

Original Article



Systematization of the methodology of children and adolescents as co-researchers. The research case on school engagement and contextual factors in Chile

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Abstract

Scientific research involving children and adolescents as members of research teams are relevant, both because of the possibility of giving voice and leading role to this social group and because it constitutes an expressway of exercising the participation rights enshrined in the Convention on the Rights of the Child (CRC). Increased research involving children and adolescents as co-researchers appears, seeking designs and implementations that safeguard technical, cultural, and ethical aspects. This article reports a methodology implementation of children as co-researchers in a scientific research project associated with school engagement and its contextual factors in Chile. Therefore, the article goes in-depth into the methodology implementation, the

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Alejandra Santana López, Facultad de Ciencias Sociales, Jurídicas y Humanidades, Universidad Gabriela Mistral, Avenida Andrés Bello 1337, Providencia, Santiago de Chile, Santiago 7500533, Chile. Email: alejandra.santana@ugm.cl conditions of the implementation, and its results. Finally, conclusions and projections for future research in this line are shared.

Keywords

Participatory methodologies, co-researchers, children's rights, agency, participation

Presentation

Various international and national organizations have expressed the urgency of focusing on the well-being and rights of children and adolescents, especially with the recent social, educational and health crises that have had repercussions on their well-being (Children Society, 2024; Reimers, 2021; Brito et al., 2020; Eyzaguirre et al., 2020), in their learning and in the possibilities of participation and contact with their support networks (Salas et al., 2020). In this context, and from the perspective of the Convention on the Rights of the Child (CRC), he fact that children and adolescents have the right to be heard and to participate in decision-making on topics affecting them (e.g., climate change, school coexistence, use of social networks, to name a few) is highlighted as a fundamental aspect for their development. Children's participation could in some way be understood as the "right of rights", given that it refers centrally to the exercise of citizenship and its effective fulfillment, and allows for the analysis of the degree of validity of other rights (Giorgi, 2010), among which is the right to participate in social research on topics that affect their lives (Santana et al., 2023; Saracostti et al., 2015). Thus, promoting research with them means recognizing their role in the transformation processes of their environment (Corvera, 2011), an area to which the dissemination of this experience seeks to contribute.

Scientific research, especially in social sciences and education, has not been immune to questions about the participation of children and adolescents in research and where these actors are positioned (Cahill & Dadvand, 2018; Christensen & Prout, 2002). While experiences of involving children and adolescents as members of research teams or as coresearchers have been documented around the world, in Chile such experiences are still incipient (Bambs et al., 2022; Saracostti et al., 2022).

From the perspective of these authors, the contributions of scientific research in the field of social sciences and education that consider children and adolescents as participants and protagonists respond to purposes that go beyond these fields of knowledge. Coresearch with children and adolescents is consistent with the recognition of the contribution of science, technology and innovation to sustainable development. Such appropriation is a bridge towards the achievement of some sustainable development goals (UNDP, 2024), 1. Quality education, seeking to "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (SDG 4). Where the development of research design with children and adolescents co-researchers is located

from a perspective of children's rights where the right of participation operates as a necessary condition for the exercise of other rights, such as inclusive education and, in turn, investigative skills are a learning opportunity in themselves. On the other hand, it highlights the objective of reducing knowledge gaps, which allows citizens to evaluate the benefits, risks and costs of the decisions they make regarding their health (SDG 3: Good health and well-being). As noted, designs with children and adolescents co-researchers offer learning opportunities, openings to new worlds, development of reflective skills and their empowerment, favoring decision-making that, in a broad sense, can influence their overall well-being.

Specifically, this article allows us to graph, through the documentation of the implementation of the methodology of boys and girls as co-researchers, the concrete experience in a social context in which these guidelines are incipient in the development of scientific research in Chile. This article aims to present the systematization of the methodology of co-researching with children and adolescents in the Chilean context, particularly in a research project that focuses on school engagement (affective, behavioral, and cognitive) and its contextual factors (family, peers, and teachers) (Saracostti & de Toro, 2023), which is currently underway. This article is part of the research project entitled 'Modeling school commitment, contextual factors, and socio-educational achievement of children and adolescents: from the international scientific literature to a mixed longitudinal study in the Chilean context,' funded by the National Agency for Research and Development of Chile (Agencia Nacional de Investigación y Desarrollo de Chile). This is the main agency that channels public resources for quality and highly competitive scientific research. In this case, the project responds to research criteria in the field of sociological phenomena and the agenda of country-issues related to educational inequality and children's rights, which includes the development of new research methodologies. The funds come from the Ministry of Science, Technology, Knowledge and Innovation.

The research proposes a mixed design with both quantitative and qualitative components. The participation of children and adolescents as co-researchers is part of the qualitative dimension, where the researcher seeks mainly to explore and analyze the meanings that children and adolescents attribute to school engagement and its contextual factors. The qualitative methodological design includes involving children and adolescents as co-researchers, as well as training them in designing data collection instruments, applying them, analyzing and disseminating results.

The development of this project by the authors responds to their commitment to children's rights, making them visible and promoting them in academic, research and biopsychosocial interventions aimed at children and adolescents, seeking to generate conditions to transform their development opportunities together with them, in a way that respects their contexts and enhances their capabilities; this includes addressing adults and institutions that are key to their comprehensive development, such as families, schools, and local and community organizations.

The researchers of the project, including one of the authors of this article, were inspired by methodologies that actively involve children in educational research. They sought to explore the methodology of child co-researchers, which has been scarcely used in Chile, with the intention of learning from this experience in terms of its adoption by children and the implementation of actions for future research.

Background framework. Children and adolescents as co-researchers

This section establishes a foundational framework emphasizing the significance of active participation by children and adolescents in the creation of knowledge.

Why include children and adolescents in research?

When questioning why children and adolescents should be included in scientific research, it is possible to outline multiple arguments. The recent health crisis provides us with compelling reasons associated with the subjectivity of how each person experienced this phenomenon - especially children and adolescents - the collective approach to the pandemic, the psychosocial consequences it had, and the deployment of support that it was possible to activate. In this scenario, the voice of children and adolescents, as well as their role and protagonism, were not always recognized but would have been valuable in informing adaptation strategies aimed at them, particularly in the educational, social, and mental health fields.

Following this premise and in the same line of interest in giving a voice to those who are affected by a problem, research studies such as Barcala et al. (2022), and Castro and Valcárcel (2022) have emerged, aiming to generate knowledge to provide alternatives to improve the quality of life of children and adolescents, who often are not the protagonists in the situations that affect them. This implies the democratization of knowledge in its generation, dissemination and direct interference from those who are affected and could benefit directly or indirectly from this knowledge. A process that would also contribute to their social role, agency and development, recognizing children and adolescents as experts in their own living conditions.

From an ethical perspective and under the paradigm of participatory research, the inclusion of those who are directly affected by a given phenomenon should be a fundamental stage in the knowledge-generation process (Bergold & Thomas, 2012).

Participatory research offers multiple benefits, including facilitating social change, reducing the cost of data collection, strengthening local institutions, and increasing awareness among those involved regarding the distribution of benefits associated with research (Contreras, 2002). When children and adolescents are part of a project as coresearchers, they engage in a process of self-recognition and recognition of others, contributing to the construction of meaning and learning about justice, and responsibility (Ospina-Ramírez & Ospina-Alvarado, 2017).

These efforts require paradigm shifts from the researchers and pose methodological and ethical challenges in capturing the unique perspectives of phenomena as seen by children and adolescents. This not only influences the knowledge produced but also sheds light on innovative developments within specific fields, contributing to the achievement of sustainable development objectives.

What are the levels of participation of children and adolescents in scientific research?

In the search for tools to estimate and characterize the participation of children and adolescents as co-researchers, we delve into the existing literature. Some authors have proposed ways of grading children's participation in research contexts (Lundy, 2007; Shier, 2001). Participation types and levels are essential to understand the scope of participation and the criteria that allow children to develop adequately while respecting their rights and their approach to the world.

Shier, H. (2001), based on Roger Hart's model proposes five levels of participation in scientific research, including:

- (1) Children and adolescents are heard.
- (2) Children and adolescents are encouraged to express their views.
- (3) The views of children and adolescents are considered.
- (4) Children and adolescents are involved in the decision-making process.
- (5) Children and adolescents share power and responsibilities in decision-making.

This model is directly linked to the participatory model proposed by Lundy (2007), which highlights the conditions for the proper development of this type of work (Brady & Graham, 2019), and seeks to focus the approach to working with children and adolescents for decision-makers, calling for a focus on the existence of:

- Space: understood as a place/opportunity where these actors can safely express their opinion.
- 2. Voice: it must be provided so that they can express their opinion.
- 3. Audience: it must exist to ensure that their point of view is heard.
- 4. Influence: their point of view must have influence, i.e., concrete actions must be taken when appropriate.

The levels of participation and their categories are used in the review conducted by Larsson et al. (2018), where research is grouped according to the participation level of children and adolescents in specific topics related to the area of health and well-being, highlighting studies such as Jenkins et al. (2016), Arvidsson et al. (2016), Wärnestål et al. (2017), among others. This review indicates that many studies that claimed to enhance participation levels among children and adolescents did demonstrate such improvements in their results. The number of studies that achieved high participation levels as stipulated in the model of Shier (2001) is limited.

What are the conditions for implementing the methodology of children as co-researchers?

For this purpose, the criteria used were mainly those provided by Brady and Graham (2019), que highlight the importance of recognizing and respecting the rights of children

and adolescents, allowing them not only to express their opinions but also to have a voice in the matters that concern them. On the other hand, it addresses the question of the importance of including children and adolescents in the research team when it is desired to study these same groups, mentioning that this diversity in the research team would facilitate access to potential participants, guarantee that the strategies, material, and information for recruitment would be accessible and relevant to their peers.

In addition, there is a criterion for understanding children and adolescents as a non-homogeneous group, which should consider: their background, circumstances and life experiences, culture, ethnical origin, family composition, and income, among other factors.

A third criterion established indicates that methodologies used when working with children and adolescents must align with their interests, needs, concentration, or comprehension capacities. The benefits of studies with children as part of the information-gathering process are highlighted as the better quality and quantity of data collected when children apply instruments or other children due to the comfort they can transmit to their peers (Brady & Graham, 2019; Santana et al., 2023).

These conditions have been implemented in research studies that have adhered to designs in which children and adolescents have been included as co-researchers (Daly, 2009; Garofalo et al., 2012; Kellett, 2010; Lundy et al., 2011). However, in Chile and Latin America, these studies are in their early stages (Lay & Serrano, 2018; Sotomayor et al., 2021).

Method

This study has a qualitative approach based on a participatory action research model (Reimer & McLean, 2015) where children and adolescents take on the role of coresearchers. Langhout and Thomas (cited in Ozer et al., 2010) identify this model as a theoretical vision and a collaborative methodology to ensure that the people involved in a research project have a voice and influence in it. Based on the above, the participatory approach seeks to promote the inclusion of children and adolescents throughout the knowledge-construction process (Grace & Langhout, 2014).

The methodology section of the project will describe participants, procedures, and sources of information, followed by a description of the dimensions of analysis used to systematize the methodology of co-researching with children.

Participants

Children and adolescents (64) from six public and vulnerable schools located in the central zone of Chile were invited to participate in mixed groups (boys and girls) of coresearchers, half of them corresponding to the first year of the second basic cycle (approximately 10 years old) and the other four groups to the first year of secondary school (approximately 14 years old). The children and adolescents who showed interest and agreed to join the study were asked for their parents' informed consent and informed assent, emphasizing that participation was voluntary.

Additionally, primary information was obtained from the facilitator of the coresearcher groups, who is not a co-author of this article, who worked directly with the children in the schools. Finally, information was obtained by contacting the principal investigators to request official information or clarification on the execution of the project.

Researchers

The researchers are professionals in the field of social sciences, particularly three social workers, a psychologist and a sociologist with career paths that reflect profiles in which academic aspects have been combined, working as (researchers in the area of education, academics from various Chilean universities, three of them with doctors and master's degrees recognized in their areas and fields of influence). In these roles, they teach undergraduate and graduate classes, lead research, generate scientific productivity in terms of publishing books, articles and transfer products, especially generating capacities in educational communities through training and support in educational improvement processes. From a profesional point of View and professional aspects... the four researchers have extensive experience in especially vulnerable school contexts, working directly with children, adolescents and families, having participated in the implementation of social programs that promote the well-being of children in school contexts (for example, favoring more effective learning processes, preventing child labor by strengthening community resources present in schools, to give some examples). They are highly committed to the development of strategies that aim to reduce social and educational inequities by enhancing the capabilities of people and communities. They are sensitive and concerned about implementing actions that break with vertical-rigid power relations. The researchers have been attentive to the relationship established with the children, adolescents and the communities and have taken care to promote capacities in accordance with the age and experience of the children and adolescents, favoring an instance of dialogue and respect, where they can be taught as subjects of rights. This has been channeled through scientific research, consultancy and other support experiences, usually from a role external to the educational communities in coordination with the school management and management teams. The permanent reflection on power relations regarding schools and children and adolescents has been addressed from the ethical approaches of research work, two of the researchers are experts on this topic, the project has been evaluated by Research Ethics Committees, and from the continuous monitoring of the work of the research team that supervises its practices and has had additional specialization in this type of methodological design when needed, Regarding the social and power position in which the researchers are placed, they have had the opportunity to be trained in the most prestigious universities in Chile, they do not come from socially disadvantaged sociocultural contexts, which, effectively, which sets them apart from the living conditions of the participants, especially when studying the conditions associated with the vulnerability and poverty of educational contexts in one of the countries in which this is most segmented in Latin America. The biases that this position could cause in research practice are addressed from the training itself, which broadens the comprehensive vision of the researchers, offers methodological tools to minimize them, such as

research teamwork, based on internal supervision meetings and the different triangulation mechanisms typical of qualitative and participatory approaches. Instances that allow us to keep a watchful eye on these possible biases, which, on the contrary, increases the commitment to reduce social and educational inequalities that affect children and their families.

Ethical safeguards of research

In Chile, scientific research involving people is legally regulated, and one of its requirements is to have the approval of a Scientific Ethics Committee. These bodies must ensure that the research demonstrates respectful treatment of participants, is scientifically relevant and a contribution to society, assesses risks and benefits, protects personal and sensitive data of participants, and guarantees the voluntary nature of individuals, among other aspects. In addition, the use of informed consent for adults and informed assent for children is required. The project has been approved by the Institutional Ethics Committee of *Universidad de Valparaíso*.

Procedures and instruments

In terms of workshop procedures, the children and adolescents were incorporated into:

- Collective design of data collection instruments for peers, teachers, and family.
- Information production process, where children voluntarily explored the perspective of a parent, teacher, and/or peer. The group work context of the co-researcher children and adolescents was also a space for information production.
- Analytical process and discussion of the progress and results of the research project with the groups of co-researcher children and adolescents.
- Dissemination and transfer of the results, where it is expected to develop spaces of voluntary participation for co-researcher children and adolescents who wish to participate in friendly dissemination events.

Regarding the *instruments*, the sessions of the 8 research groups (COI 1–8) themselves became a data collection strategy, and records of the workshop sessions of children and adolescent co-researcher groups were analyzed.

Additionally, a thematic script was used to prepare two semi-structured interview guidelines (E1 and E2), which were applied to the facilitator. Finally, these topics were also included in records (field notes) that contained information on the activities conducted, activity transcription, participants, methodological strategies used, workshop methodology comments, observations on the experience of the groups, observations on the experience of working with co-researcher children, and results regarding school engagement and its contextual factors.

Analysis

Content analysis strategy was used as data analysis strategy, which is a "technique (...) that allows studying the content of a communication, classifying its different parts according to categories previously made by the researcher" (Flores, 2009, p. 272). In this case, the analysis texts correspond to the transcribed interviews and the fieldwork record cards.

Presentation of results

The systematization of the methodology of children and adolescents as co-researchers will be organized according to the three topics of analysis focused on the uptake that the children and adolescents made of the methodology of children and adolescents as co-researchers in the implementation of the project. For this purpose, the following dimensions were addressed: temporal organization of the work with children and adolescent co-researchers; workshop contents; facilitator and children and adolescents' connection; identification of workshop implementation milestones; the process in which the children and adolescents take ownership of the co-researchers' methodology; and the role of Children and Adolescents in the co-research process. Each of them will be described and analyzed according to the experience lived in the reported research project.

Temporal organization of the work with children and adolescent co-researchers

The work proposal with the children and adolescents was planned to be implemented between 2021 and 2024 as the Figure 1 shows:

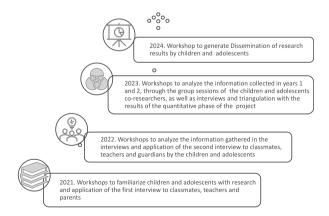


Figure 1. Temporal organization of the workshops. (Own elaboration).

Workshop contents

The contents of the workshops were supported by didactic material previously prepared by the authors of the project. The following is a summary of the topics addressed in the workshops, which are associated with the workbooks (Saracostti et al., 2022).

Facilitator and children and adolescents' connection

From the facilitator's perspective, there are distinctions between working with children and working with adolescents. In the case of the first group, it is possible to find them highly motivated by the task. The role of co-researchers is applied as an early strategy with them, and there is less resistance. In contrast to the research with adolescents, where they are more reactive to joining this type of project. This differentiation marks willingness and motivation.

Some other distinctions associated with the age of the children and adolescents that were appreciated in this experience are that younger children tend to be closer to the facilitator, trust more easily, and quickly express their affection, for example, with hugs and affectionate gestures. In the case of adolescents, more time was spent on trust building, and with one group, there was more resistance. With this group, the progress of the project is perceived as slower, in terms of planning and uptake of the methodology itself.

With both groups of children and adolescents, the relationship is being worked on and it changes as the project develops. In the beginning, the facilitator introduces herself and the children and adolescents are rather shy. However, in the final workshops, the conversation flows naturally, giving rise to more personal conversations about their school experiences, and their relationship with their teachers and classmates.

Active listening, the ability to contain and understand were the most valued competencies of the facilitators, more so if we consider that some children find it more difficult to participate and express their opinions: "(...) I felt very comfortable because with my classmates and with the teacher we connected with the answers" (COI 6). "The (facilitator) is warm and welcoming and we were able to express our opinions and express ourselves freely." (COI 4) "When someone didn't want to talk or was afraid, the (facilitator's name) gave them the confidence, so they could talk quietly without being judged or anything." (COI 1) "Some people are very shy or don't know how to express themselves. We must help them and give them comfort and confidence" (COI 4).

It is worth emphasizing that the supportive role of the facilitator is crucial. According to the professional interviewed, this was achieved. She considers that the support to the children and adolescents in the development of the project was present. However, she realizes that the children and adolescents require support that goes beyond the project. She points out: "(...) children have their own needs and experiences, and suddenly it was more important for them to have more support in other aspects, as they have their priorities at the end (...) rather than in the research process (...)" (F2).

When analyzing this aspect, the researchers learned that it is crucial at the beginning of the project to have an environment of trust for children and adolescents and with facilitators who encourage this type of bonding. Therefore, time and previous work should be devoted to sensitizing the children and adolescents to their self-awareness and their role in the research.

Identification of workshop implementation milestones

At the time of gathering information on this implementation experience, it was possible to identify three milestones:

- 1. Build trust. Establish the necessary trust to approach sensitive issues or to point out critical opinions regarding teachers of children and adolescents and the functioning of their schools. This milestone is crucial because it marks the motivation of the children and adolescents for the following stages.
- 2. Progressive improvement of coexistence among children and adolescents in the project activities. This has been enhanced by working on respect as a value among them and with the facilitator.
- 3. Motivation with data collection in the context of the project. During year 2 of the project, the children and adolescents could choose different data collection strategies, which was very motivating for them. Regarding the workshop implementation adjustments and the transition between years 1 and 2, between the pandemic and remote work and openness and presence, a generic workshop was developed at the beginning of year 2.

The children and adolescents recognize that virtuality affects motivation, which they link to connection problems. For this reason, they emphasize that they would like the workshops to continue to remain face-to-face, arguing that contact encourages participation: "Some of those who were in the group selected were very committed at the beginning, but then at the end, they did not connect, did not answer messages, and that put the whole group off" (COI 2). (COI 2) "Sometimes the signal goes down and I can't connect much because it's hard for me to get in and learn. I prefer face-to-face meetings". (COI 5)

Effective techniques in implementation. In the approach to the contextual factors that contribute to school engagement, the support of peers and family is considered, particularly in the methodology implementation. This was something experienced by the children and adolescents, in the sense of evidencing in them the need to be listened to and that, when trusting spaces were generated, they opened to talk about their school and/or family world. So, the most effective technique was conversational, in which a space of trust and respect to share their stories was created before the work of building this trust.

The children valued the workshop as a space for learning, sharing, and making decisions among peers: "What I liked most was learning new things with the teacher, who is very nice. So, I had a lot of fun with them and with the other classmates" (COI 1). (COI 1) "I also really liked the workshop because we laughed and learned new things. And we

shared and decided things together about the interviews, to what we wanted to do in the research." (COI 2)

Activities between sessions. Sometimes, as part of the implementation of the project, there were activities that the children and adolescents had to carry out between sessions of the workshops.

The experience shows that a space of trust is offered to the children and adolescents, where their needs arise and activities are channeled according to them, and where there are instances of active listening to the constructions and meanings of their school experiences. This could be recognized as the initial steps in the participation scales of Shier (2001) and Lundy (2007), at least in the initial stage of the project. Subsequently, in the stage of data analysis and dissemination of results, higher levels of appropriation by the children and adolescents were observed, i.e., more participation and influence by them in the topics addressed.

The process in which the children and adolescents take ownership of the co-researchers' methodology

In a limited project experience, it is not possible to estimate a total appropriation of the coresearcher methodology by the children and adolescents. As previously mentioned, there is an intention by the researchers to incorporate the role of the children and adolescents as co-researchers; however, there are cultural conditions that make it difficult for the children and adolescents to appropriate the methodology. For example, although the facilitator is a young professional, the children identify her with the role of the teacher: "The best thing about the research was the teacher (facilitator), she is super nice, they supported everything and the games too because we were dying of laughter like now" (COI 5).

The traditional school structure that has prevailed has a strong influence on the willingness to be guided in the different activities, which hinders a rapid appropriation of the space and the action of co-researchers. It is not common for children to participate in their classes and be co-constructors of processes. The facilitator points out: "(...) it is difficult for them to take the initiative, to put forward ideas, to feel confident about their ideas and how to take ownership of the spaces (...)" (F1).

Role of children and adolescents in the co-research process

At the beginning of the implementation, the emphasis was on consultation - necessary in a school culture where children and adolescents are accustomed to guidelines on what to do - and then shifted to a collaborative emphasis, when children and adolescents have already understood what this space is all about and are building it up.

Regarding the shared responsibilities between adults and children in the co-researcher process, it is possible to mention that they are indeed shared. From the facilitator's perspective, she has been a mediator of the process rather than a decision-maker.

Regarding the emergence of the research question, it was not created by the children and adolescents since this initiative is part of a broader research project. In this sense, there was a global research question that was given at the beginning.

Children and adolescents were invited to participate in the courses at the levels established by the project in the participating schools; children and adolescents joined freely. A board of children and adolescent co-researchers was established, composed of participants from a previous project, who created videos and infographics to invite these new co-researchers to voluntarily participate in a research workshop (Figure 2).

The children and adolescents participated in the data collection, so in the first year of implementation, all children and adolescents were invited to apply for interviews. In this phase, the participation of children and adolescents in the decision-making process is visualized in two aspects: (1) they could voluntarily decide whether to participate as interviewers or not; and (2) if they decided to implement the interviews, they also chose whom to interview (families, peers, teachers).

In this context, some children highlight how challenging it was to interview class-mates, teachers, and families and to go out into the field: "I felt nervous because I decided to interview (...) but at the same time I was happy". (COI 5)



Figure 2. Examples of materials developed by children and adolescents during the project. Source: Materials created by children of the project's Advisory Council.

Some groups of researchers also decided to make use of computer technologies to collect information in the workshop sessions. For example, they brainstormed in response to the questions: "What is school commitment for you?" and "What do you think are the contextual factors related to school commitment?", an activity conducted through the MentiMeter platform (COI 1, 3 and 7).

Although the school engagement project involves pre-established parameters of topics, scope, time, and resources, which would restrict the full protagonism of the children, it is important to note that they have played a more active role in the phases of analysis and interpretation, including the dissemination of results. It was a learning experience for the researchers that the appropriation of the methodology by the children requires respecting their own time, considering a less active role in the first phases of the research.

The children and adolescents also participated in data analysis. Regarding the analysis, the facilitator showed them the quantitative and qualitative results, and they interpreted them in their own words and that material was transcribed literally (Saracostti & de Toro, 2023). They also made suggestions on how to strengthen school commitment and its contextual factors within their schools, consistent with the interest of participatory action research in facilitating participants to be agents of change in their schools.

Regarding the research reports, they did not elaborate formal reports, but their opinions and interpretations did become integrated.

Regarding the specific findings of the research and the analysis of the proposed categories, it can be seen that children and adolescents can demonstrate the dimensions of school commitment and the contextual factors that influence it, where it is considered that children and adolescents give an important role to their peer groups: "When I have problems I go to my closest friends, about more personal issues, but with some, with whom I have confidence" (COI Group 5). (COI Group 5) "A peer may know something I don't know or vice versa and we can help each other". (COI Group 6).

On the other hand, children and adolescents place a key value on the perceived support of their families in the learning process, "We have a lot of support from our families, but some have less" (COI Group 4). (COI Group 4) "For me, the support of my parents is more important than that of my classmates" (COI Group 1). Therefore, it is important to consider that parents and teachers can share the responsibility of teaching the students and develop a joint work to achieve educational objectives.

Finally, the perceptions about the teaching staff factor are divergent, i.e., "We have a lot of support from some teachers, but none from others" (COI Group 4) "...There are teachers who have no patience and explain only once and say they are not going to explain further" (COI Group 7).

Regarding the participation of children and adolescents in the dissemination, they participated in a dissemination workshop, designing different posters for the discussion of their experiences within the research process, either through manual or computerized work, as shown in Figure 3. Some children decided to exhibit these materials in their schools.

Definitively, the children and adolescents played the role of collaborators in the execution of the global research in which this methodology was inserted, highlighting a genuine space for active listening, where they expressed their points of view and were



Figure 3. Currently, some child co-researchers are working on materials to share the results (videos, infographics, drawings, etc.) and present them at a congress of child researchers at the university sponsoring this research.

taken into account (Shier, 2001), that is, they had the space and the opportunity to express their voice (Lundy, 2007). Perhaps more than the impact on the children themselves, the value of this exploratory experience was to demonstrate socially and scientifically in the Chilean context, that it is possible to insert the methodology of co-researcher children.

Final thoughts

This article seeks to contribute to research on childhood and adolescence. Firstly, the fact that it can contribute to intergenerational research between adult and child researchers would allow progress in the construction of more democratic knowledge, particularly on those aspects affecting children's lives and in consideration of their own interests. This would make it possible to move from research on childhood from an adult-centric perspective, which includes adults' view of them, to research children as people. Secondly, it is expected to be useful to all those practitioners (e.g., teachers and professionals in education, health, and social protection systems, among others) who, through participatory action research strategies, manage to promote social and, in this case, educational transformation in children and adolescents who are co-researchers.

To conclude this analysis and in view of the objective of this article, it is relevant to highlight some of the paradigms that focus on children and adolescents, who are increasingly positioned as protagonists of scientific research in the scientific community, given the benefits for society as a whole and for children and adolescents themselves.

From a cultural point of view, factors that operate as facilitators for the participation of children and adolescents as co-researchers, include recognition of them as subjects of rights. However, it is also possible to identify fields in which representations appear that operate as barriers for this child-youth leading role to be fully expressed. For example, in the research on school engagement and contextual factors developed in Chile, it was difficult for children and adolescents to appropriate the co-researcher's space. The school environment is characterized by vertical relationships between students and teachers, Children and adolescents get used to adults who indicate what to do and how to do it.

Another cultural aspect that has an important presence in the school context is the tendency to understand children and adolescents as a homogeneous human group (Brady & Graham, 2019). The challenge implies assuming a complex and situated understanding of children, a dynamic understanding of them.

Regarding the specific methodology of children and adolescents as co-researchers, the most important ideas are, in the first place, to build trust as a basic condition for working with them. This component is highlighted transversally in the literature and is also explicit in the experience of the school engagement project and contextual factors. Secondly, it highlights that the adults who accompany the research process must build respectful bonds to cultivate during the research process and ensure permanent care for the well-being and integrity of the children and adolescents. The literature highlights the need to have suitable adult personnel who understand the importance of the rights of children and adolescents. In the school engagement and contextual factors project, the link with the facilitator changed between year 1 and year 2, affecting the adhesion of the children and adolescents to the project and implying new strategies to re-engage with them, minimizing the methodological costs for the project.

It was interesting to observe the whole process to estimate the achievement of the results. However, this view provided multiple lights concerning the capacity of adaptation of the team and the children and adolescents between pandemic contexts and the context of return to face-to-face work, the relevance of the figure of the adults who directly

accompany the process and who are part of the research team, the importance of the stability in a time of the facilitator of the processes with the children and adolescents to ensure their quality and guarantee the validity of the methodological design, the contributions of the didactic material that the authors of the project had as work in progress, among other aspects.

Consistent with these points, it is essential to share the limitations and challenges that the implementation of this methodology had, with the objective of contributing to other researchers who plan to make use of these tools During this research, children initially found it difficult to participate effectively and actively. It was necessary to create conditions of comfort and trust to encourage openness to dialogue with the children; and arrange with schools the appropriate spaces for the development of activities.

A methodological success was the use of playful techniques, they were valued, although they recognize that virtuality affected motivation. That is why they emphasize that they would like the workshops to continue to be face-to-face, as was the case in the later phases. In this sense, the methodology highlights the importance of direct personal connections and daily face-to-face contact as necessary relational conditions.

On the other hand, the role of adult facilitators of the research process is key for coresearch, in this case the participation of young professional facilitators. Beyond age, active listening, and the ability to hold space have been the most valued skills of the facilitators, even more so if we consider that some children find it more difficult to participate and express their opinions.

As a research team, it has been necessary to adjust through continuous testing, especially in the techniques used, to ensure that these investigations do not perpetuate the power imbalance that exists between children as participants and adults as researchers.

The authors are looking for strategies to improve the implementation of this model of children as co-researchers. They have also managed to observe that the use of participatory methodologies with children constitutes in itself a path to promote social transformation with them, with a critical and respectful reading of their living conditions, development opportunities and social agency. These approaches also require careful work from an ethical point of view, and rigorous work from a methodological point of view. The result is that the authors have expanded the use of these methods in their academic and professional fields, generating awareness and new reflections on the subject, for example, the promotion of participatory research with children in the work of postgraduate students; training Chilean children as co-researchers, development of knowledge and reflection in different types of publications, term papers, articles and books; contributing to international collaborative work, leading editorial work in relevant scientific journals and generating specialized ethical protocols for research with children and good practice guidelines in the main Chilean universities.

Specifically, the approach to the school engagement project and contextual factors also revealed the need for the participating schools to understand, value and promote the participation of children and adolescents as co-researchers, based on the participation paradigms as subjects of rights and from the opportunity to generate learning in the experience of research. This requires a strong work of sensitization and training of the educational communities themselves.

It is hoped that, with this type of analysis, researchers focused on children will be motivated to develop designs that include children and adolescents as protagonists, which will undoubtedly enrich the generation of knowledge. Although there are increased research projects that work with children and adolescents, there are fewer that involve them as co-researchers in the project. The methodology systematization of the school engagement and contextual factors project in Chile reflects the need to innovate with designs, techniques, and strategies designed to be built with children, documenting and contributing these advances to the scientific community.

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