student Voice" and Governmentality: The production of enterprising subjects? *Discourse: Studies in the Cultural Politics of Education*, *28*(3), 343-358. https://doi.org/10.1080/01596300701458905

Bragg, S. (2010). *Consulting young people: A literature review* (Creativity, Culture and Education Series, Issue. http://www.creativitycultureeducation.org/data/files/cce-lit-review-consulting-young-people-256.pdf

Bron, J. (2018). *Student voice in curriculum development: Explorations of curriculum negotiation in secondary education classrooms* University of Humanistic Studies]. Utrecht, The Netherlands. https://repository.uvh.nl/uvh/bitstream/handle/11439/3229/Bron%20Jeroen%20Proefschrift%20Jeroen.pdf?sequence=1

Bronkhorst, L. H., Koster, B., Meijer, P. C., Woldman, N., & Vermunt, J. D. (2014). Exploring student teachers' resistance to teacher education pedagogies. *Teaching and Teacher Education*, *40*, 73-82. https://doi.org/10.1016/j.tate.2014.02.001

Brouwer, P., Van Kan, C., Smit, B. H. J., Admiraal, W., Van Swet, J., Spreeuwenberg, L., Jong, F. d., Asbreuk, H., Kruijer, T., & Berg, L. v. d. (2018). *Van masterstudent naar masterdocent: Onderzoek naar de betekenis van onderwijsonderzoek door docenten [From master student to master teacher: Research into the meaning of educational research for teachers]* [Final report](NRO-project 405-15-811). NRO.

Brydon-Miller, M., & Maguire, P. (2009). Participatory action research: contributions to the development of practitioner inquiry in education. *Educational Action Research*, *17*(1), 79-93. https://doi.org/10.1080/09650790802667469

Burke, C. (2007). The View of the Child: Releasing "visual voices" in the design of learning environments. *Discourse: Studies in the Cultural Politics of Education*, *28*(3), 359-372. https://doi.org/10.1080/01596300701458947

Buxton, C. A., Allexsaht-Snider, M., Kayumova, S., Aghasaleh, R., Choi, Y.-J., & Cohen, A. (2015). Teacher agency and professional learning: Rethinking fidelity of implementation as multiplicities of enactment. *Journal of Research in Science Teaching*, *52*(4), 489-502. https://doi.org/10.1002/tea.21223

Buzzelli, C., & Johnston, B. (2001). Authority, power, and morality in classroom discourse. *Teaching and Teacher Education*, *17*(8), 873-884. https://doi.org/10.1016/s0742-051x(01)00037-3

Call-Cummings, M. (2018). Claiming power by producing knowledge: the empowering potential of PAR in the classroom. *Educational Action Research*, *26*(3), 385-402. https://doi.org/10.1080/09650792.2017.1354772

Campbell, A., & Groundwater-Smith, S. (Eds.). (2007). *An Ethical Approach to Practitioner Research: Dealing with issues and dilemmas in action research*. Routledge.

Capobianco, B. M., & Ní Ríordáin, M. (2015). Navigating layers of teacher uncertainty among preservice science and mathematics teachers engaged in action research. *Educational Action Research*, *23*(4), 581-598. https://doi.org/10.1080/09650792.2015.1045537

Carr, W. (2007). Educational research as a practical science. *International Journal of Research and Method in Education*, *30*(3), 271-286. https://doi.org/10.1080/17437270701614774

CBKS. (2012). *The Coalition of Knowledge Building Schools*. Retrieved November 12 from http://www.ckbschools.org/Coalition_Home.html

Chou, C.-h. (2010). Investigating the effects of incorporating collaborative action research into an in-service teacher training program. *Procedia - Social and Behavioral Sciences*, *2*(2), 2728-2734. https://doi.org/10.1016/j.sbspro.2010.03.404

Clandinin, D. J., & Connelly, F. M. (1998). Personal Experience Methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Collecting and Interpreting Qualitative Materials* (pp. 150-178). SAGE Publications.

Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, *18*(8), 947-967. https://doi.org/10.1016/s0742-051x(02)00053-7

Cochran-Smith, M., Barnatt, J., Friedman, A., & Pine, G. (2009). Inquiry on Inquiry: Practitioner Research and Student Learning. *Action in Teacher Education*, *31*(2), 17-32. https://doi.org/10.1080/01626620.2009.10463515

Conroy, H., & Harcourt, D. (2009). Informed agreement to participate: beginning the partnership with children in research. *Early Child Development and Care*, *179*(2), 157-165. https://doi.org/10.1080/03004430802666973

Cook-Sather, A. (2002). Authorizing Students' Perspectives: Toward Trust, Dialogue, and Change in Education. *Educational Researcher*, *31*(4), 3-14. https://doi.org/10.3102/0013189x031004003

Cook-Sather, A. (2006). Sound, Presence, and Power: "Student Voice" in Educational Research and Reform. *Curriculum Inquiry*, *36*(4), 359-390. https://doi.org/10.1111/j.1467-873X.2006.00363.x

Cook-Sather, A. (2009). From traditional accountability to shared responsibility: the benefits and challenges of student consultants gathering midcourse feedback in college classrooms. *Assessment & Evaluation in Higher Education*, *34*(2), 231-241. https://doi.org/10.1080/02602930801956042

Cook-Sather, A. (2014). The trajectory of student voice in educational research. *New Zealand Journal of Educational Studies*, *49*(2), 131-148. http://search.informit.com.au/documentSummary;dn=842480978608459;res=IELHSS

Cook-Sather, A. (2018). Tracing the evolution of student voice in educational research. In R. Bourke & J. Loveridge (Eds.), *Radical collegiality through student voice: Educational experience, policy and practice* (pp. 17-38). Springer.

Cook-Sather, A. (2020). Student Voice across Contexts: Fostering Student Agency in Today's Schools. *Theory Into Practice*, 1-10. https://doi.org/10.1080/00405841.2019.1705091

Crawford-Garrett, K., Anderson, S., Grayson, A., & Suter, C. (2015). Transformational practice: critical teacher research in pre-service teacher education. *Educational Action Research*, *23*(4), 479-496. https://doi.org/10.1080/09650792.2015.1019902

Darwin, S., & Barahona, M. (2018). Can an outsider become an insider? Analysing the effect of action research in initial EFL teacher education programs. *Educational Action Research*, 1-17. https://doi.org/10.1080/09650792.2018.1494616

De Winter, M. (2009, 7 oktober). *Pupils as Citizens: Consequences for teaching, policy and research* Symposium inauguratie Petra Ponte, Hogeschool Utrecht.

Dinkelman, T. (2003). Self-Study In Teacher Education: A means and ends tool for promoting refelcetive teaching. *Journal of Teacher Education*, *54*(1), 6-18. https://doi.org/10.1177/0022487102238654

Edwards-Groves, C., & Grootenboer, P. (2015). Praxis and the theory of practice architectures: Resources for re-envisioning English education. *Australian Journal of Language and Literacy*, *38*(3), 150-161.

Edwards-Groves, C., & Kemmis, S. (2016). Pedagogy, Education and Praxis: understanding new forms of intersubjectivity through action research and practice theory. *Educational Action Research*, *24*(1), 77-96. https://doi.org/10.1080/09650792.2015.1076730

Edwards-Groves, C., Olin, A., & Karlberg-Granlund, G. (2016). Partnership and recognition in action research: understanding the practices and practice architectures for participation and change. *Educational Action Research*, *24*(3), 321-333. https://doi.org/10.1080/09650792.2015.1129983

Edwards-Groves, C. J., & Hoare, R. (2012). "Talking to Learn": Focussing teacher education on dialogue as a core practice for teaching and learning. *Australian Journal of Teacher Education*, *37*(8), 82-100. https://doi.org/10.14221/ajte.2012v37n8.8

Egg, P. (2009). Research happens: I have a dream. In J. Fiedler & C. Posch (Eds.), *Yes we can! Children researching their lives* (pp. 111-123). Hofmann.

el Ayachi, R., & Willems, R. (2012). *Students as co-researchers* [Documentary]. RuRa Media. http://www.youtube.com/watch?v=L8p8fLBx54I

Evans, J. (2016). Children's rights, educational research and the UNCRC: past, present and future [book review]. *Journal of Education for Teaching*, *42*(5), 626-627. https://doi.org/10.1080/02607476.2016.1235926

Farrell, A. (Ed.). (2005). *Ethical Research with Children*. Open University Press.

Fielding, M. (2001). Students as radical agents of change. *Journal of Educational Change*, *2*(2), 123-141. https://doi.org/10.1023/A:1017949213447

Fielding, M. (2004). Transformative approaches to student voice: theoretical underpinnings, recalcitrant realities. *British Educational Research Journal*, *30*(2), 295-311. https://doi.org/10.1080/0141192042000195236

Fielding, M. (2007). Beyond "Voice": New roles, relations, and contexts in researching with young people. *Discourse: Studies in the Cultural Politics of Education*, *28*(3), 301-310. https://doi.org/10.1080/01596300701458780

Fielding, M. (2011). Patterns of Partnership: Student Voice, Intergenerational Learning and Democratic Fellowship. In N. Mockler & J. Sachs (Eds.), *Rethinking Educational Practice Through Reflexive Inquiry: Essays in Honour of Susan Groundwater-Smith* (pp. 61-75). Springer. https://doi.org/10.1007/978-94-007-0805-1_5

Fielding, M. (2018). Radical Democracy and Student Voice in Secondary Schools. In J. Feu & O. Prieto-Flores (Eds.), *Democracy and Education in the 21st century: The articulation of new democratic discourses and practices* (pp. 69-86). Peter Lang. https://doi.org/10.3726/b11577

Fielding, M., & McGregor, J. (2005, April). *Deconstructing student voice: New space for dialogue or new opportunities for surveillance?* AERA conference, Montreal.

Fielding, M., & Moss, P. (2011). *Radical education and the common school: A democratic alternative*. Routledge.

Fine, M., Torre, M. E., Burns, A., & Payne, Y. A. (2007). Youth Research/Participatory Methods for Reform. In D. Thiessen & A. Cook-Sather (Eds.), *International Handbook of Student Experience in Elementary and Secondary School* (pp. 805-828). Springer Netherlands. https://doi.org/10.1007/1-4020-3367-2_32

Flutter, J. (2007). Teacher development and pupil voice. *The Curriculum Journal*, *18*(3), 343-354. https://doi.org/10.1080/09585170701589983

Fullan, M. (2007). *The New Meaning of Educational Change* (4th ed.). Teachers College Press.

Fuller, F. F. (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal*, *6*(2), 207-226. https://doi.org/10.3102/00028312006002207

Galletta, A., & Torre, M. E. (2019). Participatory Action Research in Education. *Oxford Research Encyclopedia, Education*, 1-30.

Glazer, E. M., & Hannafin, M. J. (2006). The collaborative apprenticeship model: Situated professional development within school settings. *Teaching and Teacher Education*, *22*(2), 179-193. https://doi.org/10.1016/j.tate.2005.09.004

Gore, J. M. (1994). *Power and pedagogy: an empirical investigation of four sites* annual meeting of the American Educational Research Association, New Orleans, LA.

Gore, J. M. (1996). *Understanding power relations in pedagogy* joint meeting of the Australian Association for Research in Education and the Educational Research Association, Singapore.

Gore, J. M., & Zeichner, K. M. (1991). Action research and reflective teaching in preservice teacher education: A case study from the United States. *Teaching and Teacher Education*, *7*(2), 119-136. https://doi.org/10.1016/0742-051x(91)90022-h

Graham, A., & Fitzgerald, R. (2010). Progressing children's participation: Exploring the potential of a dialogical turn. *Childhood*, *17*(3), 343-359. https://doi.org/10.1177/0907568210369219

Groundwater-Smith, S. (2005, 4-6 November). *Learning by listening: student voice in practitioner research* International Practitioner Research & Collaborative Action Research Network (CARN) Conference, Utrecht, the Netherlands.

Groundwater-Smith, S., Dockett, S., & Bottrell, D. (2015). *Participatory research with children and young people*. SAGE Publications.

Groundwater-Smith, S., Mitchell, J., Mockler, N., Ponte, P., & Rönnerman, K. (2013). *Facilitating Practitioner Research: Developing Transformational Partnerships*. Routledge. https://www.routledge.com/Facilitating-Practitioner-Research-Developing-Transformational-Partnerships/Groundwater-Smith-Mitchell-Mockler-Ponte-Ronnerman/p/book/9780415684422

Groundwater-Smith, S., & Mockler, N. (2007). Ethics in practitioner research: an issue of quality. *Research Papers in Education*, *22*(2), 199-211. http://www.informaworld.com/10.1080/02671520701296171

Groundwater-Smith, S., & Mockler, N. (2016). From data source to co-researchers? Tracing the shift from 'student voice' to student–teacher partnerships in Educational Action Research. *Educational Action Research*, *24*(2), 159-176. https://doi.org/10.1080/09650792.2015.1053507

Hardy, I., Salo, P., & Rönnerman, K. (2015). Bildung and educational action research: resources for hope in neoliberal times. *Educational Action Research*, *23*(3), 383-398. https://doi.org/10.1080/09650792.2015.1012175

Hargreaves, A. (2005). Educational change takes ages: Life, career and generational factors in teachers' emotional responses to educational change. *Teaching and Teacher Education*, *21*(8), 967-983. https://doi.org/10.1016/j.tate.2005.06.007

Hargreaves, A., & Goodson, I. (2006). Educational Change Over Time? The Sustainability and Nonsustainability of Three Decades of Secondary School Change and Continuity. *Educational Administration Quarterly*, *42*(1), 3-41. https://doi.org/10.1177/0013161x05277975

Hart, R. A. (1992). Children's Participation: from Tokenism to Citizenship. In *Innocenti Essay* (Vol. 4). Florence, Italy: UNICEF International Child Development Centre.

Hawkins, K. A. (2015). The complexities of participatory action research and the problems of power, identity and influence. *Educational Action Research*, *23*(4), 464-478. https://doi.org/10.1080/09650792.2015.1013046

Holdsworth, R. (2014). Spaces for partnerships. Teach the teacher: student-led professional development for teachers. *FORUM*, *56*(1), 67-78. https://doi.org/10.2304/forum.2014.56.1.67

Honerød Hoveid, M., & Hoveid, H. (2007). Research in, on, or with practice? In P. Ponte & B. H. J. Smit (Eds.), *The quality of practitioner research: Reflections on the position of the researcher and the researched* (pp. 43-56). Sense Publishers.

Honneth, A. (2012). *The I in We: Studies in the Theory of Recognition*. Polity Press. (Das Ich im Wir; Berlin: Suhrkamp Verlag, 2010)

Illich, I. (1971). *Deschooling society*. Harper & Row.

Jones, M.-A., & Hall, V. (2021). Redefining student voice: applying the lens of critical pragmatism. *Oxford Review of Education*, 1-17. https://doi.org/10.1080/03054985.2021.2003190

Kane, R. G., & Chimwayange, C. (2014). Teacher action research and student voice: Making sense of learning in secondary school. *Action Research*, *12*(1), 52-77. https://doi.org/10.1177/1476750313515282

Kaukko, M., & Wilkinson, J. (2018). 'Learning how to go on': refugee students and informal learning practices. *International Journal of Inclusive Education*, *24*(11), 1175-1193. https://doi.org/10.1080/13603116.2018.1514080

Kelly, L. (2015, December 21). Reflections on the Coalition of Knowledge Building Schools 2001-2015. *Museums-Digital-Research-Learning*. https://musdigi.wordpress.com/2015/12/21/reflections-on-the-coalition-of-knowledge-building-schools-2001-2015/

Kemmis, S. (2008). Critical theory and participatory action research. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research: Participative inquiry and practice* (2nd ed., pp. 121-138). SAGE Publications.

Kemmis, S. (2009). Action research as a practice-based practice. *Educational Action Research*, *17*(3), 463-474. https://doi.org/10.1080/09650790903093284

Kemmis, S., & Grootenboer, P. (2008). Situating praxis in practice. In S. Kemmis & T. J. Smith (Eds.), *Enabling Praxis: Challenges for education* (3 ed., pp. 37-62). Sense Publishers.

Kemmis, S., McTaggart, R., & Nixon, R. (2014). *The Action Research Planner; Doing Critical Participatory Action Research*. Springer.

Kemmis, S., & Smith, T. J. (Eds.). (2008). *Enabling praxis: challenges for education*. Sense Publishers.

Kemmis, S., Wilkinson, J., Edwards-Groves, C., Hardy, I., Grootenboer, P., & Bristol, L. (2014). Praxis, Practice and Practice Architectures. In S. Kemmis, J. Wilkinson, C. Edwards-Groves, I. Hardy, P. Grootenboer, & L. Bristol (Eds.), *Changing practices, changing education* (pp. 25-41). Springer.

Kidd, S. A., & Kral, M. J. (2005). Practicing Participatory Action Research. *Journal of Counseling Psychology*, *52*(2), 187-195. http://www.sciencedirect.com/science/article/B6WYB-4FYB94T-8/2/73e605cde8170492bd147b2cca41fb0d

Kirby, P., Lanyon, C., Cronin, K., & Sinclair, R. (2003). *Building a culture of participation: Involving children and young people in policy, service planning, delivery and evaluation* (DfES/0827/2003). N. DfES Publications, UK.

Korthagen, F. A. J. (2010). The Relationship Between Theory and Practice in Teacher Education. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International Encyclopedia of Education (Third Edition)* (pp. 669-675). Elsevier. http://www.sciencedirect.com/science/article/pii/B9780080448947006382

Krell, D. E., & Dana, N. F. (2012). Facilitating action research: a study of coaches, their experiences, and their reflections on leading teachers in the process of practitioner inquiry. *Professional Development in Education*, *38*(5), 827-844. https://doi.org/10.1080/19415257.2012.666052

Lansdown, G. (2005). Can you hear me? The right of young children to participate in decisions affecting them. In (Vol. 36). The Netherlands: Bernard van Leer Foundation.

Le Fevre, D. M. (2014). Barriers to implementing pedagogical change: The role of teachers' perceptions of risk. *Teaching and Teacher Education*, *38*, 56-64. https://doi.org/10.1016/j.tate.2013.11.007

Lefstein, A., & Perath, H. (2014). Empowering teacher voices in an education policy discussion: Paradoxes of representation. *Teaching and Teacher Education*, *38*, 33-43. https://doi.org/10.1016/j.tate.2013.11.001

Leitch, R., & Day, C. (2000). Action research and reflective practice: towards a holistic view. *Educational Action Research*, *8*(1), 179-193. https://doi.org/10.1080/09650790000200108

Leuverink, K. R., & Aarts, A. M. L. (2021). Changes in teachers' professional behavior through conducting teacher research. *Journal of Educational Change*, *23*(1), 61-84. https://doi.org/10.1007/s10833-020-09409-9

Louws, M. L. (2016). *Professional Learning: What teachers want to learn* [Doctoral thesis, Universiteit Leiden]. Leiden.

Lundy, L. (2007). 'Voice' is not enough: conceptualising Article 12 of the United Nations Convention on the Rights of the Child. *British Educational Research Journal*, *33*(6), 927-942. https://doi.org/10.1080/01411920701657033

Luttenberg, J., Van Veen, K., & Imants, J. (2011). Looking for cohesion: the role of search for meaning in the interaction between teacher and reform. *Research Papers in Education*, 1-20. https://doi.org/10.1080/02671522.2011.630746

MacDonald, C. (2012). Understanding participatory action research: A qualitative research methodology option. *Canadian Journal of Action Research*, *13*(2), 34-50.

Mager, U., & Nowak, P. (2012). Effects of student participation in decision making at school. A systematic review and synthesis of empirical research. *Educational Research Review*, *7*(1), 38-61. https://doi.org/10.1016/j.edurev.2011.11.001

Mahon, K., Francisco, S., & Kemmis, S. (Eds.). (2017). *Exploring education and professional practice: Through the lens of practice architectures*. Springer. https://doi.org/10.1007/978-981-10-2219-7.

Matthews, K. E. (2017). Five Propositions for Genuine Students as Partners Practice [Editorial]. *International Journal for Students as Partners*, *1*(2), 1-9. https://doi.org/10.15173/ijsap.v1i2.3315

Mayall, B. (2000). The sociology of childhood in relation to children's rights. *International Journal of Children's Rights*, *8*(3), 243-259. https://doi.org/10.1163/15718180020494640

McTaggart, R. (1998). Is validity really an issue for participatory action research? *Studies in Cultures, Organizations and Societies*, *4*(2), 211-236. https://doi.org/10.1080/10245289808523513

Meijer, P. C. (2014). *De docent: Sterk in ontwikkeling [The teacher: Strong(ly) in development]* [Inaugurele rede [Inaugural speech]].

Meijer, P. C., Oolbekkink, H. W., Meirink, J. A., & Lockhorst, D. (2013). Teacher research in secondary education: Effects on teachers' professional and school development, and issues of quality. *International Journal of Educational Research*, *57*, 39-50. https://doi.org/10.1016/j.ijer.2012.10.005

Meister, D. G., & Melnick, S. A. (2003). National New Teacher Study: Beginning Teachers' Concerns. *Action in Teacher Education*, *24*(4), 87-94. https://doi.org/10.1080/01626620.2003.10463283

Mezirow, J. (2009). Transformative learning theory. In J. Mezirow, E. W. Taylor, & Associates (Eds.), *Transformative Learning in Practice: Insights from Community, Workplace, and Higher Education* (pp. 18-32). Jossey-Bass.

Mitchell, S. N., Reilly, R. C., & Logue, M. E. (2009). Benefits of collaborative action research for the beginning teacher. *Teaching and Teacher Education*, *25*(2), 344-349. https://doi.org/10.1016/j.tate.2008.06.008

Mitra, D. L. (2006). Student voice from the inside and outside: the positioning of challengers. *International Journal of Leadership in Education*, *9*(4), 315-328. https://doi.org/10.1080/13603120600895379

Mockler, N. (2014). When 'research ethics' become 'everyday ethics': the intersection of inquiry and practice in practitioner research. *Educational Action Research*, *22*(2), 146-158. https://doi.org/10.1080/09650792.2013.856771

Moreira, M. A. (2009). Action research as a tool for critical teacher education towards learner autonomy. *Innovation in Language Learning and Teaching*, *3*(3), 255-268. https://doi.org/10.1080/17501220903404509

Niemi, R., & Loukomies, A. (2021). 'Should we ask the students' opinions first?' Practice architectures of student participation from the perspective of teachers. *Improving Schools*, *24*(3), 261-276. https://doi.org/10.1177/1365480220974225

Noffke, S. (1994). Action research: towards the next generation. *Educational Action Research*, *2*(1), 9-21. https://doi.org/10.1080/09650799400200010

OHCHR. (1989). *Convention on the Rights of the Child (General Assembly resolution 44/25 of 20 November 1989)*. https://www.ohchr.org/sites/default/files/crc.pdf

GENERAL COMMENT No. 12 (2009); The right of the child to be heard, (2009). https://www2.ohchr.org/english/bodies/crc/docs/advanceversions/crc-c-gc-12.pdf

Oolbekkink-Marchand, H., Oosterheert, I., Scholte Lubberink, L., & Denessen, E. (2020). The position of student teacher practitioner research in teacher education: teacher educators' perspectives. *Educational Action Research*, 1-17. https://doi.org/10.1080/09650792.2020.1857811

Osler, A. (2010). *Students' perspectives on schooling*. Open University Press.

Padilla-Petry, P., & Miño Puigcercós, R. (2022). Engaging Young People in a Research Project: The Complexities and Contributions of Using Participatory Methods With Young People in Schools. *SAGE Open*, *12*(1). https://doi.org/10.1177/21582440211068457

Pennanen, M., Bristol, L., Wilkinson, J., & Heikkinen, H. (2017). Articulating the Practice Architectures of Collaborative Research Practice. In K. Mahon, S. Francisco, & S. Kemmis (Eds.), *Exploring Education and Professional Practice Through the Lens of Practice Architectures* (pp. 201-217). Springer. https://doi.org/10.1007/978-981-10-2219-7_12

Perry-Hazan, L., & Somech, A. (2021). Conceptualising student participation in school decision making: an integrative model. *Educational Review*, 1-22. https://doi.org/10.1080/00131911.2021.1976113

Ping, C., Schellings, G., & Beijaard, D. (2018). Teacher educators' professional learning: A literature review. *Teaching and Teacher Education*, *75*, 93-104. https://doi.org/10.1016/j.tate.2018.06.003

Ponte, P. (2002). *Actie-onderzoek door docenten: Uitvoering en begeleiding in theorie en praktijk* [Teacher action research: Implementation and guidance in theory and practice]. Garant.

Ponte, P. (2010). Action Research as a Tool for Teachers' Professional Development. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International Encyclopedia of Education* (3rd ed., Vol. Teacher Education – Post-initial Professional Development, pp. 540-547). Elsevier.

Ponte, P. (2012). *Onderwijs en onderzoek van eigen makelij; Onderzoek met en door leraren* [Education and research of your own making: Research with and by teachers] (4th changed ed.). Boom Lemma uitgevers. https://www.boomhogeronderwijs.nl/kernproduct/277/Onderwijs-en-onderzoek-van-eigen-makelij-vierde-druk?h=13771

Ponte, P., Ax, J., Beijaard, D., & Wubbels, T. (2004). Teachers' development of professional knowledge through action research and the facilitation of this by teacher educators. *Teaching and Teacher Education*, *20*(6), 571-588. https://doi.org/10.1016/j.tate.2004.06.003

Ponte, P., & Smit, B. H. J. (2007). Introduction: Doing research and being researched? In P. Ponte & B. H. J. Smit (Eds.), *The quality of practitioner research: Reflections on the position of the researcher and the researched* (pp. 1-8). Sense Publishers.

Ponte, P., & Smit, B. H. J. (2013). Education for all as praxis: consequences for the profession. *Professional Development in Education*, *39*(4), 455-469. https://doi.org/10.1080/19415257.2013.796296

Print, M., Ørnstrøm, S., & Skovgaard Nielsen, H. (2002). Education for Democratic Processes in Schools and Classrooms. *European Journal of Education*, *37*(2), 193-210. https://doi.org/10.1111/1467-3435.00102

Quennerstedt, A. (2010). Children, But Not Really Humans? Critical Reflections on the Hampering Effect of the "3 p's". *The International Journal of Children's Rights*, *18*(4), 619-635. https://doi.org/10.1163/157181810x490384

Quennerstedt, A., & Quennerstedt, M. (2014). Researching children's rights in education: sociology of childhood encountering educational theory. *British Journal of Sociology of Education*, *35*(1), 115-132. https://doi.org/10.1080/01425692.2013.783962

Quicke, J. (2003). Educating the pupil voice. *Support for Learning*, *18*(2), 51-57. https://doi.org/10.1111/1467-9604.00280

Rajendran, N., Watt, H. M. G., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, *47*(3), 477-500. https://doi.org/10.1007/s13384-019-00371-x

Reis-Jorge, J. (2007). Teachers' conceptions of teacher-research and self-perceptions as enquiring practitioners—A longitudinal case study. *Teaching and Teacher Education*, *23*(4), 402-417. https://doi.org/10.1016/j.tate.2006.12.007

Rinnooy Kan, W. F., Munniksma, A., Volman, M., & Dijkstra, A. B. (2023). Practicing voice: student voice experiences, democratic school culture and students' attitudes towards voice. *Research Papers in Education*, 1-21. https://doi.org/10.1080/02671522.2023.2178496

Rönnerman, K. (2008). Empowering teachers. Action research in partnership between school and university. In K. Rönnerman, E. M. Furu, & P. Salo (Eds.), *Nurturing Praxis: Action Research in Partnerships between School and University in a Nordic Light* (pp. 157–174). Sense Publishers.

Rönnerman, K., Furu, E. M., & Salo, P. (Eds.). (2008). *Nurturing Praxis: Action Research in Partnerships between School and University in a Nordic Light*. Sense Publishers.

Rudduck, J., & Fielding, M. (2006). Student voice and the perils of popularity. *Educational Review*, *58*(2), 219-231. https://doi.org/10.1080/00131910600584207

Rudduck, J., & Flutter, J. (2000). Pupil Participation and Pupil Perspective: 'carving a new order of experience'. *Cambridge Journal of Education*, *30*(1), 75-89. https://doi.org/10.1080/03057640050005780

Rudduck, J., & McIntyre, D. (2007). *Improving learning through consulting pupils*. Routledge. https://doi.org/10.4324/9780203935323

Rutten, L. (2021). Toward a theory of action for practitioner inquiry as professional development in preservice teacher education. *Teaching and Teacher Education*, *97*. https://doi.org/10.1016/j.tate.2020.103194

Saiz-Linares, Á., Rodríguez-Hoyos, C., & Susinos-Rada, T. (2019). 'I think we are still very directive': Teachers' discourses on democratic student participation. *British Educational Research Journal*, *45*(1), 83-98. https://doi.org/10.1002/berj.3488

Salo, P., & Rönnerman, K. (2023). Educational Action Research for Being. *Nordic Studies in Education*, *43*(1), 78-93. https://doi.org/10.23865/nse.v43.3985

Sandoval, M., & Messiou, K. (2020). Students as researchers for promoting school improvement and inclusion: a review of studies. *International Journal of Inclusive Education*, 1-16. https://doi.org/10.1080/13603116.2020.1730456

Schatzki, T. R. (2012). A Primer on Practices: Theory and Research. In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.), *Practice-Based Education: Perspectives and Strategies* (pp. 13-26). Sense Publishers. https://brill.com/view/book/edcoll/9789462091283/BP000003.xml?rskey=RzCmNO&result=4

Shier, H. (2001). Pathways to participation: openings, opportunities and obligations. *Children & Society*, *15*(2), 107-117. https://doi.org/10.1002/chi.617

Sjølie, E., Francisco, S., & Langelotz, L. (2018). Communicative learning spaces and learning to become a teacher. *Pedagogy, Culture & Society*, 1-18. https://doi.org/10.1080/14681366.2018.1500392

Smit, B. H. J. (2013). Young people as co-researchers: enabling student participation in educational practice. *Professional Development in Education*, *39*(4), 550-573. https://doi.org/10.1080/19415257.2013.796297

Smit, B. H. J., Meirink, J. A., Berry, A. K., & Admiraal, W. F. (2020). Source, respondent, or partner? Involvement of secondary school students in Participatory Action Research. *International Journal of Educational Research*, *100*, 1-12. https://doi.org/10.1016/j.ijer.2020.101544

Smit, B. H. J., Meirink, J. A., Tigelaar, D. E. H., Berry, A. K., & Admiraal, W. F. (2022). Principles for school student participation in pre-service teacher action research: A practice architecture's perspective. *Educational Action Research*. https://doi.org/10.1080/09650792.2022.2121933

Smit, B. H. J., Plomp, L., & Ponte, P. (2010, 28 November - 2 December). *Pupils and teacher as co-researchers: conditions for equal voices* Symposium 'Consulting young people: Why student voice matters' (chair: Professor Susan Groundwater-Smith) at the AARE Conference 2010: 'Making a difference', Melbourne, Australia.

Smith, M., & Donnelly, J. (2004). Power, inequality, change, and uncertainty: Viewing the world through the development prism. In C. J. Pole (Ed.), *Seeing is Believing? Approaches to Visual Research* (pp. 123-145). JAI. https://doi.org/10.1016/S1042-3192(04)07008-9

Snow-Gerono, J. L. (2005). Professional development in a culture of inquiry: PDS teachers identify the benefits of professional learning communities. *Teaching and Teacher Education*, *21*(3), 241-256. https://doi.org/10.1016/j.tate.2004.06.008

Sol, Y. B., & Stokking, K. M. (2008). *Leerlingenparticipatie in het VO. Vormen, processen, effecten [Student participation in secondary education: Forms, processes, effects]* (ISOR-rapportnummer: 08-03).

Somekh, B., & Zeichner, K. (2009). Action research for educational reform: remodelling action research theories and practices in local contexts. *Educational Action Research*, *17*(1), 5-21. https://doi.org/10.1080/09650790802667402

Taylor, C., & Robinson, C. (2009). Student voice: theorizing power and participation. *Pedagogy, Culture & Society*, *17*(2), 161-175. https://doi.org/10.1080/14681360902934392

Taylor, L. A. (2017). How teachers become teacher researchers: Narrative as a tool for teacher identity construction. *Teaching and Teacher Education*, *61*, 16-25. https://doi.org/10.1016/j.tate.2016.09.008

Thomas, N., & O'Kane, C. (1998). The ethics of participatory research with children. *Children & Society*, *12*(5), 336-348. https://doi.org/10.1111/j.1099-0860.1998.tb00090.x

Thomas, R., Whybrow, K., & Scharber, C. (2012a). A Conceptual Exploration of Participation. Section I: Introduction and Early Perspectives. *Educational Philosophy and Theory*, *44*(6), 594-613. https://doi.org/10.1111/j.1469-5812.2010.00731.x

Thomas, R., Whybrow, K., & Scharber, C. (2012b). A Conceptual Exploration of Participation. Section II: Participation as Engagement in Experience—An Aesthetic Perspective. *Educational Philosophy and Theory*, *44*(7), 746-759. https://doi.org/10.1111/j.1469-5812.2010.00739.x

Thomas, R., Whybrow, K., & Scharber, C. (2012c). A Conceptual Exploration of Participation. Section III: Utilitarian Perspectives and Conclusion. *Educational Philosophy and Theory*, *44*(8), 801-817. https://doi.org/10.1111/j.1469-5812.2010.00740.x

Thomson, P., & Gunter, H. (2006). From 'consulting pupils' to 'pupils as researchers': a situated case narrative. *British Educational Research Journal*, *32*(6), 839-856. https://doi.org/10.1080/01411920600989487

Thomson, P., & Gunter, H. (2007). The Methodology of Students-as-Researchers: Valuing and using experience and expertise to develop methods. *Discourse: Studies in the Cultural Politics of Education*, *28*(3), 327-342. https://doi.org/10.1080/01596300701458863

Torre, M. E., Cahill, C., & Fox, M. (2015). Participatory Action Research in Social Research. In J. D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (Second ed., pp. 540-544). Elsevier. https://doi.org/10.1016/b978-0-08-097086-8.10554-9

Toshalis, E., & Nakkula, M. J. (2012). Motivation, Engagement, and Student Voice. In. Boston/Washington, USA: Jobs for the Future.

Trent, A. (2003). Decentering the teacher: a practitioner's acccount. *Teachers and Teaching: Theory and Practice*, *9*(4), 295-307. https://doi.org/10.1080/1354060032000097226

Ulvik, M., & Riese, H. (2016). Action research in pre-service teacher education – a never-ending story promoting professional development. *Professional Development in Education*, *42*(3), 441-457. https://doi.org/10.1080/19415257.2014.1003089

UNESCO. (1990). World Declaration on Education for All.

van der Linden, W., Bakx, A., Ros, A., Beijaard, D., & Vermeulen, M. (2012). Student teachers' development of a positive attitude towards research and research knowledge and skills. *European Journal of Teacher Education*, *35*(4), 401-419. https://doi.org/10.1080/02619768.2011.643401

Van Swet, J., Smit, B. H. J., Corvers, L., & Van Dijk, I. (2009). Critical friendship as a contribution to master's-level work in an international programme of study. *Educational Action Research*, *17*(3), 339-357. https://doi.org/10.1080/09650790903093292

Verbeek, G., & Ponte, P. (2014). *Participatie in het onderwijs: Onderzoek met en door leerlingen* [Participation in education: Research with and by students]. Boom Lemma uitgevers. https://www.boomhogeronderwijs.nl/kernproduct/295/Participatie-in-het-onderwijs?h=13771#omschrijving

Warnick, B. R. (2009). Student Speech Rights and the Special Characteristics of the School Environment. *Educational Researcher*, *38*(3), 200-215. https://doi.org/10.3102/0013189X09334706

Watzke, J. L. (2007). Longitudinal research on beginning teacher development: Complexity as a challenge to concerns-based stage theory. *Teaching and Teacher Education*, *23*(1), 106-122. https://doi.org/10.1016/j.tate.2006.04.001

West, C. (2011). Action Research as a Professional Development Activity. *Arts Education Policy Review*, *112*(2), 89-94. https://doi.org/10.1080/10632913.2011.546697

Westbroek, H., & Kaal, A. (2016). Leren onderzoeken in de eerstegraads lerarenopleiding [Learning to research in teacher education]. *Tijdschrift voor Lerarenopleiders*, *37*(1), 5-14.

White, E. (2011). Working towards explicit modelling: experiences of a new teacher educator. *Professional Development in Education*, *37*(4), 483-497. https://doi.org/10.1080/19415257.2010.531628

Wilson, S. (2000). Schooling for democracy. *Youth Studies Australia*, *19*(2), 25-31. https://doi.org/10.3316/ielapa.200011076

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed., Vol. 5). SAGE Publications.

Young, I. M. (1990). *Justice and the politics of difference*. Princeton University Press.

Zeichner, K., Payne, K. A., & Brayko, K. (2015). Democratizing Teacher Education. *Journal of Teacher Education*, *66*(2), 122-135. https://doi.org/10.1177/0022487114560908

Zeichner, K. M. (2003). Teacher research as professional development P–12 educators in the USA. *Educational Action Research*, *11*(2), 301-326. https://doi.org/10.1080/09650790300200211

Zwart, R., Smit, B. H. J., & Admiraal, W. (2015). Docentonderzoek nader bekeken: een reviewstudie naar de aard en betekenis van onderzoek door docenten [A closer look at teacher research: A review study into the nature and meaning of teachers' practitioner research]. *Pedagogische Studiën*, *92*(2), 131-148.

Appendices

Appendices

Appendix 1 – List of readings as part of the TEd program

READINGS ON ACTION RESEARCH AND STUDENT PARTICIPATION

Required (supplied in class)

Groundwater-Smith, S. (2005). *Learning by listening: student voice in practitioner research*. Paper presented at the International Practitioner Research & Collaborative Action Research Network (CARN) Conference, Utrecht, the Netherlands.

Smit, B. H. J. (2013). Young people as co-researchers: enabling student participation in educational practice. *Professional Development in Education, 39*(4), 550-573. doi: 10.1080/19415257.2013.796297

Trent, A. (2003). Decentering the teacher: a practitioner's account. *Teachers and Teaching: Theory and Practice, 9*(4), 295-307. doi: 10.1080/1354060032000097226

Suggested (available online or in the Multimedia Center)

Admiraal, W., Smit, B. H. J., & Zwart, R. (2014). Models and design principles for teacher research. *IB Journal of Teaching Practice, 2*(1), 1-6.

Crawford-Garrett, K., Anderson, S., Grayson, A., & Suter, C. (2015). Transformational practice: critical teacher research in pre-service teacher education. *Educational Action Research, 23*(4), 479-496. doi: 10.1080/09650792.2015.1019902

Meijer, P. C., Oolbekkink, H. W., Meirink, J. A., & Lockhorst, D. (2013). Teacher research in secondary education: Effects on teachers' professional and school development, and issues of quality. *International Journal of Educational Research, 57*(0), 39-50. doi: http://dx.doi.org/10.1016/j.ijer.2012.10.005

Ponte, P. (2012). Onderwijs en onderzoek van eigen makelij; Onderzoek met en door leraren [Education and research of your own making: Research with and by teachers] (4th changed ed.). Den Haag: Boom Lemma uitgevers.

Reis-Jorge, J. (2007). Teachers' conceptions of teacher-research and self-perceptions as enquiring practitioners—A longitudinal case study. *Teaching and Teacher Education, 23*(4), 402-417. doi: 10.1016/j.tate.2006.12.007

Verbeek, G., & Ponte, P. (2014). Participatie in het onderwijs: Onderzoek met en door leerlingen [Participation in education: Research with and by students]. Den Haag: Boom Lemma uitgevers.

Zeichner, K. M. (2003). Teacher research as professional development P–12 educators in the USA. *Educational Action Research, 11*(2), 301-326. doi: 10.1080/09650790300200211

Zwart, R., Smit, B. H. J., & Admiraal, W. (2015). Docentonderzoek nader bekeken: een reviewstudie naar de aard en betekenis van onderzoek door docenten [A closer look at teacher research: A review study into the nature and meaning of teachers' practitioner research]. *Pedagogische Studiën, 92*(2), 131-148.

Appendix 2 – Matrix SPinSTAR (Student participation in student teacher's action research)

Action research stage	Level of school student involvement				
	None (no SP)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
a. Problem definition (RQs)					
b. Intervention design					
c. Research design					
d. Conduct intervention[19]					
e. Data collection					
f. Analysis of results					
g. Formulation of suggestions / recommendations					
h. Making public					

(adapted from Bovill, 2017; Fielding, 2001, 2011, 2018)

The matrix *Student participation in student teacher action research* (SPinSTAR) has been designed within this study to describe and analyze school student involvement in pre-service student teacher action research as found in the specific context of this study. This scope has two characteristics that determine the matrix design. First, the action research project is conducted in a one-year postgraduate setting, which allows for only a relatively short time-span for the whole research process and in particular for actually conducting the research steps (about one half-year). Second, the teacher education context requires the PST to carry out a research assignment and to conduct the research according to the TE program's requirements and standards, for instance on research approach and time schedules. Consequently, in these respects, the matrix *SPinSTAR* deviates from Fielding's (2001) model of student participation and Bovill's (2017) matrix of student involvement. Bovill's level 'Partnership' suggests a sustained teacher-learner relationship that can be inferred from an ongoing teaching practice, and not or only tentatively from a one-off activity or a single research project. For that reason, the level 'Partnership' has been replaced by 'Collaborate', which implies a joint way of working and decision-making, but not necessarily a lasting pattern. Since ultimately, in this context, the responsibility for the PST research is not shared between the student teacher and the school students – as with higher levels of Hart's *Ladder of Participation* (Hart, 1992) – and the school students are not the initiators of the research project, the level 'Control' does not add any meaning to connotations of locus of responsibility and decision-making already comprised by the four other levels of student involvement. Therefore, contrary to Bovill's matrix, 'Control' is not included as a part of the *SPinSTAR* matrix. To be able to identify also the non-existence of student involvement in specific stages of the research process, the column 'None (no SP)' has been added. This category is coded with the actor, source or target group for the activity, either the teacher herself or significant others: Individual, Peers, Literature/Theory, School/curriculum.

[19] Although conducting the intervention in class is part of the action research process, in the context of this study it is not related to school student involvement in decision-making processes with regard to the action research project. Therefore, this row is not used for coding the level of student involvement.

Appendix 3 – Level of student involvement – definition and decision rules

Level	Definition	Coding/Decision rules
None No SP	School students themselves are neither actively nor passively involved in the PST research and information from or about them is not being used for the action research project.	Only coding type of resource used by PST or target group for the activity: - individual (PST all by her/himself) - theory; literature - peers (at school or institute)
Inform Data source	Use of information from or about school students (e.g. student data on progress or well-being) without further interaction (such as explanations). Also: PST informs SSs, e.g. presents results to SSs.	Types of data and response options are not chosen by SSs. Also: SS materials In surveys: closed questions. Thinking-aloud: **Inform** when not followed by explanations. PST Informs during analysis of results: if SSs think along with the PST about interpretation of results → **Consult**. Analysis of results: as soon as SSs make suggestions and recommendations → next AR stage.
Consult Active respondent	Use of SS's explanations, views, opinions, or suggestions.	Through dialogue, discussions, or open forms of communication. Information is not pre-coded; the SSs can freely express her-/himself. In surveys or dialogues/interviews: answers to open questions.
Participate Co-researcher; knowledge creator	SS is actively involved in the research process and in the creation of new knowledge (results, insights)	The SS follows actions and plans set by the PST or others. Either PST takes a lead role and students actively support (co-researchers) or students take lead roles and PST actively supports (knowledge creators)
Collaborate Researcher; joint author; shared decisions	SS and PST jointly conduct (parts of) the research activities and both participate actively in decision-making on research activities and processes.	Students and PST decide on a joint course of action together

Appendix 4 – Action research stage – definition and decision rules

Action research stage	Definition	Coding/Decision rules
a. Problem definition (RQs)	Exploration, development and definition of the problem and formulation of project goals and research questions.	All activities that contribute to problem definition. So, also: data collection and analysis are coded in this stage if the activities are conducted for the purpose of problem definition.
b. Intervention design	Formulation of design criteria and development of an intervention (tool or instrument, teaching-learning method or approach, classroom or school practice, teaching-learning materials, lesson planning, etcetera).	Planning and preparing all that will be done and used in class as a possible solution to the problem; a change in teaching and learning practice to be investigated. Mere SS involvement during teaching/learning is not sufficient for including the activity; the SP has to pertain to the *design* of the intervention, before actually conducting it.
c. Research design	Development of research steps, methods, instruments, and procedures.	Planning and preparing all that is needed to investigate the problem and to be able to answer the research questions.
d. Conduct intervention	Enactment of the intervention in classroom or school practice	This stage is not applicable to SP in PST research, because school students are enacting the intervention by implication, and do not decide on steps during this stage. e.g. SSs teaching each other is not coded as SP, because it does not imply decisions on the research, such as the principles of the intervention.
e. Data collection	Collection of existing or new data contributing to answering the research questions.	Also generating data or providing data. Data collection for or during problem definition or intervention design is not coded in this stage.
f. Analysis of results	Analysis of collected data aimed at answering the research questions, interpretation of results, and drawing conclusions in the light of theory and practice.	Teacher analyzes school student data, without involvement of SSs in the analysis process → Level = None (No SP).
g. Formulation of suggestions / recommendations	Providing tips, suggestions, recommendations for designing the research or for changes in the teaching and learning practice.	This stage cannot be combined with the student involvement level 'Inform', because any school student activity in this stage involves suggestions (active SS input), which implies level 'Consult', 'Participate', or 'Collaborate'.
h. Making public	Reporting, presenting, publishing, or disseminating of available research outcomes, results, products, conclusions, and recommendations, in any form (oral, written, visual, material, other) to teacher educators, participants, stakeholders, or others.	Mostly: PST research report Also: presenting or making available SS's products, teaching materials as outcomes of the research. If PST report did not involve SSs in writing, commenting on drafts, then 'None; no SP'. However, SSs might be involved in other ways of making the research results public; then coded as one of the levels.

Appendix 5 – Types of student participation in PST action research projects; in keywords[20]

	Level of school student involvement				
Action research stage	**None** (no SP)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
a. Problem definition (RQs)	*Individual* - PST's experience in teaching/with class - PST views and preferences - PST-class relationship ratings *Peers* - peer teacher practices - peer conversations and feedback (CFs, coach, supervisor, facilitator, research group) *Literature/theory* - educational research - educational theory - school subject teaching - student voice *School / curriculum* - school context / issue - national policy	PST class/lesson observations PST problem assessment from SS work (tasks and materials) SS questionnaire, survey (closed questions); SS feedback group questionnaire SS previous test scores	PST-SSs interview / talks / chats PST-SSs general problem-exploring brainstorm SS questionnaire, survey (open questions) PST use of findings from former PAR stages (subsequent cycles)	SSs research group (class subgroup) PST-SSs research-focused brainstorm SS try-out/pilot of intervention Class discussions to identify problems	Class discussion on problem/RQ decision SSs research team discussion on problem/concepts/RQ decision
b. Intervention design	*Individual* - PST fabrication of tools/methods *Peers*	PAR project intermediate findings inform intervention, e.g. teaching materials SSs test scores, exam results, grades	SSs group/subgroup discussion SSs reflection-feedback session; class feedback on lesson proposal	SSs research group results SS suggestions for working methods SSs pilot group meeting	PST-SSs agreement on methods / strategies PST-SSs joint decision on content a/o procedures

[20] The table cells present the type or form of the SP activity, per action research stage, as derived from the PAR reports. The content or goal of the activities is directly related to the respective AR stage; therefore, even activities with the same labels can have different functions in different stages. For instance, at the problem definition stage, class observations by the PST might form the basis for recognizing a problem to investigate or might be used for exploring if an issue does indeed occur in the specific context. At the data collection stage, such PST class observations are the instruments to obtain data needed for answering the research questions.

Action research stage	Level of school student involvement				
	None (no SP)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
	- peer conversations and feedback (CFs, coach, supervisor) *Literature/theory* - methodology - aspects of chosen problem	SS intervention idea questionnaire PST constructs didactic tool based on SSs work PST assessment of SSs interests/characteristics PST explanation of content/procedures/criteria	SS questionnaire, survey (open questions) SSs identify problems in teaching/learning SSs suggestions for working method		PST-SS research team meeting
c. Research design	*Individual* - PST fabrication of instruments - PST selection of SSs (groups) - PST decision on research procedures *Peers* - peer conversations and feedback (CFs, coach, supervisor) *Literature/theory* - methodology / instrument design	SSs test scores SSs' observed problems PAR project intermediate findings	PST-SS negotiation on partaking in PAR SSs concerns	SSs research group results SSs pilot group meeting	PST-SSs intake meeting co-research team PST-SSs research meeting/discussion PST-SSs joint construction of research instruments
d. Conduct intervention					
e. Data collection	*Individual* - PST reflections *Peers*	SS questionnaire, survey (closed questions)	SS questionnaire, survey (open questions; added remarks)	SSs research group interview (feedback on lessons)	SS research team takes a SS survey

Action research stage	Level of school student involvement				
	None (no SP)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
	- Peer feedback on findings - Peer class/lesson observations - Peer teacher questionnaire	SS reflection form / lesson evaluation form (closed questions) SS test scores, exam results, grades SS self-ratings (closed); SS line graphs of self-reported progress SS material / work / output PST class/lesson/social media observations PST field notes of class discussions	SS reflection form / lesson evaluation form (open questions) PST-SSs talks/chats/informal conversations SS interviews (individual; focus group) SS explanations of observations SS evaluation of own learning SS feedback on intervention; SS reflection-feedback session SS feedback on the research project classroom discussions exit-tickets/post-its	SSs/class tally of evaluation results SS-led SS discussion of *their* learning problems SSs-conducted lesson observation	
f. Analysis of results	*Individual* - PST analyzes data - PST creates categories, results tables, graphs - PST summarizes SS suggestions *Peers* - Peers check results (triangulation) *Literature/theory*	PST shares results with SSs	PST-class evaluative discussion on survey results and PAR process	PST-SSs discuss results PST-SSs research group evaluative discussion on survey results and PAR process SSs explain/interpret results	PST discussion of results with SSs research group SSs create categorization of data

Action research stage	Level of school student involvement				
	None (no SP)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
	- PST interprets results in light of theory				
g. Formulation of suggestions / recommendations	*Individual* - PST suggests good teaching practices - PST plans future PAR steps		SSs suggest solutions to found problems PST evokes SSs ideas for lesson/intervention improvement SS mind maps of ideas for improvement of future lessons SS survey (open call for tips/suggestions) SS reflection-feedback sessions PST-SS suggestions interview	SSs research group suggestions SSs preferred activities for various moments during the week	PST-SSs meeting to jointly suggest on school language policy
h. Making public	*Individual* - PST writes PAR report *Peers* - PST presents/discusses findings at school - PST shares findings outside school	SSs read PAR report		SSs present PAR findings in class	

PST = pre-service student teacher; SS = school student; CF = critical friend (from peer PST group); PAR = participatory action research.

Appendix 6 – PST interview guide

[start with asking consent for audio recording]

Experiences with the PAR assignment

Now, almost at the end of the study year, **how do you view doing action research at school? [=the PAR assignment]**?

Subsequent – probing – questions:

- What did you find interesting, exiting, or useful; what did you find challenging, boring, or useless?
- To what extent and in what way did you involve school students into your research? What do you think of that? And how did your school students feel about participating?
- Did you conduct the research as planned? In what way yes/no? What changed, and why? [for case studies: relate this question to the submitted research plan, logs, research report]
- What helped or hindered you in doing the research?
- Did you feel equipped for conducting the research? To what extent did you feel supported and facilitated? Please explain. [specify: institute/TEs/facilitator; school/mentor]
- What did you take yourself from doing research [participatory action research] at your school? What value do you see in it?

Would you consider **doing teacher research after graduation**? Would you involve school students in any way? Why yes/no?

Has anything **changed in your view** on teacher research or student participation? If so, what, and what triggered that? [critical incidents; optional: draw a story-line]

View on the content and set-up of the WTP TE program

If you take a look at the World Teacher Program, as it was carried out this study year, **where and how are student voice and student participation visible for you**?

[if needed: refer to the general theme of the program: 'Focus on the learner']

Subsequent – probing – questions:

- Did/do you feel that your voice was being heard in the TE program? If yes, how? If no, why not? What is your opinion on that?
- What in the WTP program helped or hindered you in 'focusing on the learner'?
- Do you feel supported in learning to 'focus on the learner'? If so, in what way?
- How does the WTP program relate to your school practice with regard to this central theme?
- According to you, what else is needed to be well prepared for 'focusing on the learner'? Within the institute, the school, elsewhere … Is anything (still) missing in the program that should be part of it? If so, what?

Experiences with the PhD research

What have you **experienced with regard to my research**? How do you look at that?
[aspects to focus on: way of being informed; activities; data collection instruments (one-minute papers, logs, SS questionnaires); frequency and timing]
Do you have any **suggestions for me as researcher** of the student teachers' research part within the WTP TE program? How could I best monitor what STs do with regard to PAR/student voice?
[aspects to focus on: see above + missed topics]

Other issues

Are there **any other issues** related to SP in TE that you feel are important to talk about?

Appendix 7 – Level of student involvement

For coding the instances of research activities as one of the five levels of student involvement, definitions were used as shown in Table 17 (adapted from Bovill, 2017; Fielding, 2001, 2011, 2018). Level of involvement (or participation) pertains to the degree of active engagement of school students in pre-service teacher students action research projects and their role in the decision-making processes during or based on the research project.

Table 17. Level of student involvement

Level	Definition
None No SP	School students themselves are neither actively nor passively involved in the PST research and information from or about them is not being used for the action research project.
Inform Data source	Use of information from or about school students (e.g. student data on progress or well-being) without further interaction (such as explanations). Also: PST informs SSs, e.g. presents results to SSs.
Consult Active respondent	Use of SS's explanations, views, opinions, or suggestions.
Participate Co-researcher; knowledge creator	SS is actively involved in the research process and in the creation of new knowledge (results, insights)
Collaborate Researcher; joint author; shared decisions	SS and PST jointly conduct (parts of) the research activities and both participate actively in decision-making on research activities and processes.

Identification of the overall type and level of student participation (SP); eight cases.

For this step, based on the PST PAR reports, characteristics of the PST PAR project were described in short summaries of main topics and research activities (for an example, see Appendix 8 – Case summary and perceived conditions). Subsequently, they were further summarized along the dimension *level of student involvement* and *action research stage*. The summarized project descriptions were labelled as one or more most characteristic levels of student involvement (Table 18 and Appendix 7 – Level of student involvement).

Table 18. Overall level of student participation in PST PAR projects

Case	Level of student participation	SP keywords
1	PAR project focused on how the number of language errors that HAVO 3 students make on their end-of-unit tests through using visual tools can be lowered. Students participate in this PAR project at the level of data source and active respondent. Collaboration was planned and strived for, but not realized.	Inform Consult
2	PAR project focused on motivating factors for TTO students who find studying English literature challenging. Student participated in this PAR project on the level of 'participation' in designing the lessons (focus topics, content, form). In designing and conducting the research the students participated as active respondents.	Participate Consult

Case	Level of student participation	SP keywords
3	PAR project focused on why codeswitching occurs in language and science bilingual classroom and if it is considered beneficial by students. Students participated in this PAR project at the level of data sources, active respondents and a few of them as co-researchers.	Inform Consult Collaborate
4	PAR project focused on controllable factors in the process of evaluating group work which can enhance student motivation in cooperative learning forms. Students participated in this PAR project on the level of data source and active respondents.	Inform Consult
5	PAR project focused on how to use technology to increase effective learning in Language Acquisition for two Year 10 MYP classes. Students participated in this PAR project at the level of data source. Two students participated on the level of collaboration during this PAR project.	Inform Collaborate
6	PAR project focused on the relation between the self-formulated identity of non-Dutch or mixed background learners and the historical topics that they feel most related to. Consequently, the research focuses on which suggestions could be made to improve the relevance of history education in the context of a multicultural school? Students participated in this PAR project on the level of 'participation' for the design on the intervention. In designing and conducting the research they participated on the level of data source and active respondent.	Inform Participate Consult
7	PAR project focused on how the students' motivation to learn for biology could be increased by designing lessons in which motivating tasks and a reward system were designed. Students participated in this PAR project at the level of data source, active respondents, and collaboration.	Inform Consult Collaborate
8	PAR project focused on the research question whether Hadfield and Dörnyei's theory, which entails visualizing a future self, helps students to become more (intrinsically) motivated. Students participated in this PAR project at the level of data source and active respondent.	Inform Consult

Appendix 8 – Case summary and perceived conditions

Example Case 2 (PST1-09)

Based on PST1-09's observation of the students' attitude towards literature and literary analysis, she decided to explore what the motivating factors were for TTO students who found studying English literature challenging. This was done in 3 cycles (across 3 terms).
First was to discuss the contents for the 4th year and the skills students would need to achieve the end results. Reflection and feedback sessions with SSs were held to track student progress and to decipher what needed to be addressed next or worked on more. Finally, students were provided with two questionnaires, one on motivation regarding studying English literature and another containing questions geared towards t4b and their English curriculum.

- Reflection and feedback sessions (active reflection by PST and students): clues for (teaching) adjustments needed in future; finding motivating factors for TTO students in studying literature; understanding learners' needs and abilities, and emotions; track student progress
- Student surveys
- PST's field notes of class discussions

Site B (practicum; class, school)	**Site A (TE program/institute)**
PST and school students encounter one another amid *practice architectures* that enable and constrain their interactions:	PST and teacher educators encounter one another amid *practice architectures* that enable and constrain their interactions:
Cultural-discursive arrangements	***Cultural-discursive arrangements***
Sharing findings with school students was not necessary because of the research topic; and also because change in the desired direction was already visible. Research is not considered that important in school either. School is very academic, but not about research; nobody talks about research projects. No contact with the subject coach about the research.	PAR is a good introduction to teacher research.
Material-economic arrangements	***Material-economic arrangements***
Usable result in the end. At the same time, research activities can also be used for own teaching (e.g. feedback from school students in the research can also be used for lessons [thus less conflict with curriculum]) Finding / choosing a topic that is a problem for both PST and school students was difficult, and took time. Having only been able to do little in school; small research project, but have enjoyed that. IB curriculum at this school is so packed that there is hardly any space / time for research. Suggestion: allow more time for research. Not seen any opportunity (space) to discuss questionnaire results with school students.	Good project, but be realistic about how much is possible. Teacher education program needs to recognize that research is a really big thing and maybe let PSTs choose whether to do that. A combination of practice and an international internship is a lot; too little account is taken of what is going on (simultaneously) in the program More time would make PST enjoy research more.
Social-political arrangements	***Social-political arrangements***
Topic that really bothered PST No colleagues who do research Fellow teachers at school not so keen on research; not inclined to join, make room for research. Easier if colleagues were more involved with research; if there were also an verbally expressed research attitude (as with [my school]).	Theory-practice gap Suggestion: stronger connection university-school (theory-practice)
Which are bundled together in characteristic ways in *practice landscapes* and *practice traditions*	**Which are bundled together in characteristic ways in *practice landscapes* and *practice traditions***

Note: text in table cells refers to conditions as paraphrased from the interview transcripts (originally in Dutch; translated by the authors).

Appendix 9 – Table of enablers and constraints, per case

Example from Case 2

Table of PST's **perception** of **/ view** on the practice architectures of site B (school) and site A (institute); perceived as either enabler (+) or constraint (-) for conducting PAR and for incorporating student participation.

Practice architectures **(arrangements and 'set-ups') enable and constrain interaction via**	***PST and school students*** **encounter one another amid practice architectures that enable and constrain their interactions**	***PST and teacher educators*** **encounter one another amid practice architectures that enable and constrain their interactions**
	Site B (teaching practice; class, school)	Site A (TE program/institute)
Cultural-discursive arrangements	- Observed results rendered sharing findings with SSs unnecessary Sharing findings with school students was not necessary because of the research topic; and also because change in the desired direction was already visible. - Research in school not viewed as important Research is not considered that important in school either. School is very academic, but not about research; nobody talks about research projects. - Lack of communication with subject coach No contact with the subject coach about the research.	+ *Teacher as researcher* well introduced through PAR task PAR is a good introduction to teacher research.
Material-economic arrangements	+ Results usable in own practice Usable result in the end. At the same time, research activities can also be used for own teaching (e.g. feedback from school students in the research can also be used for lessons [thus less conflict with curriculum]) - Finding shared problem is difficult Finding / choosing a topic that is a problem for both PST and school students was difficult, and took time. - Little opportunity in school for research Having only been able to do little in school; small research project, but have enjoyed that. - Packed curriculum; little time and space for research and SP IB curriculum at this school is so packed that there is hardly any space / time for research. Suggestion: allow more time for research. Not seen any opportunity (space) to discuss questionnaire results with school students.	- Extensive and time-consuming PAR task Good project, but be realistic about how much is possible. - Obligatory character of PAR task Teacher education program needs to recognize that research is a really big thing and maybe let PSTs choose whether to do that. - Packed curriculum; overlap of activities A combination of practice and an international internship is a lot; too little account is taken of what is going on (simultaneously) in the program - Lack of time for research More time would make PST enjoy research more.
Social-political arrangements	+ topic important for teacher Topic that really bothered PST - No colleagues as researchers No colleagues who do research - Lack of peer teachers' enthusiasm for research Fellow teachers at school not so keen on research; not inclined to join, make room for research. Easier if colleagues were more involved with research; if there were also an verbally expressed research attitude (as with [my school]).	- Theory-practice gap; weak relation school-institute Theory-practice gap Suggestion: stronger connection university-school (theory-practice)

Note: text in small font refers to conditions as paraphrased from the interview transcripts (originally in Dutch; translated by the authors): these were reformulated at a more generic level in analytical Step 3.

Samenvatting / Summary

Nederlandse samenvatting

Inleiding

Centraal in dit proefschrift staat de idee dat jongeren het recht hebben betrokken te worden bij besluitvormingsprocessen over zaken die hen aangaan, zoals hun schoolopleiding, en dat jongeren serieus dienen te worden genomen in hun opvattingen en suggesties over deze zaken. Het betrekken van leerlingen bij besluitvorming is echter geen gangbare praktijk in het onderwijs, noch in scholen noch in de opleiding van leraren. Daarom wordt in dit proefschrift een aanpak onderzocht die docenten-in-opleiding (dio's) voorbereidt op het bevorderen van leerlingenparticipatie in de besluitvorming op scholen. Meer en meer worden leraren verondersteld betrokken te zijn bij onderzoek in een rol als geïnformeerde gebruiker of als praktijkonderzoeker, en lerarenopleidingen dienen voor te bereiden op die rollen. Een voorbeeld hiervan is het betrekken van leerlingen bij het uitvoeren van een onderzoek in de eigen praktijk tijdens de dio-stage. In dit proefschrift staat participatief actieonderzoek (*participatory action research*, PAR) centraal als een benadering die bij uitstek geschikt is dio's voor te bereiden op participatieve praktijken in scholen.

De vier in dit proefschrift opgenomen studies zijn uitgevoerd in twee afzonderlijke projecten: de eerste, als een verkennende studie, in de context van een masteropleiding voor dio's en leraren in het basis- en voortgezet onderwijs; de tweede, als een reeks van drie opeenvolgende studies, in de context van een postdoctorale lerarenopleiding voor het voortgezet onderwijs.

De bevindingen en aanbevelingen van dit proefschrift zijn beoogd om bij te dragen aan de doelstellingen van sociale rechtvaardigheid en de versterking van democratische benaderingen in het onderwijs. Daartoe richtte het onderzoek zich op een verkenning van leerlingenparticipatie in besluitvormingsprocessen via leraar-leerling-partnerschappen in onderzoek. De beoogde praktische meerwaarde van het onderzoek is om scholen en lerarenopleidingen handreikingen te bieden om leerlingenparticipatie in besluitvormingsprocessen te implementeren of verder te ontwikkelen, rekening houdend met te verwachten mogelijkheden en complicaties.

Lerarenonderzoek

Het is een bekend gegeven dat de uitkomsten van onderwijsonderzoek niet automatisch leiden tot implementatie ervan in de onderwijs- en leerpraktijk. Redenen hiervoor kunnen onder andere zijn een zogenaamde 'kloof' tussen theorie en praktijk (bijv. Admiraal et al., 2016; Bendtsen et al., 2021; Korthagen, 2010). Deze zogenoemde 'theorie-praktijkkloof' heeft de idee aangewakkerd dat onderzoek niet alleen door academische onderzoekers moet worden uitgevoerd, maar dat idealiter ook betrokkenen uit de onderwijspraktijk daarin deelnemen of dat leraren hun eigen onderzoek uitvoeren.

In de afgelopen decennia heeft lerarenonderzoek steeds meer erkenning gekregen als zijnde een waardevolle vorm van onderzoek en een integraal onderdeel van het beroep van leraar. Leraren-onderzoek kan bijdragen aan kennisconstructie over onderwijs en kan een transformatieve professionele ontwikkelingsactiviteit zijn voor leraren (Zeichner, 2003). Met name actieonderzoek is in dat kader gepromoot als een geschikte benadering (bijv. Moreira, 2009; Ponte et al., 2004; Rönnerman et al., 2008; West, 2011). Actieonderzoek houdt in dat kwesties systematisch worden onderzocht

binnen de eigen praktijkcontext van een leraar, met inbegrip van de perspectieven van alle belanghebbenden, en meestal ook in samenwerking met hen.

Lerarenopleiding en participatief actieonderzoek

De meeste studenten die aan de lerarenopleiding beginnen, hebben weinig of geen ervaring met sociaal-wetenschappelijk onderzoek of onderwijsonderzoek, en nog minder met actieonderzoek. Daarom is het een eerste vereiste om leraren op te leiden en te ondersteunen bij het uitvoeren van dergelijk onderzoek, hetzij als onderdeel van professionele ontwikkelingsactiviteiten voor afgestudeerde leraren, hetzij in initiële programma's voor docenten in opleiding. Een ontbrekend perspectief in veel onderwijsonderzoek is dat van de leerlingen, terwijl zij als cruciale belanghebbenden in vraagstukken rond onderwijzen en leren niet over het hoofd zouden moeten worden gezien (Groundwater-Smith, 2005). Participatief actieonderzoek (PAR) kan het denken en handelen van leerkrachten meer richten op leerlingenparticipatie en democratische benaderingen van onderwijs. In de studies voor dit proefschrift is PAR geïntroduceerd in een programma van een lerarenopleiding als één van de mogelijke *middelen* om leerlingen te laten deelnemen aan besluitvormingsprocessen. Hierbij wordt PAR niet alleen gezien als een plaatsgebonden aanpak van onderzoek, maar ook als een democratische praktijk in zichzelf. PAR kan een context creëren (een *niche*, in ecologische termen) die het voor dio's gemakkelijker maakt hun leerlingen te betrekken bij het onderzoeken van hun schoolpraktijk; PAR maakt dialogische en collaboratieve praktijken mogelijk en legt beperkingen op aan meer hiërarchische, eenzijdige en geïsoleerde praktijken.

Leerlingenparticipatie: onderwijs, scholen en ruimte voor besluitvorming

In de laatste decennia is er een hernieuwde belangstelling voor betrokkenheid van leerlingen bij onderwijs en onderzoek ontstaan vanuit het besef dat studenten uitgenodigd en in staat gesteld moeten worden om hun mening te uiten en door volwassenen daarin serieus genomen moeten worden (Cook-Sather, 2006). Dit perspectief vindt een wettelijke basis in de rechten van het kind (VN-Conventie inzake de Rechten van het Kind) (Evans, 2016; OHCHR, 1989). Het sluit ook aan bij de opvatting dat voor het opbouwen en in stand houden van een democratische samenleving het onderwijs niet alleen gericht moet zijn op leren *over* democratie en burgerschap, maar ook dat onderwijs jongeren in staat moet stellen een democratische manier van leven te praktiseren, ook op school (Print et al., 2002).

Een parallelle ontwikkeling in het onderwijsonderzoek van de afgelopen decennia is de verschuiving van onderzoek *over* leerlingen naar onderzoek *met* leerlingen (Cook-Sather, 2002; Fielding, 2004; Fine et al., 2007; Groundwater-Smith et al., 2015; Mitra, 2006). Deze ontwikkeling herpositioneert de rol van docenten en leerlingen binnen partnerschappen in onderwijsonderzoek en -hervorming (Cook-Sather, 2014, 2018). De feitelijke vorm die onderzoek *met* leerlingen kan aannemen is afhankelijk van de leeftijd, capaciteiten en voorkeuren van de betrokken jongeren, en kan variëren van inclusieve en participatieve benaderingen tot een herziening van rollen, structuren en processen in onderzoek.

Het kan een complex en uitdagend proces zijn om leerlingen daadwerkelijk te betrekken bij besluitvorming in de klas op de school. Het vereist een verschuiving van een traditionele, op de leraar gerichte benadering van onderwijs naar een pedagogische benadering waarin betrokkenheid en zeggenschap van de leerling prioriteit krijgt. Dat kan een uitdaging zijn, met name voor leraren die zijn

opgeleid in traditionele onderwijsmethoden en niet over de vaardigheden of middelen beschikken om leerlingenparticipatie in hun lessen op te nemen of daartoe niet direct geneigd zijn.

Momenteel bestaat er in Nederland nog geen lerarenopleiding waarin het bevorderen van leerlingenparticipatie expliciet aandacht krijgt. Onderzoek naar het opzetten van een dergelijk programma binnen de lerarenopleiding is beperkt, en uiteindelijk zou zo'n programma ook nog moeten worden afgestemd op lokale omstandigheden.

Centraal in dit proefschrift staat de vraag hoe participatief onderwijsonderzoek van dio's in de context van een lerarenopleiding kan worden begrepen en gefaciliteerd, zodat aankomende leraren zich toegerust en gemotiveerd voelen om ook op hun eigen school aan leerlingenparticipatie te doen.

Hoofdstuk 2 - De verkennende studie

Het onderzoeksproject 'Leerlingen en docenten als medeonderzoekers', waarover in **hoofdstuk 2** wordt gerapporteerd, omvatte teams van leerlingen uit het basis- of voortgezet onderwijs, docenten en externe educatieve medewerkers die in een externe onderwijssetting (museum of bibliotheek) gezamenlijk onderzoek deden naar het leren van leerlingen. Een externe setting als onderzoekslocatie werd bewust gekozen om een meer gelijke uitgangspositie voor leerlingen en docenten te creëren en de deelname van leerlingen aan het onderzoek te maximaliseren.

In hoofdstuk 2 wordt ten eerste het concept van leerlingenparticipatie verder verkend en gerelateerd aan de professionele ontwikkeling van leerkrachten. Ten tweede worden de kenmerken en de intensiteit van de leerlingenparticipatie beschreven aan de hand van zes dimensies van participatie. Vervolgens worden de implicaties voor het leren en de professionele ontwikkeling van leraren die deelnamen aan het Nederlandse project onderzocht.

De bevindingen van de studie toonden aan dat leerlingen in deze context op een relatief hoog participatieniveau werkten. In termen van de modellen van Fielding traden leerlingen op als medeonderzoekers of onderzoekers (Fielding, 2001) of als medeonderzoekers, 'makers van kennis' of gezamenlijke auteurs (Fielding, 2011, 2018). Leerlingen deden dit in alle onderzoeksfasen, variërend van het formuleren van onderzoeksvragen tot het rapporteren van bevindingen. Over het algemeen ervoeren de leerlingen een gevoel van verantwoordelijkheid voor het onderzoek. De projecten waren zo opgezet dat daarin een verscheidenheid aan leerlingen (en docenten) betrokken was; niet alleen degenen die de gegevensverzameling uitvoerden, maar ook hun medeleerlingen in de klas (en school of museum/bibliotheek). Leerlingen die niet in een onderzoeksteam zaten, maakten als raadgevende medeleerlingen toch uitdrukkelijk deel uit van het onderzoeksproces. De opzet van de projecten kan worden bestempeld als een formele aanpak, omdat ze bedoeld waren om leerlingen van de school invloed te laten uitoefenen op beslissingen, op het uitvoeren van het onderzoek en op het vormgeven van de externe leercontext. Ze waren echter ook informeel, omdat leerlingen en leerkrachten tijdens de onderzoeksfasen en op school betrokken waren bij gezamenlijke activiteiten en dialogen. Dit kan worden opgevat als tweerichtingsonderwijs; van leraar naar leerling en omgekeerd.

Belangrijk is dat de onderzoeksprojecten leidden tot echte veranderingen in de externe omgeving, dankzij de perspectieven en aanbevelingen van de leerlingen – die soms onverwacht waren voor de leerkrachten en educatieve medewerkers. Bovendien waren de leerkrachten getroffen door de

bekwaamheid en motivatie van hun leerlingen bij het ontwerpen en uitvoeren van de onderzoeksactiviteiten, en door hoe dat alles het zelfvertrouwen van de leerlingen versterkte. Daardoor veranderde hun idee over de wederzijdse rollen van leraar en leerling in de klas; de samenwerking veranderde de relatie tussen leraar en leerling op basis van een groter vertrouwen in de betrokkenheid van de leerlingen bij de ontwikkeling van lessen en resulteerde in een meer vriendschappelijke manier van werken met en voor hun leerlingen.

Het project leverde nuttige en positieve ervaringen op met betrekking tot de betrokkenheid van de leerlingen, de samenwerking in onderzoek met hun leraren en andere belanghebbenden, en het professionele leren van de leraren. Om praktische redenen en vanwege de gelijke positie van studenten en docenten en de vermindering van de complexiteit voor docenten werd het project echter uitgevoerd in een externe omgeving (museum en bibliotheek). Dit liet de vraag open hoe leerlingenparticipatie in onderzoek, als een democratische benadering van onderwijs, binnen scholen kan worden gerealiseerd en hoe toekomstige leraren kunnen worden voorbereid op een dergelijke participatieve benadering en praktijk, in een context van een relatief kort, eenjarig, postdoctoraal programma.

Hoofdstuk 3 - Omvang en aard van leerlingenparticipatie

De drie studies in de hoofdstukken 3-5 hebben betrekking op het aansluitende project dat in het kader van dit proefschrift werd uitgevoerd in de context van een postdoctorale lerarenopleiding. Het project was erop gericht dat dio's tijdens de stage leerlingen bij hun PAR-projecten zouden betrekken. Er werd niet voorgeschreven welke vorm de deelname van leerlingen moest aannemen; wel werd dio's aangeraden en werden zij ondersteund om te streven naar een intensieve vorm van leerlingen-participatie.

Het onderzoek van **hoofdstuk 3** had tot doel inzicht te krijgen in de omvang en de aard van de deelname van leerlingen aan de actieonderzoeksprojecten van de dio's in de stagescholen. De onderzoeksverslagen die door de dio's in het kader van het TEd-programma werden ingediend, werden geanalyseerd aan de hand van de in deze studie ontwikkelde *SPinSTAR-matrix*, waarin vier niveaus van leerlingenparticipatie werden onderscheiden: *Inform*, *Consult*, *Participate*, en *Collaborate* (Informeren, Raadplegen, Deelnemen en Samenwerken), in verschillende fasen van het onderzoek.

Uit deze studie bleek dat in de onderzochte opleidingscontext leerlingenparticipatie veel meer voorkwam op de twee minder intensieve niveaus (*Inform* en *Consult*) dan op de twee intensievere niveaus (*Participate*, *Collaborate*). Voorbeelden van minder intensieve niveaus van leerlingen-participatie waren onder meer het gebruik van testscores, cijfers of leerlingenwerk door de dio *(Inform)* en de afname van enquêtes of chats bij leerlingen, en discussies in de klas *(Consult).* De meer intensieve niveaus, *Participate* en *Collaborate*, werden slechts in enkele gevallen waargenomen. Tot de typische vormen van samenwerking op deze meer intensieve niveaus behoorden onderzoeksteams van leerlingen die dio's ondersteunden bij het PAR-proces en onderzoeksteams van leerlingen die samenwerkten om onderzoeksinstrumenten te creëren en gegevens te verzamelen. Bovendien voerden deze teams gezamenlijke discussies over de resultaten. Activiteiten op de intensievere niveaus werden meer aangetroffen in de voorbereidende fasen dan in de latere fasen van de projecten. Voorts werd, ongeacht het niveau, nauwelijks leerlingenparticipatie aangetroffen in de fasen van

onderzoeksontwerp, analyse van de resultaten en rapportage. Zoals verwacht bleek de mate van leerlingenparticipatie echter te variëren in de onderzoeksfasen.

De dio's voelden zich onder druk gezet door de beperkte termijnen voor de opdracht en voor de beoordeling, waardoor velen van hen terughoudender waren om activiteiten toe te voegen die als ingewikkeld en tijdrovend werden ervaren, met name die waarbij leerlingen betrokken waren. Toch werd het doel om leerlingen bij de PAR-projecten te betrekken bereikt, zij het niet altijd op een niveau dat als 'actieve betrokkenheid bij de besluitvorming' kan worden beschouwd. Veel dio's vonden het te moeilijk om als echte partners met hun leerlingen om te gaan terwijl ze nog in opleiding waren.

Hoofdstuk 4 - Principes voor deelname van leerlingen aan onderzoek van dio's

De volgende studie (hoofdstuk 4) richtte zich op de opvattingen van dio's over de voorwaarden die hun PAR-praktijken in middelbare scholen bevorderen en op de vraag hoe deze voorwaarden een onderbouwing kunnen bieden voor de ontwikkeling van programma's voor lerarenopleidingen.

Tabel 19. Typen arrangementen en toepasselijke aspecten, concepten en terminologie

Arrangementen	Beschrijving	Aspecten, concepten, terminologie
cultureel-discursief	Semantische/conceptuele aspecten: Gebruikelijke manieren van spreken, denken en uitwisselen door middel van taal	taal, dialoog concepten, ideeën, doelen, opvattingen, perspectieven
materieel-economisch	Ruimtelijke en temporele aspecten: Gebruikelijke manieren van uitvoering en organisatie.	objecten, ruimtelijke omstandigheden tijd en middelen, organisatie van programma's, materialen, studiewijzers
sociaal-politiek	Relationele aspecten: Gebruikelijke manieren van omgaan met elkaar; aspecten van macht en solidariteit	rollen en taken eigenaarschap, invloed, erkenning, rechten status, positie, hiërarchie

Met gebruik van de *Theory of Practice Architectures* (Kemmis, Wilkinson, et al., 2014)[21] als analytisch kijkkader, werden acht cases van PAR-projecten bestudeerd op twee gerelateerde locaties voor het leren van dio's: het opleidingsinstituut en de stageschool. We verwachtten dat de bevindingen meer licht zouden werpen op mogelijke voorwaarden voor het bevorderen van PAR-praktijken in de context van lerarenopleidingen in termen van drie typen arrangementen, namelijk: cultureel-discursief, materieel-economisch en sociaal-politiek (zie tabel 19). Praktijken zijn georganiseerde activiteiten van meerdere mensen, waarin ook individuen worden erkend als 'agentic subjects' die een rol spelen in de transformatie van de praktijkomstandigheden (de arrangementen). Het doel was om inzicht te verkrijgen in hoe dio's aankijken tegen de eisen die worden gesteld aan hun onderzoek en de factoren die hun PAR-projecten met leerlingen vergemakkelijken of belemmeren. De onderzoeksvragen waren gericht op de PAR-praktijken van dio's en stimulerende voorwaarden, vanuit de percepties van dio's zelf. Uit deze voorwaarden leidt de studie een reeks van 17 principes af om dio's te ondersteunen bij hun participatief actieonderzoek.

[21] Zie hoofdstuk 4, pp. 59-61, voor een uitgebreidere beschrijving van de *Theory of Practice Architectures*.

De bevindingen van deze studie geven aan dat de dio's het op prijs stellen om een helder beeld te krijgen van onderzoek door leraren en duidelijkheid (*clarity*[22]) over de termen en begrippen die in het programma van de opleiding worden gebruikt, zoals "leerlingenparticipatie" en "focus op de leerling". Dio's vonden dat het ervaren van deze duidelijkheid in zowel het instituut als de schoolsetting hen helpt bij het ontwikkelen van begrip van de wijze waarop zij leerlingen kunnen betrekken bij onderzoeksactiviteiten en fungeert als een constante herinnering daaraan gedurende hun hele stageperiode. Verder benadrukten de dio's het belang van een goede planning en samenhang tussen het programma en de activiteiten van het instituut en de school, en van het streven naar continuïteit (*continuity*) in het curriculum en de lesplanning en in de verdeling van de lessen. Het principe van *contingentie* houdt verband met de opvatting dat de deelname van studenten moet resulteren in reële, waarneembare impact, waardoor de leerlingen van de school meer worden erkend als capabele en waardevolle partners. Aangezien dio's zich ongemakkelijk kunnen voelen bij het delen van invloed met hun leerlingen, hebben zij ruim de tijd nodig om een klimaat van vertrouwen en veiligheid voor de leerlingen en henzelf op te bouwen.

Hoofdstuk 5 - Manifestaties van principes voor participatief actieonderzoek in een lerarenopleiding

Om nog meer inzicht te krijgen in de vraag hoe participatief onderwijsonderzoek van dio's in de context van een lerarenopleiding kan worden begrepen en gefaciliteerd, richtte de volgende studie zich op lerarenopleiders. De set van principes die was afgeleid van de ervaringen en praktijken van dio's (zie hoofdstuk 4, tabel 9) werd in deze studie gebruikt om door middel van interviews in kaart te brengen hoe lerarenopleiders participatieve onderzoekspraktijken vormgeven en dio's daarin trachten te ondersteunen.

Ten eerste bleek dat voor de lerarenopleiders de voorbereiding van dio's op leerlingenparticipatie en specifiek op het betrekken van leerlingen bij hun actieonderzoeksprojecten even uitdagend was als voor de dio's, zij het om verschillende redenen. De participatieve benadering van onderzoek op zichzelf werd echter door beide groepen goed ontvangen.

Uit de interviews kwam naar voren dat sommige principes al duidelijk toegepast waren in het programma door de lerarenopleiders, maar andere principes manifesteerden zich meer in de vorm van ideeën of intenties. Vanuit de sociaal-politieke dimensie was *recognition* (erkenning) van leerlingen het meest voorkomende principe, maar geen natuurlijke habitus van dio's. Lerarenopleiders gaven aan zich genoodzaakt te voelen het concept van leerlingenparticipatie in PAR aan dio's te verduidelijken en een meer consistente manier te ontwikkelen om het toe te kunnen passen. Vanuit de cultureel-discursieve dimensie lag bij lerarenopleiders de nadruk op het verschaffen van *duidelijkheid* in de concepten en procedures van het programma. Vanuit de materieel-economische dimensie werd *samenhang* tussen het instituut van de lerarenopleiding en de perspectieven en praktijken van het schoolpersoneel als belangrijk gezien. Problemen ontstonden door niet op elkaar afgestemde of tegenstrijdige eisen van het opleidingsinstituut versus de stagescholen. In het algemeen bleek uit de interviews met lerarenopleiders dat in het opleidingsprogramma en de stagescholen niet structureel rekening gehouden werd met sociaal-politieke principes zoals *erkenning*, *wederkerigheid* en *gelijkheid*,

[22] De gecursiveerde termen in dit en het volgende deel verwijzen naar de reeks van 17 PST PAR-principes.

wat belemmerend kan werken voor de mate waarin leerlingenparticipatie daadwerkelijk kan worden gerealiseerd. De bevindingen wijzen op de noodzaak van verdere ontwikkeling en implementatie van dergelijke beginselen in lerarenopleidingen om de betrokkenheid van leerlingen bij PAR-projecten te vergroten.

Hoofdstuk 6 - Algemene discussie

Hoofdstuk 6 geeft een samenvatting van de belangrijkste bevindingen van de vier studies, inclusief de beperkingen ervan. Daarnaast wordt in dit hoofdstuk ingegaan op belangrijke kwesties met betrekking tot leerlingenparticipatie in scholen en de opleiding van aanstaande leraren. Zowel de theoretische als de praktische implicaties van de onderzoeksbevindingen worden besproken en voorstellen worden gedaan om de deelname van leerlingen aan onderzoek door leraren aan te moedigen, zowel tijdens de initiële opleiding als daarna.

Drie kwesties op het gebied van leerlingenparticipatie

Realisatie van leerlingenparticipatie op school

In dit proefschrift is onderzocht hoe leerlingenparticipatie in besluitvormingsprocessen kan worden gerealiseerd, onder meer door middel van PAR-projecten in de context van een lerarenopleiding. Het onderzoek was erop gericht om leerlingen op een intensief niveau te laten samenwerken met hun docenten en daadwerkelijk invloed uit te oefenen op de genomen beslissingen tijdens het onderzoeksproject en de daaruit voortvloeiende veranderingen in de praktijk. Het onderzoek liet zien dat sommige dio-projecten de eerste niveaus van leerlingenparticipatie vertoonden, en dat deelname van leerlingen mogelijk was binnen beperkte tijdskaders en contexten. Leerlingen werden betrokken bij het ontwerpen en uitvoeren van de onderzoeksprojecten, en hun opvattingen en suggesties droegen bij aan veranderingen in de inhoud of de omstandigheden van hun onderwijs en leerproces. Het onderzoek laat ook de behoefte zien aan een hoger niveau van leerlingenparticipatie dan alleen het hebben van een stem en het kunnen uiten van gezichtspunten. Het uiteindelijke doel was om partnerschappen tussen leerkrachten en leerlingen te ontwikkelen die verder zouden kunnen reiken dan een onderzoeksproject tijdens een stage en geïntegreerd zouden kunnen worden in de dagelijkse schoolpraktijk.

Het opbouwen van een participatiecultuur in scholen vereist echter brede steun van schoolleiders en onderwijzend personeel en gaat verder dan een enkel participatief onderzoeksproject. De uitvoering van de PAR-projecten was erop gericht om voor dio's en leerkrachten authentieke ervaringen met leerlingenparticipatie te creëren en inzicht te verschaffen in de waarde van democratische en participatieve processen in klassen en scholen. De enthousiaste reacties van leerlingen op deelname aan de PAR-projecten en de positieve houding van de meeste dio's ten aanzien van leerlingenparticipatie en PAR stemmen hoopvol. De bevindingen van dit onderzoek suggereren dat het ontwikkelen en tot stand brengen van een 'Pattern of Partnership' (patroon van partnerschap) (Fielding & Moss, 2011) tussen schoolpersoneel en leerlingen een basis kan vormen voor duurzame onderwijsveranderingen. De bevindingen geven ook inzicht in de moeite die het kan kosten om alle stemmen te betrekken en de invloed die er vanuit de lokale context kan uitgaan om actieve betrokkenheid van leerlingen bij de besluitvorming mogelijk te maken.

Ethische kwesties rondom leerlingenparticipatie in onderwijsonderzoek

Met betrekking tot de participatie van leerlingen in praktijkonderzoek en onderzoek door leerkrachten zijn de criteria voor ethisch gedrag gebaseerd op de erkenning van kinderen als rechthebbenden en actieve belanghebbenden en op de verantwoordelijkheid van volwassenen om de voorwaarden te scheppen waaronder kinderen kunnen handelen als sociale en morele belanghebbenden met rechten (Mayall, 2000; Quennerstedt & Quennerstedt, 2014).

Het realiseren van echte leerlingenparticipatie in deze ethische betekenis gaat dus verder dan het informeren en raadplegen van leerlingen en het volgen van de agenda van de leerkracht. Het omvat betrokkenheid vanuit de rol van onderzoekers, zoals bij het vaststellen van relevante onderzoeksvragen, de keuze van onderzoeksmethoden en discussies over resultaten en implicaties (Lansdown, 2005). De vraag is dus in hoeverre de onderzochte PAR-projecten voorbeelden zijn van een ethische praktijk van leerlingenparticipatie. Bij de beantwoording van deze vraag doet zich een verschil voor tussen de verkennende eerste studie en de daaropvolgende studies. In de eerste studie werd het onderzoek doelbewust gepland om te worden uitgevoerd binnen externe leeromgevingen, vanuit de aanname dat hierdoor de bestaande hiërarchische relatiepatronen tussen leraar en leerling minder een rol zouden spelen. Bovendien was er in de verkennende studie een langere periode beschikbaar om de deelnemers voor te bereiden op het onderzoek, vergeleken met de projecten in de daaropvolgende studies. In deze studie werkten leerlingen weliswaar met een gegeven onderwerp voor hun project, maar was de begeleiding gericht op het formuleren van eigen onderzoeksvragen en het zelf verzamelen van gegevens door leerlingen, terwijl de rol van de docent hierbij meer die van volger was. Voorts koos de klas uit de leerlingen die zich kandidaat stelden, medeleerlingen als leden voor hun onderzoek, waaronder niet alleen de meest mondige leerlingen of populaire personen, maar een eerlijke vertegenwoordiging van de klaspopulatie. De projecten die zijn beschreven in de hoofdstukken 3-5 waren gebonden aan een bestaand programma van een lerarenopleiding en de daarin geldende vereisten alsmede aan de bestaande praktijken, curricula en voorschriften binnen de betrokken stagescholen. Bijgevolg werden de PAR-projecten uitgevoerd binnen een kortere periode en waren ze verplicht gekoppeld aan de specifieke onderwijspraktijk en het schoolvak, waardoor de dio bijna automatisch een centrale, leidende rol kreeg.

Actieonderzoek, leerlingenparticipatie en leren van dio's in de context van de lerarenopleiding

In aansluiting op de complexiteit van het uitvoeren van PAR in dio-leerling partnerschappen en de mogelijkheden daartoe in scholen, rijst een vraag over de waarde van het integreren van PAR in lerarenopleidingen met het oog op het ontwikkelen van praktijken in scholen die leerlingen betrekken bij besluitvormingsprocessen. Vaak zijn positieve resultaten van actieonderzoek gemeld voor de verbetering van onderwijspraktijken en het leren van leerlingen, ook in de context van initiële lerarenopleidingen. Van actieonderzoek in lerarenopleidingen wordt gezegd dat het bijdraagt aan de kennisconstructie van dio's, het opdoen van praktische ervaring, het opbouwen van vertrouwen in het geven van vakonderwijs (Chou, 2010), en het verschaffen van een dieper inzicht in praktijken door bijvoorbeeld onvoorziene discrepanties tussen verwachtingen en observaties van gebeurtenissen in de klas (Ulvik & Riese, 2016). Voorwaarden voor het bereiken van dergelijke uitkomsten van actieonderzoek zijn echter de beschikbaarheid van voldoende tijd en ruimte voor het uitvoeren van het onderzoek en het reflecteren op het proces en de uitkomsten ervan, en een open, veilige en

ondersteunende onderzoekscultuur in de stageschool. Aan deze voorwaarden werd in dit project regelmatig niet voldaan. In een post-master context van lerarenopleidingen, zoals onderzocht in dit proefschrift, zijn dio's gebonden aan een relatief korte periode om hun actieonderzoeksprojecten uit te voeren, wat ten koste gaat van het cyclische en ontwikkelingsgerichte doel en karakter van actieonderzoek. Bovendien waren de PAR-projecten van de dio's een studieonderdeel dat ook beoordeeld werd, waardoor ze konden worden opgevat als meer een onvermijdelijke opdracht dan als een serieus onderzoek gericht op de verbetering van onderwijspraktijken (Darwin & Barahona, 2018; Reis-Jorge, 2007). Dio's vervullen een dubbele rol, omdat ze zowel student zijn en toewerken naar hun afstuderen als bevoegde leraar, maar ook – vaak in een tijdelijke aanstelling – als aankomend leraar hun bijdrage leveren aan het leren van leerlingen en praktijkontwikkeling binnen de school. Deze dubbele rol maakt de positie van PAR in lerarenopleidingen aanzienlijk complexer: deelname aan PAR-projecten kan dio's in een ongemakkelijke positie op school brengen, omdat vanuit PAR de bestaande praktijken van docenten ter discussie gesteld kunnen worden. Het betrekken van leerlingen bij onderzoek en bij bredere besluitvorming kan worden opgevat als een ongevraagde inbreuk op de schoolcultuur door 'buitenstaanders' of als bedreiging voor de resultaten van leerlingen wanneer het onderwijs afwijkt van de standaard curriculuminhoud en -planning.

De bevindingen van de PAR-projecten in de context van lerarenopleidingen laten deze kwesties ook zien. Ondanks al deze problemen en de complexiteit van het betrekken van leerlingen bij PAR-projecten van dio's, was er in verschillende stadia van de projecten sprake van succesvolle deelname van leerlingen aan de onderzoeksprojecten, en werden verbeteringen in de onderwijspraktijk gezamenlijk onderzocht en doorgevoerd. De ervaringen van de dio's met het plannen, uitvoeren en schrijven over een PAR-project kunnen worden gezien als waardevolle en geschikte manieren om leerlingen te betrekken en als krachtige manieren voor dio's om een identiteit te ontwikkelen als onderzoeker en als partner van leerlingen. Dit vereist het presenteren van praktijkonderzoek aan dio's "als een voortdurend systematisch en collaboratief proces" (Rutten, 2021, p. 12; vertaling auteur). Bovendien kunnen lerarenopleiders dio's ondersteunen in het zoeken naar andere soorten van kennis dan alleen in het domein van het concrete handelen, zoals dio's geneigd zijn te doen wanneer ze aan zichzelf worden overgelaten (Ponte et al., 2004), maar om deze kennis uit te breiden naar het conceptuele en empirische domein, en in samenwerking met hun leerlingen.

Beperkingen en suggesties voor toekomstig onderzoek

In deze paragraaf worden drie beperkingen van dit proefschrift besproken, samen met suggesties voor verder onderzoek over: 1) de doelgroep van de studies; 2) de omvang van de onderzoeksonderwerpen in de PAR-projecten; en 3) de verzamelde onderzoeksgegevens.

Doelgroep van de studies

De studies richtten zich op de PAR-praktijken van leraren in opleiding en op leraren die deelnamen aan professionele ontwikkeling, hetzij binnen een mastercursus, hetzij binnen een programma van een lerarenopleiding. Bijgevolg waren de studies beperkt tot de eigenlijke periode van uitvoering van het PAR-project en hadden ze geen betrekking op het lesgeven tijdens de hele loopbaan van de leraar. Verder onderzoek zou zich kunnen richten op blijvende effecten van leerlingenparticipatie en/of op de ontwikkeling van de *practice architecture* (de context van de praktijk) in de richting van een participatieve aanpak. Vervolgonderzoek naar PAR-projecten in een meer gevestigde participatieve

context zou de in dit proefschrift gevonden voorwaarden en principes voor leraar-leerling-partnerschappen in onderzoek kunnen bevestigen.

Reikwijdte van de onderzoeksthema's in de PAR-projecten

Alle PAR-projecten werden uitgevoerd als groepsgewijze activiteiten - met onderzoeksdeelnemers uit één klas of een groep leerlingen van een school - en waren gericht op onderzoeksthema's inzake leren en curriculum die waren geformuleerd op groepsniveau. Bovendien waren de projecten hoofdzakelijk gericht op het primaire proces van onderwijzen en leren en niet op schoolbrede onderzoeksthema's, zoals het schoolbeleid voor curriculumontwikkeling, tijdschema's, toewijzing van budgetten en werving en ontwikkeling van personeel. Onze bevindingen over projecten die zijn uitgevoerd in de context van klassen zijn wellicht niet rechtstreeks overdraagbaar op de deelname van leerlingen aan onderzoek in situaties waar onderzoek binnen een samenwerkingsverband van gemengde leeftijdsgroepen wordt uitgevoerd, of dat betrekking heeft op bredere of meer structurele schoolorganisatievraagstukken en beleidskwesties. Dergelijk onderzoek heeft mogelijk gevolgen voor meer belanghebbenden en kan in eerste instantie op meer weerstand stuiten. Verder onderzoek wordt voorgesteld naar de participatie van leerlingen in een bredere schoolcontext dan die van de onderzoekspraktijk in een klas van een specifieke leraar. Ook onderzoek naar de relatie tussen de participatie van leerlingen in het onderzoek van een individuele leraar en de rol van de schoolcultuur bij besluitvorming wordt aanbevolen. Resultaten van dergelijke studies zouden handreikingen kunnen bieden voor scholen om incidentele activiteiten rond leerlingenparticipatie te ontwikkelen tot een participatiecultuur.

Onderzoeksgegevens

Aangezien betrokkenheid van leerlingen bij collaboratieve besluitvormingsprocessen nog steeds zeldzaam is in Nederland, concentreerden de studies in dit proefschrift zich op aspecten van de *voorbereiding* van dio's op participatieve praktijken. Daarom was de dataverzameling gericht op de opvattingen, rollen en acties van dio's en op hun voorbereiding op participatieve praktijken in de context van een lerarenopleiding of programma voor professionele ontwikkeling en bevatten de studies geen systematische dataverzameling over de PAR-ervaringen van leerlingen. Voor een volledig beeld van de wisselwerking tussen leraren in opleiding en in-service en leerlingen bij het ontstaan van leerlingenparticipatie is verder onderzoek naar de perspectieven van leerlingen nodig. Daarvoor is meer nodig dan een enkele enquête of een interview, en bij voorkeur over een langere periode, wat ook inzicht zou opleveren in de duurzaamheid van de participatieve praktijken.

De onderzoeksverslagen van de dio's en de interviews van de dio's en lerarenopleiders geven persoonlijke perspectieven weer op de betrokkenheid van leerlingen bij dio-onderzoek en hun verslag daarvan; niet hun feitelijke praktijken op zich. Een mogelijke weg voor verder onderzoek om deze beperking aan te pakken is het vergelijken van waargenomen en uitgevoerde onderwijspraktijken door middel van klas- en schoolobservaties. Daarnaast kan het nuttig zijn om de perspectieven van andere belanghebbenden, zoals de leerlingen van de dio, te onderzoeken. Een verwante onderzoeksrichting is het onderzoeken van de disposities van de belangrijkste actoren die bij de praktijk betrokken zijn, namelijk de dio's, de leerlingen en de lerarenopleiders, met betrekking tot hun kennis, vaardigheden en waarden in verband met PAR en participatie van de school in besluitvormingsprocessen op school.

Implicaties voor praktijk en onderzoek

De bevindingen hebben implicaties voor de praktijk en het onderzoek naar onderwijs en het leren van docenten in verschillende categorieën:

- methodologische implicaties, die betrekking hebben op onderzoek naar PAR en praktijken van leerlingenparticipatie en op het gebruik van PAR als aanpak voor het onderzoeken van praktijken;
- inhoudelijke implicaties, met betrekking tot onderwijs op school vanuit een participatieve benadering;
- ontwikkelings- of ontwerpgerichte implicaties, met betrekking tot de ontwikkeling van de PAR-benadering in het onderwijs en in scholen;

Methodologische implicaties

Lerarenonderzoek moet de perspectieven van leerlingen in ogenschouw nemen en leerlingen als actoren bij het onderzoeksproces betrekken. Volgens de studies in dit proefschrift is het gebruik van actieonderzoeksmethoden waarbij leerlingen worden betrokken, zoals in de PAR-projecten, een effectieve aanpak voor leerlingenparticipatie en voor de professionele ontwikkeling van leraren. PAR kan helpen de kloof tussen theorie en praktijk te overbruggen. PAR sluit nauw aan bij de feitelijke onderwijs- en leerpraktijk en houdt rekening met het normatieve karakter van het onderwijs, de perspectieven en interpretaties van de betrokkenen en met de specifieke kenmerken van de lokale context. Bovendien stimuleert het uitvoeren van PAR het begrip van en de onderhandelingen over wederzijdse behoeften en zorgen, en helpt het om te werken aan meer rechtvaardige en democratische praktijken.

Inhoudelijke implicaties

Het integreren van nieuwe onderwijsinzichten door actieve implementatie en reflectie op de resultaten daarvan is cruciaal voor de voortdurende professionele ontwikkeling van leraren. Het is noodzakelijk een omgeving te creëren waarin leraren en leerlingen als partners kunnen samenwerken, bijvoorbeeld via actieonderzoek. Het hanteren van een participatieve aanpak door het uitvoeren van een PAR-project in samenwerking met leerlingen is een geschikte aanpak gebleken om dio's te ondersteunen bij het ontwikkelen van een positieve houding ten opzichte van leerlingenparticipatie. Een inhoudelijke implicatie uit de studies is het gebruik van de *SPinSTAR-matrix* uit hoofdstuk 3 (zie tabel 20). De SPinSTAR-matrix kan lerarenopleiders van dienst zijn bij (a) het introduceren van PAR bij dio's en het bevorderen van de opname van leerlingenparticipatie in dio-onderzoek; (b) het aanbieden van een instrument voor ‘scaffolding’ bij het PAR-proces; (c) het zodanig toerusten van dio's dat zij zelfstandig PAR kunnen blijven doen, een geschikte context voor dergelijk onderzoek in de school kunnen vinden en zich ten overstaan van collega's en de school kunnen uitspreken voor de PAR-praktijk.

Table 20. Matrix SPinSTAR (Student participation in student teacher's action research)

Fase van actieonderzoek	Mate van betrokkenheid van leerlingen				
	Geen (geen leerlingen-participatie)	**Informeren** (databron)	**Consulteren** (actieve respondent)	**Participeren** (mede-onderzoeker; maker van kennis)	**Samenwerken** Onderzoeker/ mede-auteur; gedeelde beslissingen)
a. Probleemstelling (Onderzoeksvragen)					
b. Ontwerp van de interventie					
c. Onderzoeksontwerp					
d. Uitvoering interventie[23]					
e. Dataverzameling					
f. Analyse van resultaten					
g. Formuleren van suggesties / aanbevelingen					
h. Rapportage / uitkomsten publiek maken					

(aangepast van Bovill, 2017; Fielding, 2001, 2011, 2018)

Ontwikkelings- of ontwerpgerichte implicaties

Het faciliteren van de ontwikkeling van samenwerking tussen dio's en leerlingen moet eenvoudig en aantrekkelijk worden gemaakt. Daarom kan het beste worden begonnen met een kleine en weinig belastende taak die de interactie tussen leraar en leerling bevordert. Van daaruit kan de samenwerking geleidelijk uitgroeien tot een PAR-project waar alle betrokkenen baat bij hebben. Om de deelname van leerlingen aan de PAR-projecten op gang te brengen, moeten de dio's een goed inzicht krijgen in de participatieve aanpak. Daarom kan de reeks principes voor leerlingenparticipatie in PAR (hoofdstuk 4) dienen als centraal onderdeel het programma van de lerarenopleiding. Het presenteren van succesvolle voorbeelden van PAR uit de literatuur en het ter discussie stellen van de centrale rol van de leraar in de klassenpraktijken biedt dio's duidelijkheid en samenhang in de concepten van het programma. Verder hebben dio's voldoende ruimte nodig voor het uitvoeren van hun PAR-projecten in de stagescholen en steun van hun schoolmentoren bij het betrekken van leerlingen. Doelgerichte bespreking van ideeën, concepten en doelen tussen lerarenopleiders en begeleiders op scholen kan zorgen voor meer samenhang voor dio's, meer geïnformeerde ondersteuning en een betere beschikbaarheid van middelen voor het uitvoeren van PAR in de scholen.

De resultaten van de hoofdstukken 3-5 wijzen erop dat het uitvoeren van PAR in een beperkte context zoals een onderzoeksopdracht in een éénjarig programma van een lerarenopleiding niet van nature alle onderzoeksfasen leerlingenparticipatie oproept, wat het duidelijkst blijkt uit de afwezigheid van leerlingen bij de presentatie van de bevindingen. Het verdient aanbeveling om van dio's te verwachten dat zij hun leerlingen betrekken als mede-auteurs van ten minste delen van het onderzoeksrapport,

[23] Hoewel het uitvoeren van de interventie in de klas deel uitmaakt van het actieonderzoeksproces, houdt het in de context van deze studie geen verband met de betrokkenheid van leerlingen bij de besluitvorming over het actieonderzoeksproject. Daarom wordt deze rij niet gebruikt voor het coderen van de mate van betrokkenheid van de leerlingen.

en als beoordelaars van de conclusies en aanbevelingen. Ook hier kan de SPinSTAR-matrix helpen om dio's bewust te maken van dergelijke lacunes in de planning en het in kaart brengen van de deelname van leerlingen aan hun onderzoek. Tijdens het dio-project is het raadzaam voor lerarenopleiders en dio's om reflectiemomenten in te plannen en de set PAR-principes (hoofdstukken 4 en 5) te gebruiken om het verloop van de PAR-projecten van de dio's te monitoren aan de hand van de mate waarin aan de principes wordt voldaan.

Een andere ontwerpgerichte implicatie is de invoering van PAR als vast onderdeel van het curriculum in lerarenopleidingen. De ontwikkelde reeks van PAR-principes kan worden gebruikt om de aard van de afspraken vast te stellen en om de geobserveerde of gerapporteerde praktijken in de klas en op school te categoriseren en te analyseren. Dit kan een gedetailleerder inzicht opleveren, langs de drie dimensies van de *practice architectures*, in de participatieve kwaliteiten van de praktijken en de onderling verweven mechanismen die de participatie van leerlingen beïnvloeden. Om dio's en leerkrachten te ondersteunen bij het uitvoeren van PAR, kan de SPinSTAR-matrix nuttig zijn, zoals hierboven al is aangegeven. Het kan hen helpen bij het identificeren van verschillende opties voor de betrokkenheid van hun leerlingen in verschillende onderzoeksfasen en bij het zich bewust worden van mogelijk gemiste kansen voor een dergelijke deelname.

Nieuwe manieren van werken (en denken) voor docenten moeten zorgvuldig worden geïntroduceerd en ondersteund. Voorgesteld wordt een programma voor lerarenopleidingen te ontwikkelen dat gebaseerd is op een centrale en consistente participatieve aanpak en dat expliciet ondersteund wordt op de partnerschool. Deze aanpak is idealiter niet alleen gericht op de dio's, maar ook op lerarenopleiders en scholen. Een mogelijke strategie is het initiëren van een samenwerkingsproces waarbij de deelnemers een programma voor een lerarenopleiding bespreken en creëren dat erop gericht is studenten van scholen als partners bij hun onderwijs te betrekken. Het opnemen van een kleinschalig participatief onderzoeksproject in het programma van een lerarenopleiding daagt dio's – en hun lerarenopleiders en schoolcoaches – uit om zich een voorstelling te maken van hoe het is om leerlingen als partners te betrekken in de onderwijscontext.

English summary

Introduction

Central to this dissertation is the notion that young people are entitled to be involved in decision-making processes about issues that affect them, including in their school education, and to be taken seriously in their views and suggestions on these issues. Since this is not a common practice in education, neither in schools nor in the preparation of teachers, this research takes up the need to investigate an approach to prepare pre-service teachers (PSTs) for enabling student participation in decision-making in schools. More and more, teachers are supposed to be involved in research, as informed users or as practitioner researchers, and teacher education (TEd) programs should prepare for those roles. An example is involving school students in conducting an investigation in their practice during the PST internship. In this dissertation, participatory action research (PAR) has been introduced as an approach that pre-eminently prepares PSTs for participatory practices in schools.

The four studies included in this dissertation were conducted in two separate projects: the first one, as an exploratory study, in the context of a master's course for pre-service and in-service teachers in primary and secondary education; the second one, as a series of three consecutive studies, in the context of a post-graduate teacher education program for secondary education.

Through the findings and recommendations, this dissertation seeks to contribute to the high-level goal of social justice and the enhancement of democratic approaches in education. Specifically, as one way to get closer to this goal, the studies consisted of an exploration of student participation in decision-making processes through teacher-learner partnerships in research. The practical aim then is to provide schools and TEd institutes with a way to implement or further develop student participation in decision-making processes, while considering opportunities and intricacies that can be expected to occur.

Teacher research

It has often been observed that the outcomes of educational research do not automatically lead to their implementation in teaching and learning practices. Reasons for this include a so-called gap between theory and practice (e.g. Admiraal et al., 2016; Bendtsen et al., 2021; Korthagen, 2010). This alleged theory-practice gap spurred the idea that research should not only be conducted by academic researchers but ideally should involve education practitioners or should have teachers conduct their own research.

In the last decades, teacher research has become acknowledged as a valuable form of research and as an integral part of the teaching profession, both as a valid way of knowledge construction about education and as a transformative professional development activity for teachers (Zeichner, 2003). In particular action research was promoted as a well-suited research approach (e.g. Moreira, 2009; Ponte et al., 2004; Rönnerman et al., 2008; West, 2011). Action research approaches imply systematically investigating issues within an educator's own practice context, including the perspectives of all stakeholders, and mostly also in collaboration with them.

Teacher education and Participatory Action Research

Most pre-service students enter teacher education with little or no experience in social or educational research, and even less in action research, Therefore, it is a prerequisite to educate and support teachers in conducting such research, either as part of professional development activities, for graduate teachers, or in initial TEd programs, for pre-service teachers. A missing perspective in much educational research is that of the students, while 'consequential stakeholders' in teaching and learning issues they should not be overlooked (Groundwater-Smith, 2005). Conducting participatory action research (PAR) would supposedly elicit transformation in teachers' thinking and acting towards student participation and democratic approaches. In the studies for this dissertation, PAR has been introduced into a TEd program as one of the possible *means* to elicit or enable school students to participate in decision-making processes. PAR is not only seen as a site-based approach to research, but also as a democratic practice in itself. PAR can create a context (a *niche*, in ecological terms) for PSTs that facilitates involving their students in researching their school practices; it enables certain – dialogical and collaborative – practices and constraints – more hierarchical, unilateral, and isolated – others.

Student participation: education, schools, and scope for decision-making

In the last decades, a resurgence of the perspective on student involvement in education and research can be traced towards the awareness, that students should be invited and enabled to express their views and to be taken seriously by adults and be responded to (Cook-Sather, 2006). This perspective finds a legal ground in the rights of the child (UN Convention of the Rights of the Child) (Evans, 2016; OHCHR, 1989). It also aligns with the view that for building and sustaining a democratic society, education should not be just learning about democracy and citizenship, but should enable young people to practice a democratic way of life, also in school (Print et al., 2002).

A parallel development in educational research in previous decades is the shift from research *on* students to research *with* students (Cook-Sather, 2002; Fielding, 2004; Fine et al., 2007; Groundwater-Smith et al., 2015; Mitra, 2006). It repositions teachers and students into partnerships in educational research and reform (Cook-Sather, 2014, 2018). The actual form this can take is dependent on the age, capacities, and preferences of the young people, and might range from inclusive and participatory approaches to a revision of roles, structures, and processes in research.

It can be a complex and challenging process to actually involve students in classroom decision-making at the school. It requires a shift in the traditional teacher-centered approach to education and the implementation of new pedagogical methods that prioritize student engagement and agency. This can be challenging for teachers trained in traditional teaching methods who do not have the skills or resources to incorporate student participation into their lessons or are not immediately inclined to do so.

There is currently no TEd program in the Netherlands that has an explicit focus on the promotion of student participation. Research on how to set up such a program is limited, and ultimately, the program would need to be tailored to local conditions.

Central to this dissertation is the question of how participatory educational research by PSTs can be understood and facilitated in the context of a teacher education program so that prospective teachers feel equipped and motivated to engage in student participation in their own schools as well.

Chapter 2 – The exploratory study

The research project 'Students and Teachers as Co-researchers', reported in **Chapter 2**, included teams of primary or secondary school students, teachers, and external educators who conducted collaborative research on student learning in an external educational setting (museum or library). An external setting as the site under investigation was deliberately chosen to create a more equal starting position for school students and teachers and to maximize school student participation in the investigation.

First, Chapter 2 further explores the concept of student participation and relates it to teacher professional development. Second, the characteristics and the intensity of student participation are described along six dimensions of participation. Next, the implications for the learning and professional development of teachers who participated in the Dutch project are explored.

The study findings showed that school students in this context worked at a relatively high participation level. In terms of Fielding's models, school students acted as co-researchers or researchers (Fielding, 2001), or as co-enquirers, knowledge creators, or joint authors (Fielding, 2011, 2018). They did this at all research stages, from formulating research questions to reporting findings. In general, the school students experienced a feeling of responsibility for the research. As intended, the projects involved a variety of school students (and teachers), not only the ones conducting the data collection, but also their peers in class (and school or museum/library). Those who were not members of the research teams were still explicitly part of the process as consulting peers. The setup of the projects can be labeled as a formal approach because they were designed to enable school students' influence on decisions, on conducting the research, and on shaping the external learning context. They were, however, also informal, because of the shown engagement of school students and teachers in joint activities and dialogues, during the research stages and in school. This can be understood as two-way teaching, from teacher to school student and the other way around.

Importantly, the PAR projects led to genuine changes in the external setting, due to perspectives and recommendations of the school students – sometimes unexpected by the teachers and educators. Furthermore, the teachers were struck by how capable and motivated their school students appeared to be in designing and conducting the research activities, and how that boosted their self-confidence. This transformed their idea about the mutual roles of teacher and student in class; the collaboration changed the teacher-student relationship based on increased trust in the involvement of school students in the development of lessons and resulting in a more friend-like way of working with and for their students.

The project yielded useful and positive experiences concerning the involvement of the students, collaboration in research with their teachers and other stakeholders, and professional learning of the teachers. For reasons of practicality, equality in positions of students and teachers, and reduction of complexity for teachers, the project was conducted in external settings (museum and library). This left

the question of how student participation in research, as a democratic approach to education, could be realized *within* schools and how prospective teachers could be prepared for such a participatory approach and practice, in a context of a relatively short, one-year, postgraduate program.

Chapter 3 – Occurrence and nature of student participation

The three studies in Chapters 3-5 relate to the consecutive project that was carried out within the framework of this thesis in the context of a post-graduate TEd program. The project was aimed at PSTs involving school students in their PAR projects during their internship. It was not prescribed what form the participation of school students should take, although it was suggested and supported to strive for an intense form.

The study of **Chapter 3** aimed to gain insight into the extent and nature of school student participation in the action research projects of the PSTs in the internship schools. The research reports submitted by the PSTs as part of the TEd program were analyzed using the *SPinSTAR matrix*, developed in this study, in which four levels of student participation were distinguished: *Inform*, *Consult*, *Participate*, and *Collaborate*, at various stages of research.

This study showed that, in the TEd context under investigation, student participation occurred much more at the two less intensive levels (*Inform* and *Consult*) than at the two more intensive levels (*Participate*, *Collaborate*). Less intensive levels appeared, for instance, in the form of the PST using test scores, grades, or student work, taking surveys or having chats, or leading classroom brainstorms or discussions. The more intensive levels, *Participate* and *Collaborate*, were observed only in a few cases. The typical forms of collaboration that were identified at these levels included student research groups that supported PSTs in the PAR process and student research teams that worked together to create research instruments and collect data. Furthermore, these teams engaged in collaborative discussions about the results within the PST and school student research group. Activities at these more intensive levels were found more in the preparatory stages rather than later stages of the projects. Furthermore, regardless of the level, student participation was scarcely found in the stages of *Research design*, *Analysis of results*, and *Making public*. However, as expected, the level of student participation was found to vary over the research stages.

PSTs felt pressured by the time frames for the assignment and for being graded, which made many of them more reluctant to add activities perceived as complicating and time-consuming, particularly involving school students. Still, the goal to realize student participation in the PAR projects was achieved, albeit not always on a level that may be regarded as active involvement in decision-making. Many of the PSTs in this stage of preparing for a teaching career found it too difficult to engage school students as genuine partners with them.

Chapter 4 – Principles for school student participation in pre-service teacher research

The next study (**Chapter 4**) focused on PSTs' views of the conditions that foster their PAR practices in secondary schools and on how these conditions can inform the development of TEd programs.

By using the *Theory of Practice Architectures* (Kemmis, Wilkinson, et al., 2014)[24] as an analytical lens, eight cases of PAR projects were studied at two interrelated sites of PSTs' learning: the TEd institute and the internship school. We expected that the findings would shed more light on possible conditions for fostering PAR practices in a TEd context in terms of three kinds of arrangements, namely: cultural-discursive, material-economic, and social-political (see *Table 21*). Practices are organized activities of multiple people but still, individuals are acknowledged as agentic subjects in practices and therefore can have a role in the transformation of practice conditions (the arrangements). The objective here is to gain an understanding of how PSTs view the research requirement and the factors that facilitate or hinder their PAR projects with their students. The study specifically examines PSTs' PAR practices and the conditions that encourage them, as perceived by the PSTs themselves. From these perceived conditions, the study derives a set of 17 principles to support PSTs in their participatory action research.

Table 21. Types of arrangements and applicable aspects, concepts, and terms

Arrangements	Description	Aspects, concepts, terms
cultural-discursive	Semantic/conceptual aspects: Usual ways of talking, thinking, and exchanging through language	language, dialogue concepts, ideas, goals/aims beliefs, perspectives
material-economic	Spatial, and temporal aspects: Usual ways of doing and organizing things	objects, spatial arrangements time and resources, program organization materials, study guides
social-political	Relational aspects: Usual ways of relating to each other; aspects of power and solidarity	roles and tasks agency, influence, recognition, rights status, position, hierarchy

The findings of this study indicate that PSTs value being provided with a clear view of teacher research and *clarity*[25] in the use of terms and the meaning of concepts used in the TEd program, such as 'student participation' and 'focus on the learner'. They felt that experiencing this clarity in both the institute and the school setting assists in developing a comprehensive understanding of how to engage students in research activities and serves as a constant reminder throughout their entire internship period. Furthermore, the PSTs stressed the importance of good planning, and *coherence* in the program and activities between the institute and the school, and to pursue *continuity* in curriculum and lesson planning and in the allocation of classes. The derived principle of *contingency* links to the view that student participation should result in real, observable impact, which recognizes school students as capable and valuable partners. Since PSTs can feel uncomfortable sharing power with their school students, they need ample time to build a climate of trust and *safety* for school students and themselves.

Chapter 5 – Manifestations of PST PAR principles in a teacher education program

To gain further insight into how participatory teaching research by PSTs can be understood and facilitated in a teacher education context, the next study focused on teacher educators. The set of

[24] See Chapter 4, pp. 59-61, for a more elaborate description of the *Theory of Practice Architectures*.
[25] Italicized terms in this section and the next one refer to the set of 17 PST PAR principles.

principles derived from the experiences and practices of dio's (see Chapter 4, Table 9) was used in this study to identify, through interviews, how teacher educators shape participatory research practices and try to support dio's in doing so.

First, it was found that preparing PSTs for student participation and specifically, for involving school students in their action research projects appeared as challenging for the TEd staff, as it was for the PSTs, albeit for different reasons. However, the participatory approach to doing research was well received by both teacher educators and PSTs.

The interviews revealed that some principles had already been clearly applied in the program by the teacher educators, but other principles manifested themselves more in the form of ideas or intentions. On the social-political dimension, *recognition* of students was the most frequent principle, but it was not a natural habitus of PSTs. Teacher educators expressed a need to *clarify* to PSTs the concept of student participation in PAR and develop a more *consistent* way to implement it. On the cultural-discursive dimension, the teacher educators' focus was on providing *clarity* in the concepts and procedures of the program. The material-economic dimension emphasized the importance of *coherence* between the TEd institute and school staff perspectives and practices. Issues arose due to unaligned or conflicting demands from the TEd institute versus internship schools. Overall, the interviews with teacher educators showed that the TEd program and internship schools did not inherently incorporate social-political principles such as *recognition*, *reciprocity*, and *equality*, which can hinder the degree to which student participation and PAR can be achieved. The findings suggest a need for further development and implementation of these principles in teacher education programs to enhance student involvement in PAR projects.

Chapter 6 – General discussion

Chapter 6 provides a summary of the main findings of the four studies, including their limitations. Additionally, this chapter delves into pertinent issues regarding student participation in schools and the preparation of prospective teachers in teacher education settings. It outlines both the theoretical and practical implications of the research findings and suggests ways to encourage student participation in teacher research, both during pre-service training and beyond.

Three student participation issues

Realization of student participation in school

This dissertation examined the extent to which student participation in decision-making processes can be achieved, including through PAR projects in a TEd program. The study aimed to enable school students to collaborate with their teachers at an intensive level and have a genuine impact on decisions made during the research project and resulting changes in practice. The research showed that some PST projects demonstrated initial stages of development towards achieving this goal, and student participation was possible within restricted time frames and contexts. School students were involved in designing and conducting the research projects, and their views and suggestions contributed to changes in their teaching and learning content or conditions. The study also emphasized the need for a higher level of student participation beyond just having a voice and being able to express views. The ultimate aim was to develop teacher-learner partnerships that could extend beyond the scope of a research project during an internship and be integrated into everyday school practices.

However, building a participatory culture in schools requires broad support from school leaders and teaching staff and goes beyond a single participatory research project. The implementation of the PAR projects aimed to create authentic student participation experiences for PSTs and teachers and to provide insight into the value of democratic and participatory processes in classrooms and schools. The enthusiastic responses of school students to participating in the PAR projects and the positive attitude of most PSTs towards student participation and PAR are hopeful. The research findings suggest that developing and establishing a 'Pattern of Partnership' (Fielding & Moss, 2011) between school staff and students can form a basis for sustained educational change. The findings also provide insight into the effort involved in involving all voices and the influence that the local context can exert to enable active student involvement in decision-making.

Ethical issues of student participation in educational research

Concerning the participation of young people in practitioner/teacher research, criteria for ethical conduct are grounded on the recognition of children as rights-holders and active agents and the responsibility of adults to ensure the conditions through which children can act as social and moral agents with rights (Mayall, 2000; Quennerstedt & Quennerstedt, 2014).

Realizing genuine student participation in this ethics sense, therefore, goes beyond informing and consulting students and following the agenda of the teacher. It includes being involved in the role of researchers, as manifested in participating in the identification of the relevant research questions, choice of research methods, and discussions on results and implications (Lansdown, 2005). The question then is to what extent the PAR projects studied exemplify an ethical practice of student participation? Regarding answering these question, a difference occurs between the exploratory first study and the consecutive studies. In the first study, the research was deliberately planned to be conducted within external learning environments, on the assumption that this would reduce existing hierarchical relationship patterns between teacher and student. Moreover, in this exploratory study, a longer period of preparing the participants for research was available, compared to the projects in the consecutive study. In this study, although school students worked with a given topic for their project, the supervision was aimed at formulating their own research questions and collecting data themselves, while the role of the teacher was more that of a follower. Moreover, the class decided on peer students as members for their research, from candidates who applied for it, which did include not only the most vocally skilled students or popular persons, but a fair representation of the class population. The projects described in Chapters 3-5 were tied to an existing TEd program and its requirements as well as to standing practices, curricula, and regulations in the internship schools involved. Consequently, these projects were conducted within a shorter period, and obligatorily linked to the specific teaching practice and the school subject, which put the PST almost automatically in a central, leading role.

Action research, student participation, and PST learning in the context of teacher education

Following up on the complexities of conducting PAR in PST-school student partnerships and the affordances for this in schools, an issue arises concerning the value of integrating PAR into TEd for developing teaching and learning practices in schools that involve school students in decision-making processes. Many times, positive outcomes of action research have been reported for the improvement of educational practices and student learning, also in the context of initial TEd. Action research in TEd

is reported to contribute to PSTs' knowledge construction, gaining practical teaching practices, building confidence in teaching their subjects (Chou, 2010), and providing a deeper understanding of practices through, for instance, unforeseen discrepancies between expectations and observations of classroom events (Ulvik & Riese, 2016). However, for the attainment of such outcomes of action research, having ample time and space for conducting the research and reflecting on the process and outcomes, and finding an open, safe, and supportive research culture in the internship school is deemed conditional. Regularly, these conditions were not met in this project. In a post-master TEd context, as studied in this dissertation, PSTs are bound to a relatively short period in which to conduct their action research projects, which conflicts with the cyclic and developmental aim and character of action research. Moreover, the PSTs' projects were an assessed part of the TEd program and could be taken more as an inevitable assignment than as a serious investigation aimed at the improvement of educational practices (Darwin & Barahona, 2018; Reis-Jorge, 2007). PSTs perform a double role as a student-teacher, working for assessments and towards graduation as a qualified teacher, and as a – temporary and pre-service – teacher, working for student learning and practice development. This dual role adds a substantial level of complexity to the position of PAR in TEd: it can place PSTs in an uncomfortable position in school because PAR can question the existing practices of teachers. Involving school students in research and wider decision-making can be perceived as unsolicited breaches of the school culture by 'outsiders' or as threats to student outcomes when teaching departs from the standard curriculum content and planning.

The findings from the PAR projects in the TEd context show these issues as well. Despite all these problems and complexities of involving school students in PST PAR projects, successful student participation in the research projects did occur at various stages of the projects, and improvements in educational practice were collaboratively examined and implemented. The experiences that PSTs had with planning, conducting, and writing about a PAR project can be considered as valuable and suitable ways to involve their school students and as powerful ways for PSTs to develop an identity as a researcher and as a partner to school students. This requires presenting practitioner inquiry to PSTs "as an ongoing, systematic, and collaborative process" (Rutten, 2021, p. 12). In addition, teacher educators can support PSTs in seeking other kinds of knowledge beyond the domain of concrete action, as they tend to do when left to themselves (Ponte et al., 2004), but to extend this to the ideological and empirical domain, and in collaboration with their school students.

Limitations and suggestions for future research

In this section, three limitations of this dissertation will be addressed together with suggestions for further research related to that issue: 1) the target group of the studies; 2) the scope of the research topics in the PAR projects; and, 3) the research data that were collected.

Target group of the studies

The studies focused on the PAR practices of pre-service and in-service teachers in professional development contexts, either as a master course or as a TEd program. Consequently, the studies were limited to the actual period of conducting the PAR project and did not encompass in-service teaching throughout the teacher's career. Further research could focus on the lasting impact of student participation in teacher research under current conditions and/or on the development of the *practice*

architectures towards a participatory approach. Follow-up research on PST PAR projects in more established participatory TEd contexts could corroborate the enabling conditions and principles for PST-school students' collaboration in research found in this dissertation.

Scope of the research topics in the PAR projects

All PAR projects were conducted as group-based activities - with research participants from one class or school student group - and focused research topics of learning and curriculum formulated on group-level. Moreover, the projects did focus primarily on the primary process of teaching and learning and not on schoolwide issues for investigation, such as school policies for curriculum development, time schedules, allocation of budgets, and staff recruitment and development. Our findings on projects conducted in classroom contexts might not be directly transferable to student participation in settings of collaborative research by mixed age groups and on broader or more structural school organization and policy issues. Such research potentially impacts more stakeholders and might face more initial resistance. Further research is suggested on student participation in a wider school context than the classroom research practice of a specific teacher. Also, further research is advised on the relation between student participation in individual teacher's research and school culture in decision-making. Results from such studies could provide guidance for schools to develop incidental activities into a participatory culture.

Research data

Since school student involvement in collaborative processes of decision-making is still rare in the Netherlands, the studies in this dissertation concentrated on aspects of *preparing* PSTs for participatory practices. Therefore, data collection was focused on PSTs' views, roles, and actions and their preparation for participatory practices in a teacher course or professional development program; the studies did not include systematic data collection on school students' PAR experiences. For a comprehensive picture of the interplay between pre-service and in-service teachers and school students in the unfolding of student participation, further research into the school students' perspectives would be needed. This would need more than just a single survey or interview, and would preferably extend over a longer period, which would also yield insight into the sustainability of the participatory practices.

The PSTs' research reports and PSTs' and teacher educators' interviews represent personal perspectives on school student involvement in PST research and their account of that; not their actual practices per se. One potential avenue for further research to address this limitation involves comparing perceived and implemented teaching practices through classroom and school observations. Additionally, it may be beneficial to investigate the perspectives of other stakeholders, such as PST's school students. A related research direction is to examine the dispositions of the key actors involved in the practice, namely the PSTs, school students, and teacher educators, concerning their knowledge, skills, and values related to PAR and school participation in decision-making processes in school.

Implications for practice and research

The findings have implications for practice and research on teaching and teacher learning in different categories:

- methodological implications, pertaining to researching PAR and student participation practices and to using PAR as a research approach for investigating practices.
- substantive or content-related implications, pertaining to teaching in school from a participatory approach;
- developmental or design-oriented implications, pertaining to developing the PAR approach in TEd and schools;

Methodological implications

Teacher research must consider school students' perspectives and involve school students as first-person actors in the research process. According to the studies in this dissertation, the use of action research methods that involve school students, as seen in the PAR projects, is an effective approach for student participation and teacher professional development. PAR can help to overcome the divide between theory and practice. PAR has a close connection with actual teaching and learning practice and considers the normative character of education, the stakeholders' perspectives and interpretations, and specific local context characteristics. Moreover, conducting PAR stimulates the understanding and negotiation of mutual needs and concerns, and helps work towards more just and democratic practices.

Substantive or content-related implications

Incorporating new educational insights through active implementation and reflecting on the results is crucial for teachers' ongoing professional development. It is necessary to establish an environment where teachers and students can collaborate as partners, such as through action research. Enacting a participatory approach through conducting a PAR project in collaboration with school students has shown to be a suitable approach to support PSTs in developing a positive disposition toward student participation. A content-related implication from the studies is to use the *SPinSTAR matrix* from Chapter 3 (see *Table 22*). The *SPinSTAR matrix* could serve teacher educators in (a) introducing PAR to PSTs and enhancing the uptake of student participation in PST research; (b) offering PSTs a scaffolding tool for the PAR process; (c) equipping them such that they can keep on doing PAR on their own, can find a suitable context for such research in schools, and can speak out for PAR practice before colleagues and school.

Table 22. Matrix SPinSTAR (Student participation in student teacher's action research)

Action research stage	Level of school student involvement				
	None (no SP)	**Inform** (data source)	**Consult** (active respondent)	**Participate** (co-researcher; knowledge creator)	**Collaborate** (researcher/joint author; shared decisions)
a. Problem definition (RQs)					
b. Intervention design					
c. Research design					
d. Conduct intervention[26]					
e. Data collection					
f. Analysis of results					
g. Formulation of suggestions / recommendations					
h. Making public					

(adapted from Bovill, 2017; Fielding, 2001, 2011, 2018)

Developmental or design-oriented implications

Facilitating the development of collaboration between PSTs and school students should be made simple and appealing. Therefore, it is best to begin with a small and low-pressure task that fosters teacher-student interaction. From there, the collaboration can gradually progress towards a PAR project that benefits all stakeholders involved. To initiate student participation in the PAR projects, PSTs need to get a good grasp of the participatory approach. Therefore, the set of principles for student participation in PAR (Chapter 4) can serve as the central element in the TEd program. Presenting successful examples of PAR from the literature and challenging the central role of the teacher in classroom practices provides PSTs with clarity and coherence in the concepts of the program. Furthermore, PSTs need sufficient space for conducting their PAR projects in the internship schools and support from their school mentors in involving school students. Purposeful discussion of ideas, concepts, and goals on participatory topics between teacher educators and school coaches and courses can create more coherence for PSTs, informed support, and availability of resources for conducting PAR in schools.

The results from Chapters 3-5 indicate that conducting PAR in a constrained context such as a research assignment in a one-year TEd program does not naturally evoke student participation at all research stages, which shows most obviously in the absence of school students in the presentation of findings. It is recommended to require PSTs to have their school students included as co-writers for at least parts of the research report, and as reviewers of the conclusions and recommendations. The *SPinSTAR matrix*, again, can help make PSTs aware of such gaps in planning and mapping student participation in their research. During the PST project, it is advisable for teacher educators and PSTs to plan for

[26] Although conducting the intervention in class is part of the action research process, in the context of this study it is not related to school student involvement in decision-making processes concerning the action research project. Therefore, this row is not used for coding the level of student involvement.

moments of reflection and to use the set of PAR principles (Chapters 4 and 5) for monitoring the unfolding of the PST PAR projects against the extent to which the principles are met.

Another design-oriented implication is to introduce PAR as a permanent part of the curriculum in TEd. The developed set of PST PAR principles can be used to determine the nature of the arrangements and categorize and analyze observed or reported classroom and school practices. This can yield a more detailed insight, along the three dimensions of practice architectures, into the participatory qualities of the practices and the intertwined mechanisms affecting student participation. For supporting PSTs and teachers in conducting PAR, the *SPinSTAR matrix* can be useful, as already indicated above. It can help them identify different options for involving their school students in various research phases and become aware of possibly missed opportunities for such participation.

New ways of working (and thinking) for teachers need careful introduction and support. It is suggested to develop a TEd program based on a central and consistent participatory approach and explicitly supported at the partner school. Ideally, adherence to this approach should not be aimed only at the PSTs, but at teacher educators and schools as well. One possible strategy could be to initiate a collaborative process where participants discuss and create a TEd program aimed at involving school students as partners in their education. Incorporating a small-scale participatory research project into a TEd program challenges PSTs - and their teacher educators and school coaches – what it is like to involve school students as partners in the educational context.

Curriculum Vitae

Curriculum Vitae

Ben Smit was born on June 19th, 1958 in Leiden, the Netherlands, but he grew up in Leiderdorp. He completed secondary education - Gymnasium A - at the Bonaventura College in Leiden. He graduated in 1985 as a psychologist at Leiden University, with a major in educational studies and minors in educational sociology and computers & education. After graduating he worked as a researcher and project leader, first at the Leiden Interdisciplinary Centre for Educational Research (LICOR) and later at the Leiden Institute for Social Science Research (LISWO), where he specialised in the fields of educational policy research, student careers in higher education and teacher education.

Since 1995 he has worked at ICLON, Graduate School of Teaching at Leiden University as an advisor/researcher in the field of research on teachers and teacher education. From 2008 until 2011 he combined his position at ICLON with activities as an advisor/researcher in a newly established research group with Petra Ponte at Utrecht University of Applied Sciences, Faculty of Education. Furthermore, since 2005, he is actively involved in the international *Pedagogy, Education & Praxis* (PEP) research programme, as a member of the network and the PEP Theme Group 'Learning & Didaktik/Professional Learning'. Since 2011, he is the International Coordinator for the PEP node in the Netherlands.

In the last 15 years, Ben's research interests circle around action research and practitioner research in educational settings, specifically in teacher education. Besides methodological issues related to this type of research, student participation and the changing position of participants in educational research have become the focus of his research. In 2015, he started his PhD project 'Teachers and students as partners in researching educational practice', which he presented at several national and international conferences (ORD, CARN, ECER, AARE).

Currently, Ben continues working at ICLON, as an educational researcher, mostly in the field of teacher professional learning and teacher research, with a special interest in action research approaches.

Publications and presentations

Selected publications and presentations

Scientific publications

Articles in peer-reviewed journals

Smit, B. H. J., Meirink, J. A., Tigelaar, D. E. H., Berry, A. K., & Admiraal, W. F. (2022). Principles for school student participation in pre-service teacher action research: A practice architecture's perspective. *Educational Action Research*. https://doi.org/10.1080/09650792.2022.2121933

Smit, B. H. J., Meirink, J. A., Berry, A. K., & Admiraal, W. F. (2020). Source, respondent, or partner? Involvement of secondary school students in Participatory Action Research. *International Journal of Educational Research*, *100*, 1-12. https://doi.org/10.1016/j.ijer.2020.101544

Hardy, I., Jakhelln, R., & **Smit, B. H. J.** (2020). The policies and politics of teachers' initial learning: The complexity of national initial teacher education policies. *Teacher Education*, 1-23. https://doi.org/10.1080/10476210.2020.1729115

Admiraal, W., Kruiter, J., Lockhorst, D., Schenke, W., Sligte, H., **Smit, B.**, Tigelaar, D., & de Wit, W. (2016). Affordances of teacher professional learning in secondary schools. *Studies in Continuing Education*, *38*(3), 281-298. https://doi.org/10.1080/0158037X.2015.1114469

Zwart, R., **Smit, B. H. J.**, & Admiraal, W. (2015). Docentonderzoek nader bekeken: een reviewstudie naar de aard en betekenis van onderzoek door docenten [A closer look at teacher research: A review study into the nature and meaning of teachers' practitioner research]. *Pedagogische Studiën*, *92*(2), 131-148.

Admiraal, W., **Smit, B. H. J.**, & Zwart, R. (2014). Models and design principles for teacher research. *IB Journal of Teaching Practice*, *2*(1), 1-6. https://xmltwo.ibo.org/journal/index.php/ibjoftp/article/view/115

Smit, B. H. J. (2013). Young people as co-researchers: enabling student participation in educational practice. *Professional Development in Education*, *39*(4), 550-573. https://doi.org/10.1080/19415257.2013.796297

Van Swet, J., **Smit, B. H. J.**, Corvers, L., & Van Dijk, I. (2009). Critical friendship as a contribution to master's-level work in an international programme of study. *Educational Action Research*, *17*(3), 339-357. https://doi.org/10.1080/09650790903093292

Books and book chapters

Smit, B. H. J. (2016). Young people as co-researchers: enabling student participation in educational practice. In J. Wilkinson, L. Bristol, & P. Ponte (Eds.), *Professional Development: Education for all as praxis* (pp. 100-123). Routledge. http://dx.doi.org/10.1080/19415257.2013.796297

Ponte, P., & **Smit, B. H. J.** (2016). Education for all as praxis: consequences for the profession. In J. Wilkinson, L. Bristol, & P. Ponte (Eds.), *Professional Development: Education for all as praxis* (pp. 5-19). Routledge. http://dx.doi.org/10.1080/19415257.2013.796296

Manuscripts submitted/under review

Smit, B. H. J., Tigelaar, D. E. H., Berry, A. K., & Admiraal, W. F. (under review). Teacher educators' views on educating pre-service teachers for participatory action research in secondary schools.

Presentations

Conference contributions

Smit, B. H. J., Tigelaar, D., Berry, A., & Admiraal, W. (2022, November 27-December 1). *Preparing secondary teachers for co-researching with their students: principles for a teacher education program* AARE Conference 2022, Adelaide, Australia.

Hardy, I., Jakhelln, R., & **Smit, B. H. J.** (2018, December 2-6). *The policy and politics of teachers' initial learning: Netherlands, Norway and Australia* AARE Conference 2018, Sydney, Australia.

Smit, B. H. J., Admiraal, W. F., & Berry, A. K. (2018, June 13-15). *Docenten en leerlingen als mede-onderzoekers: Participatory Action Research in de lerarenopleiding* ORD 2018, Nijmegen.

Smit, B. H. J., Admiraal, W. F., & Berry, A. K. (2018, December 2-6). *From PAR to Partnership: design of a teacher education program preparing for student participation in schools* AARE Conference 2018, Sydney, Australia.

Van Kan, C., Brouwer, P., **Smit, B. H. J.**, Spreeuwenberg, L., Van Swet, J., & Admiraal, W. (2018, 12-14 November). *From master student to master teacher: The meaning of teacher research for school practice* [Conference presentation (part of symposium 'Impact of master programs for teachers in the Netherlands')]. EAPRIL 2018, Portoroz, Slovenia.

Olin, A., Jakhelln, R., & **Smit, B. H. J.** (2017, August 22-25). *Understanding 'Research-based educational practice' in Initial and Continuing Teacher Professional Learning [in Symposium: The Politics and Practices of Teacher Professional Learning (Part II): Current Policy Conditions in Sweden, Norway, Finland, Netherlands and Australia; chair: Ian Hardy]* ECER 2017, Copenhagen, Denmark.

Hardy, I. J., Olin, A., Heikkinen, H., Jakhelln, R., **Smit, B. H. J.**, & Tyren, L. (2017, August 22-25). *The Policy, Politics, Practice and Praxis of Teachers' Initial and Continuing Learning [in Symposium: The Politics and Practices of Teacher Professional Learning (Part II): Current Policy Conditions in Sweden, Norway, Finland, Netherlands and Australia; chair: Ian Hardy]* ECER 2017, Copenhagen, Denmark.

Smit, B. H. J., Admiraal, W. F., & Berry, A. K. (2017, August 22-25). *'Focus on the Learner' in Teacher Education: PAR as a Strategy to Enable Student Voice in Schools* ECER 2017, Copenhagen, Denmark.

van Kan, C., Brouwer, P., **Smit, B.**, Spreeuwenberg, L., van Swet, J., & Admiraal, W. (2017, August 22-25). *Moving Beyond the Research-practice Gap: Impact of Teacher Research on Professional Development and Knowledge Utilization in Schools* ECER 2017, Copenhagen, Denmark.

van Kan, C., Brouwer, P., **Smit, B.**, Spreeuwenberg, L., van Swet, J., & Admiraal, W. (2017, June 28-30). *Voorbij de kloof tussen onderwijsonderzoek en de onderwijspraktijk* ORD 2017, Antwerpen.

Smit, B. H. J., Admiraal, W. F., & Berry, A. K. (2016, Nov 29). *"Let's find out together!": Participatory action research by student teachers and school students in secondary education* AARE 2016, Melbourne, Australia.

Smit, B. H. J., Meirink, J., & Emmelot, Y. (2015). *Interventies in school ter bevordering van een school als professionele leergemeenschap* Onderwijs Research Dagen 2015, Leiden, The Netherlands.

Smit, B. H. J., Olin, A., Edwards-Groves, C., Furu, E. M., & Karlberg-Granlund, G. (2014, 19-21 November). *Dialogue and recognition in educational partnerships: A five nation study* APERA-HKERA Conference 2014, Hong Kong, P.R. China.

Admiraal, W., **Smit, B.**, Geboers, E., & Tigelaar, D. (2014, June 11-13). *Symposium 'Professionele leercultuur in vo-scholen' - Deelonderzoek 1: Veldverkenning* Onderwijs Research Dagen 2014, Groningen, The Netherlands.

Smit, B. H. J. (2013, November 8). Teachers and students as co-researching partners: pupil participation in an educational action research project. Symposium 'Partnership & Recognition', CARN conference 2013, Tromsø, Norway.

Smit, B. H. J. (2013, 29-31 May). *Leerlingen en leraren als onderzoekers: Ontwikkeling van een strategie voor leerlingenparticipatie* Onderwijs Research Dagen 2013, Brussels, Belgium.

Ponte, P., & **Smit, B. H. J.** (2011, 13-16 September). Education for All as Praxis research program: An exploration of views and concepts. Symposium 'Education For All As Praxis' (chair: Dr. Brian Hemmings) at the European Conference on Educational Research (ECER) 2011, Berlin, Germany.

Smit, B. H. J. (2011, 12 September). Education for All as Praxis research program: Views and concepts. Symposium 'Pedagogy, Education & Praxis' at the Dept. of Education and Special Education, University of Gothenburg, Gothenburg, Sweden.

Smit, B. H. J., Ponte, P., & Plomp, L. (2011, 14-15 maart). Leerlingen als medeonderzoekers: een nieuwe leerling-leraar relatie. VELON Congres 2011, Noordwijkerhout, Nederland.

Smit, B. H. J., Plomp, L., & Ponte, P. (2010, 28 November - 2 December). Pupils and teacher as co-researchers: conditions for equal voices. Symposium 'Consulting young people: Why student voice matters' (chair: Professor Susan Groundwater-Smith) at the AARE Conference 2010: 'Making a difference', Melbourne, Australia.

Plomp, L., **Smit, B. H. J.**, & Ponte, P. (2009, 30 October - 1 November). Pupils as co-researchers: Finding evidence for changes in the pedagogical relation of pupils and teachers. 33rd Collaborative Action Research Network (CARN) International Conference, Athens, Greece.

Smit, B. H. J., & Ponte, P. (2007, 9-11 November). The position of the researcher and the researched in practitioner research: Issues of quality [symposium]. Collaborative Action Research Network (CARN) Conference, Umeå, Sweden.

Smit, B. H. J., & Ponte, P. (2006, 10-12 November). Triggering thoughts: elicitation methods in action research and practitioner research. CARN Conference 2006, Nottingham, UK.

Other presentations

Smit, B. H. J. (2020, December 6). *Source, respondent, or partner? Involvement of secondary school students in Participatory Action Research* Discussion session at the PEP International Meeting 2020, online.

Smit, B. H. J. (2013, November 7). *PEP Network - Theme Group 2 'Partnership & Recognition'* Seminar 'Pedagogy, Education & Praxis (PEP) Network', University of Tromsø / the Arctic University of Norway, Department of Education, Tromsø, Norway.

Smit, B. H. J. (2011, 12 September). The 'Pupils as co-researchers' project. Symposium 'Pedagogy, Education & Praxis' at the Dept. of Education and Special Education, University of Gothenburg, Gothenburg, Sweden.

Van Swet, J., **Smit, B. H. J.**, & Ponte, P. (2005, 5 November). Sharing the strategy: collaboration in writing an international publication. Round table presentation in the symposium 'A thoughtful but unchecked spreading strategy: the development of a curriculum for professional masters' courses'. International Practitioner Research Conference & Collaborative Action Research Network (CARN) Conference (PRAR/CARN 2005), Utrecht, The Netherlands.

Other output

Droppers, A., Ermers, C., Gruijthuijzen, R.-J., Jonker, R., Meijer, L., Nicolasen, I., Overdiep, C., Roon, L., **Smit, B.**, & Snoek, M. (2021). *Grenzen verleggen: Professionalisering tijdens innovaties door leraren*. https://www.lerarenontwikkelfonds.nl/wp-content/uploads/Onderzoek_grenzen_verleggen-_def.pdf

Schenke, W., Sligte, H., Admiraal, W., Buisman, M., Emmelot, Y., Meirink, J., & **Smit, B.** (2015). *Scan School als Professionele Leergemeenschap*. Kohnstamm Instituut.

Smit, B. H. J. (2014, May 15). Pupil participation is not a favour to students, it is their right. *ICLON Research Blog*. http://researchblog.iclon.nl/pupil-participation-is-not-a-favour-to-students-it-is-their-right/

Smit, B. H. J., & Verbeek, G. (2014). Een palet van mogelijkheden: Leerlingonderzoek in Australië [A palette of possibilities: Student research in Australia]. In G. Verbeek & P. Ponte (Eds.), *Participatie in het onderwijs: Onderzoek met en door leerlingen* (pp. 133-158). Boom Lemma Uitgevers.

Smit, B. H. J. (2012). Leerlingenparticipatie is geen gunst aan leerlingen, het is hun recht. In G. Verbeek & B. H. J. Smit (Eds.), *Rechtvaardig onderwijs: Slotakkoord lectoraat Petra Ponte 'Gedrag en onderzoek in de educatieve praxis'* (pp. 45-48). Boom Lemma uitgevers.

Verbeek, G., & **Smit, B. H. J.** (Eds.). (2012). *Rechtvaardig onderwijs: Slotakkoord lectoraat Petra Ponte 'Gedrag en onderzoek in de educatieve praxis'* [Festschrift / Liber Amicorum / Manifesto]. Boom Lemma uitgevers.

Van Swet, J., & **Smit, B. H. J.** (2008, 7-9 November). Becoming “critical friends” in multicultural tutor groups: Reflections on an international master’s course in SEN. Collaborative Action Research Network (CARN) Conference, Liverpool, UK.

Ponte, P., & **Smit, B. H. J.** (2007). Introduction: Doing research and being researched? In P. Ponte & B. H. J. Smit (Eds.), *The quality of practitioner research: Reflections on the position of the researcher and the researched* (pp. 1-8). Sense Publishers.

Ponte, P., & **Smit, B. H. J.** (Eds.). (2007). *The quality of practitioner research: Reflections on the position of the researcher and the researched*. Sense Publishers.

Van Swet, J., Ponte, P., & **Smit, B. H. J.** (2007). A platform for joint international cooperation: Introduction to a conceptual challenge. In J. Van Swet, P. Ponte, & B. H. J. Smit (Eds.), *Postgraduate programmes as platform: A research-led approach* (pp. 3-18). Sense Publishers.

Van Swet, J., Ponte, P., & **Smit, B. H. J**. (Eds.). (2007). *Postgraduate programmes as platform: A research-led approach*. Sense Publishers.

Ponte, P., & **Smit, B.**, (Eds.). (2005). *Quality of Practitioner Research / Action Research: what's it about, what's it for and what next? Proceedings of the International Practitioner Research Conference & Collaborative Action Research Network (CARN) Conference (PRAR/CARN 2005) [CD-ROM]*. Fontys University of Professional Education / OSO.

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