Action research and equity

effects in innovative school environments

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1 INTRODUCTION

This report presents the results of the project <u>Action Research and Equity:</u> <u>Effects in Innovative School Environments</u>[1], which aimed to identify evidence-based solutions for promoting equity in education, specifically in the field of human-centered design and similar action research approaches. The project addressed the following problem: do action research processes in innovative schools participating in the Schools2030 program result in greater equity in gender relations, interethnic relations, and relations between students with and without disabilities?

The Schools2030 program (*programa Escolas2030*, in Brazilian Portuguese) is a global action research program that seeks to create new parameters for learning assessment from the perspective of "holistic and transformative education", in order to achieve <u>Sustainable Development Goal 4</u>: ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Conceived to operate from 2020 to 2030, the program is now being implemented in Brazil, Afghanistan, India, Pakistan, Portugal, Kenya, Kyrgyzstan, Tajikistan, Tanzania, and Uganda, involving 1,000 organizations from all stages of basic education. In Brazil, the initiative strives to support 100 schools and other educational organizations, seen as "innovation laboratories."

Our activities investigating the effects of action research in these environments consisted of: a) a review of the literature on action research and equity; b) a survey carried out among educational organizations within the

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[1] The project was funded by Jacobs Foundation and supported by Aga Khan Foundation, under the executive responsibility of a research team comprising members from the Faculty of Education at the University of São Paulo (Feusp); and from Cieja Campo Limpo (Centro Integrado de Educação de Jovens e Adultos, or Integrated Center for Youth and Adult Education); Escola dos Sonhos; Antonio Coelho Ramalho Municipal School; Eeno Hiepole Municipal Baniwa School; Instituto Federal de Educação, Ciência e Tecnologia (Federal Institute of Education, Science, and Technology) of São Paulo, campus São Roque; and Universitat de Barcelona. Administrative management was carried out by Trilha – Research, Education, and Cultures.

Escolas2030 program[2], on the perceptions of educators and students regarding equity in gender relations, interethnic relations, and relations between students with and without disabilities; c) interviews with students, professionals, and family members in educational organizations acting as program hubs; d) participant observation in five of these organizations, conducted by professionals who simultaneously worked there and were part of the research team for this project; e) identification of in-service training initiatives held by the management bodies of those schools where participant observation was conducted.

The central purpose was to seek evidence regarding the relationship between action research and equity—building a basis to gauge the hypothesis that action research processes are associated with a change in the school environment in favor of greater equity in gender relations, interethnic relations, and relations between students with and without disabilities.

Even without systematically presenting evidence, other action research experiences related to educational equity report that students being subjected to particular inequalities have, despite that, achieved equivalent academic learning performance compared to others. However, holistic education also requires non-academic learning that makes equity effective in how people with different characteristics relate to each other. This project focused on these kinds of relationships.

From 1999 to 2000, seventeen school teachers and five consultants from two school boards in Ontario conducted an action research study based on the results of a provincial test (Wideman, 2002). They analyzed their schools' outcomes and identified areas for improvement. In their classrooms, they

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[2] These organizations were invited and became part of the Escolas2030 Collective for having accumulated significative experience in innovative practices that converged with the holistic, transformative education perspective, and were located in highly socially vulnerable regions.

explored action research questions and experimented with changing practices, which led to improved student learning.

Three studies presented at the University of Wisconsin—River Falls also exemplify equity-driven action research, particularly in developing tools to maximize academic learning for all students. The first, Highland's (2015) study in elementary education, redesigned math instruction through self-directed learning modules, offering lessons on demand. This approach resulted in learning gains ranging from 11% to 55% above previously achieved standards. Krugerud (2015), another math teacher, continued to teach in groups in a Montessori elementary classroom but provided significantly more options and additional case studies for students to solve collaboratively. She observed improvements in assessment scores and increased student motivation. By offering students more choices in their assignments, engagement levels rose significantly, and work completion rates also improved. A third elementary teacher, Miller (2015), used Socratic seminars to engage his students in the appreciation and analysis of art, gradually shifting the questioning process to them. This took place in a Montessori Middle School within a large urban school district in the Upper Midwest, serving a diverse student population. Students began to critically examine all elements of art and became more motivated to learn.

The same focus on equity in academic learning is reflected in four action research projects at an urban and diverse elementary school in Oregon (USA), as described by Sagor ans Williams (2017). The school community decided to operate as a professional learning community (PLC), and the projects, which varied in scope and process, enhanced the quality, quantity, and equitable distribution of high student engagement.

A similar community action research process began in 2010 at the National College of Ireland. Bleach (2017) describes it as an initiative aimed at addressing

the educational disparities among children and youth in Dublin. Through innovative programs targeting literacy and numeracy development, the project engaged over 4,000 participants annually—including students, parents, and professionals—yielding measurable skill improvements.

Notably, a book by Caro-Bruce et al. (2007) compiles studies from the Madison Metropolitan School District in the USA, detailing their action research program initiated in 1990. They are dedicated to improving academic outcomes for students from ethnic minority groups and low-income backgrounds. A teacher concerned that her English language students were struggling to comprehend her oral instructions sought to identify strategies for more effective communication. Through reviewing relevant literature, observing classroom interactions, and interviewing her students, she found that all learners could benefit from subtle adjustments to classroom practices. An at-risk African American boy faced significant challenges in integrating into the second-grade classroom community. His academic skills lagged far behind his peers, and he frequently exhibited frustration. In her study, the teacher intentionally focused on refining her responses to him and redesigned lessons to foster both his academic success and social acceptance among classmates.

Another study in the same book demonstrated that, in response to some African American students' preference for working in partnerships, the researcher formed math groups for what she referred to as "partner math". Frustrated with the outcomes she observed, she identified the root causes of the challenges and focused on addressing them. This compilation also features a teacher's study that required African American students to research the life, work, and influence of Malcolm X, develop an educational project that demonstrated their knowledge, and use their project to teach sixth-grade students. The initiative had a measurable impact: the number of students passing increased compared to previous semesters.

These examples reflect a body of research that mirrors diverse processes, emphasizing improvements in teacher training and changes in their practices. However, they largely overlook evidence of learning outcomes that demonstrate more equitable peer relationships or systemic shifts in classroom social dynamics. In contrast, the current project focuses on identifying how action research practices impact educational equity—defined as learning outcomes that materialize in the ways students interact and build relationships with one another.

The primary data were produced by the Research Team, which consisted of three researchers from the University of São Paulo, one from the University of Barcelona, and five researchers working as educators in basic schools.

In fact, the Research Team did not expect to find relevant impacts from action research on those aspects of educational equity in the organizations of the Escolas2030 Collective, for three main reasons. Firstly, because action research is a new practice in these organizations, requiring many measures and adjustments that could delay its effectiveness. Secondly, working conditions in those schools are usually very adverse, pressing for a greater focus on doing than on reflecting and investigating, which dampens the potential of this chosen path. Finally, the intrinsically slow nature of action research processes (which, in just two years, would necessarily still be incipient) makes it difficult for impacts to occur and be identifiable in this research's time frame.

However, we could detect signs that action research, considered as a part of the so-called "actions from outside the school," impacted on fostering predominantly egalitarian and integrative relationships. It is deemed a positive impact, although not necessarily more pronounced or more robust than the impact from the regular actions of educators or even those of students.

2 LITERATURE ON ACTION RESEARCH AND EQUITY

A systematic review of the literature on action research and equity was carried out, based on searches in six open-access databases: Scielo, Springer Link, Directory of Open Access Journals (DOAJ), Web of Science, Scopus, and JSTOR, using the keywords "education and equity" in three languages: Portuguese, Spanish, and English. No restriction was put on the publication period, and the general criteria applied for selecting the works were: scientific articles in the educational area, with "education" and "equity" in the title.

In this first stage, 737 articles that met the general criteria were identified. Next, the studies had to meet specific selection criteria: deal with basic education and adopt participatory methodologies. In a second screening, 38 articles were thus identified, of which only 3 dealt specifically with action research, and 8 employed some species of participatory methodology. Following reading and debate within the Research Team, it was decided to discard the theoretical articles, since the review goal was to map quantitative and qualitative evidence.

Applying these previously established filters reduced the number of selected articles to 11. Next, a thorough examination of these works began. This more detailed analysis covered characteristics such as the identification of the authors and year of publication, the article title, the objectives proposed, the research methods used, and, in particular, the concept of equity addressed in each investigation.

Initially, the keyword "school" had been used to search the databases. However, the results were insignificant. Replacing the term "school" with the term "education" generated a more relevant number of records.

The 11 selected works were published between 2018 and 2022—meaning that before this period, no articles were found addressing the theme of equity in its interface with participatory methodologies. The peak of production was in 2019, totaling 4 articles. During this period, few works address the themes of

equity and the use of action research in schools: one article in 2018 and two in 2019, showing that this is a little explored debate in the area of basic education.

Although this review included six databases with a large volume of indexed journals, and many articles met the general criteria, the second screening found few works and an even smaller number of those that met the established criteria.

The countries with the largest number of investigations in their territories were: the United States (four publications), Costa Rica (two), and Mexico (two). The three other studies were multinational and based on partnerships: one was carried out in collaboration among Cyprus, England, Greece, and Ireland; another resulted from an initiative between Israel and England; and the third was held between Spain and Mexico. Therefore, the largest volume of the research is concentrated in the Americas and mostly does not involve partnerships or international collaboration.

Among the 11 selected titles, equity is seen from three main perspectives: five articles understand it as the equality of conditions in the field of learning and teaching; two articles interpret it as a way of reducing social inequalities; and four of them construe it as a means of balancing existing tensions among different groups.

Regarding quantitative and qualitative evidence on equity, Furman and Traugh (2022) have not produced any evidence, as their work was still in progress. Two other studies (Kyriakides et al., 2019; Jungck; Manon, 2018) make it clear that their results are not conclusive, as they require, among other things, more in-depth research for confirmation.

A third set of articles (Miranda-Calderón; Rosalba-Vitoria, 2018; Echevarría-Grajales et al., 2021; Kang; González-Howard, 2022) presents results that could have an incidence on equity, but their conclusions are not supported

by data, or the evidence produced is insufficient, as it has not been validated. In short, there is no proof of effectiveness in terms of equity.

Miranda-Calderón and Rosabal-Vitoria (2018), for example, do provide recommendations for enhancing the pedagogical and administrative practices of rural schools; however, these guidelines are not grounded in the outcomes observed from the training workshops conducted for teachers. Consequently, it cannot be concluded that valid evidence has been produced.

Something similar occurs regarding action research practices, as Carro-Olvera et al. (2018) and Rueda (2019) also do not present validated evidence that affects equity.

Two studies presented results on students' motivation for learning. According to Barberousse-Alfonso et al. (2018), the Costa Rican program Community Teachers promoted greater student motivation and improved children's willingness to learn by providing an environment where children's expressions, knowledge, and dreams are recognized. This program places children at the center of pedagogical practices, promoting activities such as music, art, movement, and recreation to create meaningful learning experiences. The emotional bond between educators and children was also highlighted as a key factor in fostering students' enthusiasm and positive attitudes toward learning, although it remains unclear whether this indicator has impacted school equity.

One challenge faced by the systematic literature review was the limited availability of specific information in some of the selected articles. The studies often presented ill-defined methodological designs and inconclusive results due to insufficient or poorly measured evidence, including participants' perceptions of student motivation and families' sentiments toward education.

It is also noteworthy that only two studies used mixed methods-quantitative and qualitative. Most used only qualitative methods,

"aimed at an in-depth understanding of educational and social phenomena and at transforming socio-educational practices and scenarios" (Esteban, 2010, p. 127).

Another challenge was identifying precise indicators of what works or not in terms of equity. Although some studies claim to detect improvements in certain indicators, these claims are not supported by data; there is little or no information on how the research material is tested or interpreted. The texts rarely provide information on the context before and after the intervention, which would support the interpretations. Finally, most studies do not demonstrate the effects of their results on educational equity.

As Toledo and Jacobi (2013, p. 169) understand, action research is understood here as highly appropriate in the area of education because it stimulates "the autonomy of subjects through the dialogical construction of knowledge, the development of citizenship practices, and the participatory search for solutions to problems." However, the educational literature is sparse regarding evidence of the impact of action research on equity, as the methodological designs adopted did not intend to verify this impact.

Only two studies offer consistent evidence on the relationship between action research and educational equity. One of these is by Arar and Taysum (2019), addressing the use of action research in the implementation of distributed leadership (which consists of developing participatory processes, decisions, and practices), and sharing a focus on improving school effectiveness and student outcomes. The researchers showed that the experience developed intercultural awareness in diverse communities, resulting in greater equity in school communities, as it increased student achievement and performance by 17% to 27% in both language and mathematics exams.

Through the action research process, distributed leadership facilitated knowledge exchange, stakeholder mobilization, and dissemination activities that

empowered faculty and youth to become social innovators for equity, which improved student exam performance.

In turn, Gaias et al. (2020) addressed equity promotion in its interface with participatory methodologies. Teacher training was provided on "implicit biases," also aiming at building collaborative processes and promoting positive relationships with students. After assessing the teachers' relationship to each student and developing an action plan, applied over 10 days, the teaching practice incorporated a greater focus on race/ethnicity, culture, and prejudice. By learning about their students' cultural backgrounds (e.g., native language or racialized experiences), teachers were better equipped to meet students' academic needs. As a result: 1) students' motivation to learn improved; 2) their sense of belonging to the school was strengthened; 3) educational disparities for Black students were reduced.

3 PARTICIPANT OBSERVATION

Throughout 2023, members of the Research Team, who are educators from five schools in different locations in Brazil, devoted themselves to participant observation of the daily routine of their work environments, paying attention to routine events and interpersonal relationships of students and other actors. Their objective was to identify how action research in each of these institutions participating in the Escolas2030 program was producing effects on educational equity between people of different races/ethnicities; between people with and without disabilities; between males and females; and among people of various sexual orientations.

Participant observation is generally aimed at gaining familiarity with a specific group of individuals (e.g., religious, occupational, cultural subgroups, or a particular community) and their practices through intensive engagement with people in their cultural environment, typically over a defined period. In this study, participant observation was conducted by research team members who are teachers or administrators at the schools where the observation took place. These individuals already has prior, sustained, and in-deph engagement with the observed setting, as they regularly interact with colleagues and students in their daily roles. Under these conditions, they were able to produce firsthand accounts and, during the research process, began to systematically direct their observations and document them in writing. This involved directly observing lived realities in a non-randomized manner over an approximate period from May to August 2023. This extended timeframe was necessary to identify discrepancies between what people say, what they believe should happen, and what actually occurs. The research followed the four stages outlined by Howell (1972) for most participant observation studies: establishing relationships and becoming familiar within the community; immersing personally in the field of study; gathering data while minimizing bias and preconceptions; synthesizing the

collected information into coherent themes. Observers were instructed to document scenes that illustrated one of the three types of relationships central to this study—whether by reflecting forms of inequity or demonstrating efforts to counteract it. Their written records detailed the observed dynamics.

In each of these schools, an action research project was underway in order to "improve learning solutions," as the program proposes, in addition to "using existing and/or to-be-built tools to evaluate the implementation of these solutions and the dissemination of knowledge."

This group of schools covers different levels of education. Antonio Coelho Ramalho Municipal School, located in Ibiúna (São Paulo), offers early childhood and elementary education. Eeno Hiepole Indigenous Municipal School is situated in Baniwa Indigenous territory within São Gabriel da Cachoeira (Amazonas) and serves all local children and youth. Nossa Senhora do Carmo School, in the rural area of Bananeiras (Paraíba), is a community school that offers early childhood and elementary education. The Campo Limpo Integrated Center for Youth and Adult Education, on the outskirts of the capital city of São Paulo, is a municipal institution focusing on youth and adult elementary education. The Federal Institute of Education, Science, and Technology of São Paulo, on the campus of São Roque (São Paulo state), provides vocational high school education.[3]

3.1 Displaying conflicts: vocational high school in urban area, SP

At the São Roque campus of Instituto Federal de Educação, Ciência e Tecnologia de São Paulo (IFSP, the Federal Institute of Education, Science, and Technology of São Paulo), participant observation focused on students and other agents involved with first-year classes of vocational courses integrated to high

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[3] For more information check the Escolas2030 website: https://escolas2030.org.br/o-programa/.

school, who were directly enrolled in action research processes within the Escolas2030 program. Their action research consisted of experimentation with the Cooperative and Solidary Learning methodology, proposed by another participant of the Escolas2030 Collective: the Alan Pinho Tabosa State School, in Pentecoste (Ceará). The IFSP study investigated the contribution of this method to learning self-knowledge, creativity, collaboration, empathy, and agency.

Participant observation did not indicate greater equity in gender, sexual orientation, or interethnic relations. It revealed that action research brought greater attention to conflicts among adolescents, including cases of racial discrimination. To form cooperative cells, the team responsible for action research initially grouped students with complementary skills, but they preferred to group themselves based on existing affinities. They had anxiety and depression crises due to their lack of desire to interact in groups and complained of being tired when working for an extended time with the same group.

People with disabilities participate in the same activities and classes as their peers; however, content, materials, and exams are adapted as needed to accommodate specific conditions and requirements through individualized study plans. Among the 119 students involved in action research, 12 identified as having a disability. Of the 13 teachers, only one reported having low hearing or being deaf. Significant friction and disagreement were observed in the interactions between individuals with and without disabilities. Those with disabilities often faced challenges in being welcomed and engaging with others, prompting a decision to change the composition of some cooperative cells.

People with visible disabilities in their bodies or appearance, such as blindness or physical disabilities, enjoy greater understanding, respect, and empathy from students than those with invisible disabilities such as autism or ADHD (Attention Deficit Hyperactivity Disorder). In addition, some students

found it easier to deal with disabilities among their peers than among their teachers.

During the action research, as the students continued to work in the same cooperative cells, they evolved in self-knowledge, mutual collaboration, empathy, creativity, and agency. Relationships between people with and without disabilities improved, for example, in the way a class began to understand, welcome, and help an autistic student. Although the influence on equity in other types of relationships did not appear, it was noted that the action research process shed more light on situations and occurrences on campus related to the dimensions of educational equity focused on in this research. In the other relationships observed, no indicators analogous to the positive impact of action research on equitable dynamics between individuals with and without disabilities were identified.

3.2 Interrogating practices that generate equity: school for young people and adults in urban area, SP

At CIEJA Campo Limpo (Centro Integrado de Educação de Jovens e Adultos, the Integrated Center for Youth and Adult Education in the Campo Limpo region), participant observation focused on the students' routine in youth and adult literacy classes. Investigating the learning of empathy and collaboration, the action research focused on certain practices of that school which is generally characterized by a strong community identity, solid bonds, and solidarity among students, strengthened by poetry reading sessions, assemblies, community snack meetings, seminars, outings, parties, etc. The central research question was as follows: *how does hospitality, as one of the main values that underpin the work at CIEJA Campo Limpo, contribute to learning empathy and collaboration?*

The majority of students are women who self-identify as Black or as "Pardas" [which is the Brazilian Census term for individuals of mixed Black and White descent]. They very persistently use euphemisms to refer to their skin color. When asked about racism, they tend to tell stories they have seen on television, or about famous people. They generally understand racism only as explicit acts of insults and aggression. The most common form of prejudice, however, lies in the condition of illiteracy and the resulting humiliation.

At CIEJA Campo Limpo, one of the greatest sources of learning is the life stories students tell their peers in class. The mastering of empathy—a primary focus of their action research—permeates this ongoing sharing. Most of the stories are from women who, in their youth, were discouraged or prohibited from attending school due to parental coercion, early marriage and motherhood, abusive relationships, repression, and violence to submit them to the domestic role of caregivers for their children, husbands, and grandchildren.

During the introductory phase of the action research among the student group, one student shared on the microphone her experiences regarding the limitations she faced during the time she identified as illiterate. She stated, "I could only stay at home all day with my belly against the sink or the washing machine, tied to the house and the marriage," since she could not "read the signs on the buses and the subway," which often let to her feeling "humiliated in the street." According to this student, participation in the CIEJA Campo Limpo enabled her to leave her home, secure employment, and learn not to let "anyone humiliate her anymore," helping her to recognize her "dignity as a woman who is Black and *Nordestina*."

However, it is common to hear students say that only women should clean the school grounds, or request that the school bathrooms be separated by gender, claiming that men make much more mess. They also make homophobic jokes.

Discomfort and misunderstandings of homophobic origin were also identified occasionally among students. However, the attitude of men, women, and people who identify with other genders is generally peaceful and collaborative, and sexual orientation is not a relevant issue in the groups observed.

Coexistence between individuals with and without disabilities is evident in an inclusive and welcoming environment. The two groups accompanied during the participant observation each consist of 22 students, half of whom have documented disabilities. Additionally, there are students with severe learning difficulties who do not have documented disabilities.

Elderly people, adults, teenagers, and people with disabilities sit at the same table in the classroom, doing practically the same tasks. The line between the capabilities of individuals without and with disabilities can be blurred. People with disabilities may be more adept and agile when it comes to using computers, and they excel in helping colleagues who have difficulty using simple commands such as moving the cursor around the screen or opening and closing programs. Students with disabilities are also shown to be uninhibited and spontaneous when it comes to artistic expressions such as singing, dancing, giving speeches, and other forms of expression, highlighted in the many opportunities for presentations throughout the school year. On these occasions, students with disabilities occupy a very prominent place.

In this intense interaction between people with and without disabilities, a transformation was noticed towards greater empathy and understanding of people with disabilities. The initial suspicion, impatience, and prejudice became compassionate affection, willingness to help with activities, respect, appreciation, and acceptance of the peculiarities of people with disabilities.

The CIEJA Campo Limpo action research hypothesized that some practices that encourage listening and discursive and artistic expression among students

contribute to learning empathy. In addition, they promote real rapprochement among students through various initiatives of public debate and community sharing (assemblies, community snacks, election of generating themes).

Students, teachers, and managers recognize CIEJA Campo Limpo as an exemplary environment for experiences with equity. It is not clear whether action research has contributed to greater equity in this environment; however, it has mobilized a group of agents interested in investigating the effects of the institution's consolidated practices in building such an environment.

3.3 Strengthening consolidated practices: elementary school in rural area, PB

At the community-based Nossa Senhora do Carmo School, action research also addresses the relevance of consolidated practices in the school's work focused on learning collaboration, empathy, creativity, leadership, and self-knowledge. Because of this interest, the educators see the approach as contributing to strengthening these learning experiences. The school stands out for its drive to transform and reject conventional schooling formats. It abolished grades; encouraged children of different ages to work together through project-based pedagogy; changed the role of the teacher to become a tutor or mediator of projects; and allowed the children to manage the school's daily routine through mechanisms such as the Student Board and thematic committees created by the children themselves. The action research aimed to seek evidence of these five learning experiences in practices such as encouraging the sharing of knowledge in a tutoring scheme led by the children: "Those who already know teach those who need help."

A student had been feeling uncomfortable due to the way his classmates were treating him. His absence from school for several days led to a meeting of

the Student Council, a body of students dedicated to their concerns, the democratic management of the school's daily routine, and conflict resolution. In the action research process, the Council created an Equity Committee to deal with problem situations perceived and experienced by students.

The absent student had been clinically diagnosed with autism and, after experiencing bullying, stopped attending school. When some classmates found out, they brought the issue to the Student Council. It identified the individuals responsible for the bullying and, in their presence of that of their parents, required them to apologize to the student and his mother, alongside a formal commitment to cease all bullying behavior. The Council then established the Student Equity Committee to address this issua and other forms of prejudice related to students with disabilities, racism, gender, and religious intolerance. The Committee's firs action was to identify students in need of support, pairing peers to approach them.

In 2023, following the Committee's interventions, two students who struggled with social interaction due to shyness began engaging with peers. A student with autism and another with Down syndrome were included in play activities, demonstrating acceptance though their participation, while individuals who previously refused to return greetings or hug a peer with Down syndrome started doing so. A student with physical disability was integrated into soccer games, and a new student from a rural background - who had faced racial prejudice at the previous school - gradually built friendships, played with others, and shared meals with classmates. By 2024, among students requiring support, two reported no longer experiencing or engaging in bullying during one-on-one conversations; of 11 students involved in racist or religiously intolerant bullying, 7 underwent mediation, with only 2 re-engaging in conflicts; the others ceased their harmful behavior. One former perpetrator joined the Equity Committee,

while another delivered a presentation to peers reflecting on the harm of derogatory nicknames.

The issue of gender inequality was considered in the Committee's agenda, highlighting the right to "menstrual dignity" based on an incident involving a blood-stained wall in the girls' bathroom. A group of girls gathered to learn and publicize that their school provides menstrual hygiene products. They dared to overcome the embarrassment and shame that many feel about their menstrual cycles to open a debate about this possible factor of inequality between men and women. The agenda culminated in a discussion with a young activist from the "Free to Menstruate" movement, which combats "menstrual poverty" and has been working to draft laws related to the issue.

A 10-year-old student was observed participating in the soccer classes and was the only girl playing. She proved skilled at soccer, which led to her being treated "equally." Also, only one girl was present among the 21 boys who made up the school's Sports Committee. The committees design collective actions that favor interaction and bonding among students. They develop an action plan for each learning path, and students actively participate by proposing activities and solutions to problems.

The Equity Committe was established as part of the action research process, which in 2023 focused on assessing five learning outcomes by analyzing daily appreciation circles, the Student Council, the daily schedule, and relaxation sessions. It shough to address relationships that hindered the school's progress toward quality and equity, with most common challenges involving students with disabilities, racial diversity, and religious intolerance.

Students can choose the committees they participate in, and this autonomy—combined with critical reflection from the action research process—promotes equitable relationships. The Equity Committee developed an action plan with thirteen members (seven of whom are girls), which included

initiatives to discuss students' understanding of equity, conduct readings on the topic, observe equity dynamics within the school, identify individuals needing support, and provide targeted assistance. The reflective practices embedded in the action research process empower students to take responsibility and make decisions in shaping school life, guiding them toward systemic equity improvements.

3.4 A proposal for the school as a whole: indigenous elementary school in the rainforest, AM

The Baniwa Eeno Hiepole School is an Indigenous school located in the Amazon rainforest, in the Alto Rio Negro Indigenous Land. At this school, action research focuses on collaboration among students to acquire and master oral and written language. The project's guiding question is: *how can oral and written language be mastered through collaborative learning?* During participant observation, no markers were recorded that denote friction in interethnic relations, in relations between people with and without disabilities, or in interactions among people of different sexual orientations. One of the characteristics of this educational reality is that it takes place in various spaces in the village, such as community centers, churches, research centers, trails, food gardens, and fields. The main motto of the school's pedagogical approach is *learning by doing and doing by learning*. Action research was adopted as a structural methodology of the whole school, emphasizing interdisciplinarity. Students use research scripts and carry them out in the village, including choosing a problem and developing a conceptual map, work plan, goals, and results or products. The school's entry into the Escolas2030 Collective was simultaneous with its learning methodology reorientation and the beginning of action research. However, no evidence was found that this generated equity effects, nor were there any cases of discrimination or inequalities.

Participant observation focused on everyday moments of collective meals, inter-community events, collective educational activities, sports practices, and games in open spaces—since the entire village is conceived as a school and knowledge is understood to be present not only in the classrooms. In most collective activities, there is no gender distinction. Boys and girls carry out the tasks of distributing food during community meals and participate equally in games in open spaces and sports moments. The only time when there is separation is during soccer competitions.

In this school, the "generation" marker is more evident, since some activities are organized in order to separate children and young people into groups, although other people from the village who are not necessarily students at the school also participate in many activities.

3.5 Reflection and change of approach with students: primary school in urban area, SP

At the Antonio Coelho Ramalho Municipal School, action research focused on learning agency and collaboration. The children are not divided into grades, but into learning groups, that bring together different age profiles and focus on study plans chosen by them, based on their curiosities about local needs, in assemblies bringing together children and educators. The action research project deals with the specificity of the school's proposal: *do group work and study plans favor collaboration and agency among students?* Participant observation was conducted in 2023 and highlighted two situations that took place in school activities and dealt with misunderstandings and achievements led by the children themselves, especially focused on the issue of gender.

Action research provided moments of reflection on these aspects related to equity, the search for knowledge about it, and the change in the ways of approaching these aspects with students.

A group of students learned that a female teacher couple had adopted a child. There was questioning, discussion, silencing, joking, laughter, and reprimands from colleagues. On the other hand, some children also alluded to the teachers' marriage as "normal" or "admirable."

The observation also registered an interest in the soccer study group, which was initially made up of only boys, but then received two girls. Only one of them played soccer, and the other reported being interested in learning about the sport. There was no discrimination against female participation in the group.

3.6 What direct observation cases suggest

The five schools where participant observation was conducted have student bodies ranging from approximately two hundred to three hundred and fifty students. Four institutions serve elementary education, one serves high school, and one serves only adults. Three are located in urban areas of São Paulo (SP), one in a rural area of Paraíba (PB), and one in a tropical forest in the region of Amazonas (AM). The ethnic composition of students also varies: in two São Paulo schools, Afro-Brazilian students constitute at least half of the population, while they are a minority in the third; in the Amazonas school, all students are Indigenous; in the Paraíba school, Afro-Brazilian students are a minority. Across all five schools, gender distribution is balanced, with roughly half male and half female students.

Although it is not possible to identify commonalities across all school contexts observed, the following statements can be drawn from findings in the distinct cases:

Action research heightened attention to conflicts among student

Action research facilitates addressing unequal relationships, but not all types of inequalities uniformly. It may more effectively improve dynamics between individuals with and without disabilities, while showing limited impact on gender or interethnic relations.

Action research can also involve activities that provoke student resistance, such as interacting in groups or collaborating with peers with whom they lack affinity.

In environments where empathy and non-discrimination already predominate, action research did not significantly enhance equity. However, it engaged teachers interested in investigating the effects of established educational practices presumed to be positive.By integrating reflection and knowledge-seeking, action research fosters greater equity by supporting student participation in shaping school life.

4 TEACHER TRAINING INITIATIVES

It is common for government agencies that manage school networks to promote various in-service teacher training activities. Some of these may cover educational equity issues. Our project inspected in-service training initiatives to determine the importance of the action research approach in this field of professional development, seeking to identify those aimed at addressing educational inequalities. Then, we conducted interviews with managers of government agencies in Paraíba, as well as searches on the websites of the Federal Institute of Education, Science, and Technology of São Paulo (IFSP) and the database of the Municipal Department of Education of São Paulo. These agencies are the respective superior organs to three of the five schools where we conducted participant observation. In the other two schools, located in Ibiúna (São Paulo) and São Gabriel da Cachoeira (Amazonas), there are no records of such actions addressing inequalities.

The two interviews with technical staff in the state of Paraíba took place in May and September 2023. The first was with the municipal pedagogical coordinator of education in Bananeiras and the second was with the coordinator of the Executive Management of Diversity and Inclusion (Gerência Executiva de Diversidade e Inclusão, GEDI) at the Paraíba State Department of Education.

4.1 Municipal Department of Education of Bananeiras (Paraíba)

Bananeiras has approximately 23,000 inhabitants and 31 municipal educational units (4 daycare centers and 27 elementary schools). According to the pedagogical coordinator of the Department of Education, the training of teachers in the municipal schools of Bananeiras takes place at the beginning of the year, with lectures by specialists from universities; during the school year,

every two weeks, at collective pedagogical work hours; and once every two months, in meetings with the technical supervisors of the school network.

One of the topics addressed at the beginning of 2023 was equity. The interviewed coordinator could not provide further details or show the training material. She recalled a training meeting of technical staff where some aspects related to equity were addressed. In her opinion, although equity is a new theme, many colleagues already work on the topic—and report difficulties in dealing with gender issues, for example, as those may involve cultural and familial factors, bullying, and prejudice.

The coordinator said she verbally encourages teachers to also seek training in subjects in which they feel unprepared, such as gender relations.

She pointed out that there was no specific training on interethnic relations; however, managers advise faculty to observe daily school life, to verify whether there are children suffering some type of exclusion or prejudice.

The coordinator emphasized that the Municipal Department of Education focuses more on the inclusion of children with disabilities, which has a specific department with a psycho-pedagogue that helps refer these children. Despite this, students for whom a medical report has been issued and who are entitled to additional caregivers are not assisted by professionals with higher education, since those monitors can be hired with just a high school degree.

In 2022, the training courses were destined for caregivers, regular classroom teachers, technical managers, and supervisors. They addressed communication, individualized teaching plans, and topics such as "Basic Concepts about Autism and Behavior Analysis," "Management of Inappropriate Behavior," "Planning Individualized Workshop," and "Activity Adaptations for Early Elementary School Teachers."

In 2023, the training actions covered "Development of an Individualized Teaching Plan" (PEI, Plano de Ensino Individualizado), "Childhood Apraxia of

Speech," "Specialized Educational Assistance Plan" (AEE, Assistência Educacional Especializada), and training for school caregivers.

From what was thus possible to ascertain, the in-service training activities promoted by the Municipal Department are virtually restricted to the so-called "inclusion," understood as that of people with disabilities. No information was available on the number of professionals reached by these activities.

4.2 Paraíba State Department of Education

The Executive Management of Diversity and Inclusion (GEDI, Gerência Executiva de Diversidade e Inclusão) of the Paraíba State Department of Education is divided into several pedagogical centers. The body does not have resources of its own, being funded by the federal government. Although there is an initial planning and common calendar, it is not always implemented due to changes within the Department or in government.

According to its coordinator, the training actions planned by GEDI are sent to the Ministry of Education for approval, bidding, and engagement of the companies that will carry them out. There are also training courses planned and carried out by the body itself, with discussion groups and other activities for teachers, students, and technical managers.

In-service training activities focus mainly on teachers and caregivers who are responsible for working directly with students with disabilities. Another important activity addresses ethnic-racial relations through courses in different formats, serving teachers from 20 schools per year, out of a total of 600 throughout the state.

The special education center is responsible for a training course that takes place two to three times a year for teachers in Specialized Educational Assistance (AEE, Assistência Educacional Especializada) and school caregivers, in partnership

with the Integrated Support Center Foundation for People with Disabilities (Fundação Centro Integrado de Apoio à Pessoa com Deficiência). The body also offers training to municipal governments that request it. Over the last five years, it has included themes such as theory and practice in AEE, Libras (Brazilian Sign Language), and monitoring of teachers in AEE classrooms.

Among the training activities offered by the center for ethnic-racial relations are the anti-racist education seminar and the "Africa for All of Us" project, which annually organizes virtual classes with non-mandatory participation. This project involves work with music, dance, and conversations, taking place in 20 schools each year.

The theme for 2018 was the critical study of the Brazilian law abolishing slavery, with a focus on decentralizing school ethnic-racial awareness work. In 2019, the themes were "Prevention and intervention in bullying," "Youth agency in gender equity," "1st Seminar for the Implementation of Racial Equality Policies," and "Dialogue circles on the application of Law No. 10.639/2003." In 2020, the "Youth in Network" Forum (Fórum Juventude em Rede) took place, discussing holistic development, quality of life, and human rights.

In 2021, the "Africa for All of Us" project carried on, still focusing on critically understanding the law that abolished slavery. In 2022, the same project addressed anti-racism awareness and held the 1st Anti-Racist Education Seminar. The next year, 2023, the theme was: "In the anti-racist struggle, each person has their role." There was also a workshop on strengthening identity and empowerment, fostering appreciation for Black men's and women's hair.

Training was provided to support the political-pedagogical projects of Quilombola schools[4], with community participation, on the themes of

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[4] Schools located in *quilombos*, autonomous communities once created by black populations as a way of socio-cultural resistance. Originally, the term referred to enslaved Africans and people of African descent who escaped to form clandestine villages (*quilombos*). Currently, it commonly designates the historical descendants of these groups, living in rural, suburban, and urban areas.

ethnomathematics and African languages and heritage in Brazil. GEDI professionals usually visit Quilombola schools, Indigenous schools, and schools that receive Traveler children (*ciganas*), mapping issues, and transforming the knowledge from the visits into pedagogical training. In 2022, there was a seminar on "Traveler Peoples in the School Space," aimed at combating racism and prejudice against these groups. An edition of the "Youth Network" Forum on ethnic diversity was also organized.

The human rights education center offers training based on particular cases of human rights violations. The organization plans and carries out activities with teachers, technical administrators, and family members. It works in partnership with municipal and private schools as needed. The center also promotes annual interventions with the military police's Drug and Violence Resistance Education Program.

4.3 Federal Institute of Education, Science and Technology of São Paulo

The planning of in-service teacher training courses at IFSP as a whole is the responsibility of the institute's Pro-Rectory of Education, through its Pedagogical Articulation Directorate (DAPE, Diretoria de Articulação Pedagógica), which guides and interacts with each campus' Socio-Pedagogical Coordination and local committees for in-service training.

The role of DAPE is to coordinate, discuss, and contribute to pedagogical actions, as well as identify and develop projects focused on in-service teacher training in partnership with other Departments and Directorates of the Pro-Rectory of Education, to achieve the goals established in the IFSP Institutional Development Plan. Concerning Inclusive Actions, it seeks to promote initiatives aimed at the retention and success of students in Special Education, by fostering a culture of coexistence, respect for diversity, and removal of

educational and attitudinal barriers to social and educational inclusion of students. The In-Service Teacher Training Team of the São Roque Campus holds monthly meetings with trainers, meeting community demands in the choice of topics.

In 2021, the themes were "How to develop the theme of Indigenous peoples in the classroom" and "Affection and acceptance in remote teaching." In 2022, the themes were: "Inclusive education for deaf and low-hearing people;" "Inclusive education for people with blindness and low vision;" "Schools2030 Program, learning from those who innovate;" and "Gender and use of social name."

Throughout 2023, the school's action research team carried out training within the Cooperative and Solidarity Learning methodology, reaching approximately 30 employees including teachers and technical-administrative staff. It also addressed "Curriculum Accessibility," "Harassment in the Workplace," "Emotional Health Post-Pandemic," and "Education, Power, and Decoloniality."

As institutional measures, in-service teacher training meetings were held covering equity issues, especially ethnic-racial relations or issues related to the target audience of special education. These actions were considered comprehensive, relevant, and sufficient, but there were few initiatives addressing gender relations and those among people with different sexual orientations.

4.4 São Paulo Municipal Department of Education

São Paulo is home to around 12 million inhabitants. It has 4,125 municipal educational units, including early childhood education, elementary school, high school, youth and adult education centers, Indigenous education and culture centers, and bilingual schools for the deaf. There are around 1,290,870 students

and 52,723 educators, including teachers, assistants, supervisors, coordinators, directors, assistants, etc.

The Municipal Department of Education also promotes teacher-training proposals related to educational equity. The topics addressed between 2021 and 2023 were: anti-racist education, pedagogical guidelines for working with migrant students, accessible and inclusive pedagogical practices, specialized educational services, human rights education, bilingual curriculum, and Black literature, among others.

In 2021, there were 28 distance-learning training activities, reaching 4,553 people. Of this total, 11 activities covered topics related to ethnic-racial education, 13 to the education of people with disabilities, and 4 initiatives dealt with interdisciplinary themes such as human rights and prevention of violence against babies, children, and adolescents, for example.

In 2022, only 4 courses were offered, in addition to 2 events on accessible pedagogical practices and human rights. The number of vacancies decreased, totaling 1,580 people reached. Three of these actions dealt with topics of ethnic-racial education, while one dealt with specialized educational services.

In 2023, a total of 17 training actions were offered, including remote, in-person, and hybrid initiatives, in addition to 2 specific events. The number of slots available to participate in those teacher training actions increased to 3,500. Among those actions, 11 covered ethnic-racial education themes, 2 addressed gender themes, and 4 dealt with interdisciplinary themes such as differences, identity, and democracy.

Between 2021 and 2023, the Municipal Department of Education promoted 25 training actions on ethnic-racial relations, 14 on the inclusion of people with disabilities, and only 2 on gender issues. In 2021, some training on equity-related issues was offered to 8.6% of all educators. In 2022, with the decrease in the offer, only 3% of educators were reached, and in 2023,

approximately 6.6% of educators received training. Over these years, approximately 9,600 educators participated (18% of the total). Regardless of the content and formats of this offer, its reach is very limited compared to the global number of professionals working in these schools.

4.5 Discontinuity and limited scope

In the investigated context, which involves the municipal, state, and federal spheres of schooling, the training actions were aimed at professionals in different roles: teachers, pedagogical coordinators, principals, and school supervisors. Among the themes of equity, predominant topics are ethnic-racial relations and the inclusion of people with disabilities. Topics involving gender relations appear in substantially fewer numbers.

Moriconi et al. (2017) examined empirical studies on the effectiveness of in-service teacher training in several countries, revealing five common effective characteristics: 1) focus on pedagogical knowledge of subjects; 2) use of active learning methods; 3) collective participation; 4) prolonged, intensive, and continuous duration; 5) coherence with educational policies, curriculum, objectives, and priorities of schools.

The data collected on the training activities offered in the schools networks investigated here do not examine all of these effectiveness factors. However, the actions clearly deviate from the fourth factor, since most of them are one-off events with little continuity. By this criterion, such initiatives would tend to have a limited impact on school practices. Another related aspect is the limited reach of the actions, only covering a small segment of professionals in each school network.

Although in-service training for teachers through administrative bodies of public school systems is recurrent, such initiatives remain fragile or non-existent

in smaller or remote municipalities, coupled with discontinuities stemming from political constraints imposed by authorities. Regarding content, training programs do address educational inequalities, but equity is frequently treated as a "new topic", only tentatively covering issues like bullying and prejudicial behaviors. It is more common for training to focus on "including children with disabilities", followed by anti-racist education, though specific training on interethnic relations is sometimes absent.

As observed, only the federal institution - part of a much smaller network compared to state and municipal systems - incorporates local commission participation in shaping training initiatives. There, part of the action research process included training on educational equity aspects.

Generally, available in-service training programs lose much of their relevance and effectiveness by remaining disconnected from action research practices and the intersections between such practices and educational equity. In action research, teaching practices and the school environment are simultaneously conceived as activities and spaces for professional development. They are, in themselves, self-directed professional development projects for their proponents.

5 QUANTITATIVE SURVEY: PERCEPTIONS AMONG EDUCATORS AND STUDENTS

A quantitative survey was conducted on the perceptions of educators and students regarding equity in their educational organizations, in terms of gender relations, interethnic relations, and relations between students with and without disabilities. Questionnaires were applied within schools of the Escolas2030 Collective so that this panorama of perceptions would also support the analysis of the relationship between action research and equity.

5.1 Sample population

Initially, the survey had been proposed only for teachers, in approximately 70 educational organizations that are part of the Escolas2030 Collective. These school and non-school organizations stand out for innovative activities aimed at holistic and transformative education. It was found possible and fruitful to survey also students; however, this had to rely on the voluntary participation of educators from each location, which limited the scope to 26 organizations. A questionnaire for educators and another for students was distributed among all units of the Escolas2030 Collective. The 26 responding organizations are located in 16 cities over 10 states in Brazil.

The questionnaire was administered between July and September 2023. Interviewers were instructed to seek responses from at least five educators and at least one class in the educational organization where they worked, with three classes being desirable. Each respondent signed an Informed Consent Form and in the case of children and adolescents, it was signed by a caregiver.

5.2 Participant profile

The survey included 43 educators (female, male, and transgender) from 14 educational organizations in eight cities across the country. Most were affiliated with the federal education system, while the others were from the private or state spheres. These educators worked at different levels and modalities of education. Only six reported having some type of disability, such as deafness, blindness, autism, etc.

Another 321 students from 22 educational organizations in 16 cities in 9 states also participated. One of these organizations is federal and another is community-based; the others are state, municipal, or private. In 17 organizations, participation ranged from 1 to 12 people. The largest group, with 131 students, was in high school or vocational high school. The rest were evenly distributed across elementary schooling, while only 1 was from early childhood education. 179 people declared themselves female and 138 were male. 2 declared themselves non-binary, and 5 indicated "other" as their gender.

Almost half of the respondents (150) were between 15 and 19 years old, and 93 were between 11 and 14. The third-largest age group is 28 people aged 20 or over, followed by 24 people aged 6.

Of the total of 321 students, 22 reported having some disability. 139 people declared themselves White, 117 mixed race, and 45 Black. Only 15 were Indigenous (1 Kaingang, 3 Baniwa, 1 Atribe, and 2 non-identified) and 8 were of Asian descent.

5.3 Assumptions and questionnaire

The survey aimed to characterize how people relate to one another. It assumes these practices express their conceptions about themselves, others, and their relations. In other words, they express what people know about all

that. It was also assumed they know it because they learned it. In this sense, educational equity is understood as equity of knowledge that is practiced, configuring a reality of equitable relationships.

Given the impossibility of directly applying the questionnaire to all educators and students from all educational organizations, the survey covered the maximum number of people that could be reached through the voluntary work of the educators from the Escolas2030 Collective. These volunteers had access to written and filmed instructions before applying the questionnaire.

Both questionnaires for educators and students addressed the same topics and only slightly varied in language. More than the respondent's opinions on each issue, the questions focused on what they observed to be the predominant behaviors and attitudes among students in their organization. The questionnaire also sought to detect whether the respondents thought such behaviors and attitudes had changed since 2021 when the action research processes driven by Escolas2030 began. The occasional cooccurrence of the perceived change with the action research process would be taken as an indicator of the influence of this process on the more equitable nature of the relationships in question, therefore an indicator of impact on educational equity.

If, in general, in the schools where respondents work or study, at least a simple majority (over 50%) disagreed with the statements below, this was considered indicative of an integrative perspective within the school. Conversely, the opposite outcome characterised a segregative perspective.

> Girls and boys believe certain activities are exclusively for girls or boys.
>
> Girls do not want boys to participate in their activities, and boys do not want girls to participate in theirs.
>
> Girls and boys view certain educational activities as suitable only for heterosexual individuals and others only for people with different sexual orientations.
>
> Girls and boys do not want peers of a different sexual orientation to join the activities they are undertaking.

Individuals regard certain educational activities as exclusive to specific races/ethnicities (e.g., Black, White, Indigenous peoples of diverse ethnicities, immigrants, East Asian individuals, etc.).

Individuals do not want peers from different racial/ethnic backgrounds to participate in the activities they are undertaking.

Individuals believe certain educational activities are exclusively for those with disabilities, while others are solely for individuals without disabilities.

Individuals without disabilities do not want peers with disabilities to join the activities they are engaged in.

If, in general, in the schools where respondents work or study, at least a simple majority (over 50%) agreed with the statements below, this was considered indicative of an <u>egalitarian perspective</u> within the school. Conversely, the opposite outcome characterised a <u>discriminatory perspective</u>.

Girls collaborate in tasks that boys are undertaking, and boys collaborate in tasks that girls are undertaking.

Girls value boys, and boys value girls, regarding their appearance, ideas, or conduct.

Girls and boys collaborate in completing tasks with peers of a different sexual orientation.

Girls and boys value the appearance, ideas, or conduct of peers with a different sexual orientation.

Individuals collaborate in completing tasks with peers from different racial/ethnic backgrounds.

Individuals value the appearance, ideas, or conduct of peers from different racial/ethnic backgrounds.

Individuals without disabilities collaborate in completing tasks with peers who have disabilities.

Individuals without disabilities value the appearance, ideas, or conduct of peers who have disabilities.

Once the predominance of integrative/segregative and egalitarian/discriminatory perspectives was characterised, we sought to determine whether the associated behaviors and attitudes remained unchanged,

increased, or decreased from 2021 onwards. The highest response percentages for each case were considered.

Following the identification of stability or shifts in behaviors and attitudes indicative of predominant integrative/segregative or egalitarian/discriminatory perspectives, potential causes for such changes were investigated. These causes included: <u>extra-school</u> actions (e.g., families, local groups/associations, external organisations), including action-research projects developed under the exogenous framework of the *Schools2030* program; <u>school staff</u> actions (e.g., teachers, principals, administrative personnel) not covered by action-research; <u>student-led</u> actions, excluding those linked to action research projects; <u>other</u> actions.

When the percentage attributed to each type of action ranged from 10% to approximately 50%, the actions were classified as <u>significant</u> in driving or maintaining the predominant school perspectives. If the percentage exceeded 50% up to 75% or more, the actions were deemed a <u>considerable factor.</u>

5.4 Responses from students

5.4.1 Relationships between people with and without disabilities

For more than half of the students (56.2%), there should be no division between certain educational activities being only for people without disabilities and others being only for people with disabilities, which means an integrative view predominates. However, there is a significant perception of a segregating mentality: 22.2% "agree" or "strongly agree" that people think this separation is necessary.

A large majority (65.1%) "agree" or "strongly agree" that people without disabilities do collaborate in carrying out tasks with their peers with disabilities,

so an egalitarian view prevails. However, there is also a significant discriminatory position, with around a quarter (24.7%) "disagreeing" or "strongly disagreeing" with this statement.

81.8% "agree" that people without disabilities value the appearance, ideas, or behavior of colleagues with disabilities, meaning the egalitarian view predominates. There is also a minority of discriminatory views (6.5% "disagree").

The perception that the egalitarian and integrative view has grown predominates: for 35.5% of respondents, as of 2021, people have started to have more of these positive behaviors and attitudes towards people with disabilities. However, there is also a strong perception that the egalitarian and integrative view has always been strong: for 26.7% of responses, people continued to have the same behaviors and attitudes. In addition, there is a discriminatory position in the minority view of 17.4% for whom people have started to have less of these egalitarian and integrative behaviors and attitudes. The number of people who abstained from giving an opinion on the dynamics of behaviors and attitudes is also relevant, with 21.1% not knowing or not wanting to answer.

The opinion that the actions of students (72.2%) and school professionals (71.3%) stand out as causes of the continuity or change in behavior and attitudes is strongly predominant. The weight attributed to extra-school actors such as families, local groups or associations, or external organizations (65.7%), and to actions of other types (56.6%), is also considerable.

A summary of these results on equity in relations between people with and without disabilities is in Appendix A. It was seen that the predominant opinion is that the egalitarian view has grown, although there is a significant perception that neither the strong predominance of the egalitarian view nor the minority discriminatory position has changed. The abstention from expressing an opinion on the dynamics of conduct and attitudes is also significant.

The main actions causing this perceived increase or continuity are attributed to both professionals and students, with considerable weight also given to extracurricular actions and actions of other types. These types of actions are described in Appendix K.

The action research process is somewhat visible, though its presence is not particularly strong. While the majority feels like egalitarian visions have increased, there remains a significant perception that attitudes and behaviors have not changed. Extracurricular activities, including the action research process, are viewed as relevant to the increase or permanence of that egalitarian vision—although this increase or continuity is primarily attributed to the actions of the professionals or students involved.

5.4.2 Relationships between people of different races/ethnicities

The largest proportion (61.4%) "disagree" or "completely disagree" with the statement that people think certain educational activities should be only for students of a certain ethnicity, thus predominating an integrative view. There is a minority but significant segregating position: 15.7% "agree" or "completely agree" with the statement.

Around three-quarters (76.8%) "disagree" or "strongly disagree" that people do not want colleagues of another race/ethnicity to participate in activities they are carrying out, that is, an integrative view strongly predominates. There is a minority segregating position, with 9% who "agree" or "strongly agree" that people do not want interracial participation.

With the strong predominance of an integrative view, a large majority (87%) "agree" or "strongly agree" that people do collaborate in carrying out tasks with colleagues of another race/ethnicity.

An egalitarian view also predominates in another issue, with a similar proportion (82.7%) of those who "agree" or "completely agree" that people value the appearance, ideas, and conduct of colleagues of another race/ethnicity.

A third (31.1%) believe that, as of 2021, neither the strong predominance of the egalitarian and integrative view nor the minority discriminatory and segregating position has changed. Another third (30.2%) believe that the egalitarian view has grown and that people have started to have more of those behaviors and attitudes. Less than a fifth (15.1%) believe that, on the contrary, this egalitarian view has diminished. The abstention from giving an opinion on the dynamics of behaviors and attitudes is significant, close to a quarter: 23.4% did not know or did not want to answer.

The prevailing opinion is that actions from outside the school, and those of students and school professionals, have similar weight as causes of the continuity or change in behaviors and attitudes. In total 65.1% of respondents attribute the perceived dynamics, whether maintenance, increase, or reduction of those behaviors, to actions from outside the school (families, local groups or associations, external organizations). For 68.8%, it is also the effect of the actions of school professionals (teachers, principals, employees); while 66.9% see the influence of the actions of the students themselves. Almost half (49%) attribute the continuity, increase, or reduction of behaviors and attitudes to actions of another type. These actions are described in [Appendix L](#).

A summary of opinions on equity in relations between different races/ethnicities can be found in [Appendix B](#).

A substantial proportion (around a quarter) abstained from expressing an opinion on the dynamics of conduct and attitudes, but around a third of respondents felt that both the strong predominance of the egalitarian view and the minority discriminatory position had increased or remained unchanged.

The prevailing opinion is that actions from outside the school, as well as those of students and school professionals, have similar weight as causes for the continuation or change of behaviors and attitudes.

The action research process has an origin outside the school and its presence is perceived as having practically the same great influence as the actions of professionals and students in the continuity or intensification of the pattern of relationships between people of different races/ethnicities, characterized by the predominance of an egalitarian and integrative vision.

5.4.3 Relationships between people of different genders

The prevailing perception reports a preference for mixed-gender participation in activities. Specifically, over half of the respondents (58.6%) either "disagree" or "strongly disagree" with the notion that students see certain activities as exclusively for boys or girls. However, a minority, though it is still a significant part of respondents (17.3%), perceive the existence of the opposite views, either "agreeing" or "strongly agreeing" that students see some activities as gender-exclusive.

The perception of an inclusive environment still predominates in the next question, with nearly three-quarters of respondents (71.6%) "disagreeing" or "totally disagreeing" that girls do not want boys to participate in their activities and vice versa. Despite this, there remains a minority perception, albeit expressive, of there being divisive positions: 12.6% "agree" or "totally agree" that there are students who want to keep activities single-gendered.

The majority (62.3%) "agree" or "totally agree" that girls collaborate in the tasks that boys are doing and vice versa; that is, a view of an egalitarian and inclusive attitude predominates again. However, for almost a fifth (19.7%) of respondents, such collaboration is not perceived.

The view of an egalitarian attitude also predominates in the next question, with three-quarters (74.3%) of the responses "agreeing" or "totally agreeing" that girls value boys and boys value girls in their appearance, ideas, and conduct.

More than a third (36.1%) of respondents believe that, as of 2021, the strong predominance of the egalitarian view has not changed and that girls and boys have continued to have the same behaviors and attitudes towards people of the opposite sex. For almost a third (29.9%), girls and boys have started having more egalitarian behaviors and attitudes. The abstention of around a fifth (20.6%) in expressing an opinion on the dynamics of behaviors and attitudes is again significant. For the smallest portion (13.2%), girls and boys have started having less horizontal behaviors and attitudes.

The prevailing opinion is that the actions of students and school staff have similar weight as causes for either the continuation or change in behavior and attitudes: 65.1% attribute their perceived results to the actions of school professionals (teachers, principals, employees) and 65.7% also attribute them to the actions of the girls and boys themselves. Most respondents (59.2%) feel that behaviors and attitudes have either been maintained, increased, or decreased due to actions coming from outside the school (families, local groups or associations, or external organizations). Just over half (53%) attribute the perceived changes in behavior and attitudes to actions of another type. These actions are described in Appendix M.

The opinions on equity in relationships between people of different genders are summarized in Appendix C. The largest proportion of respondents (although still less than half) perceive that, as of 2021, the strong predominance of the egalitarian view has not changed. For almost a third, these behaviors and attitudes have increased.

The perceived continuity or change in the patterns of gender relations is mainly attributed to the actions of students and school staff, of similar

importance. It is also a majoritarian opinion (although it does not reach the same magnitude) that behaviors and attitudes have remained the same, increased, or decreased due to actions from outside the school.

Thus, the general perception is that the action research process would be linked to the prevalence of an integrative and egalitarian attitude between genders, but would not achieve the same degree of influence on behaviors as the actions of students and school professionals.

5.4.4 Relationships among people of different sexual orientations

The predominant perception also indicates a tendency for integration among people of different sexual orientations. Specifically, over half of the respondents (58.6%) "disagree" or "completely disagree" that students would consider certain educational activities suitable only for heterosexual individuals and others adequate only for people of other sexual orientations.

Three-quarters (75.9%) "disagree" or "totally disagree" that students would not want peers of another sexual orientation to participate in the activities they carry out. The perception of an integrative environment strongly predominates on this topic, too.

The integrative perception that there is collaboration also predominates. The majority (63.3%) "agree" or "totally agree" that girls and boys collaborate in carrying out tasks with peers of another sexual orientation. However, almost a quarter (24.7%) "disagree" or "totally disagree".

A large majority (80.6%) "agree" or "strongly agree" that girls and boys value the appearance, ideas, or conduct of peers of another sexual orientation, indicating the strong predominance of the perception of an egalitarian view.

In the perception of almost a third of the responses (28%), from 2021 onwards, neither the predominance of the egalitarian view nor the minority segregating position has changed. For a similar portion (27.7%), however, these

behaviors and attitudes have increased. The abstention of just over a quarter of respondents from giving an opinion on the dynamics of behaviors and attitudes is again significant: 26.5% did not know or did not want to answer.

The predominant opinion is that actions from outside the school (62.3%), as well as by students (62%), and by school staff (63.5%), have similar weight as causes of the continuity or change in behavior and attitudes. Half (50.6%) attribute the continuity, increase, or reduction in behavior and attitudes to actions of another type. These actions are described in Appendix N.

A summary of students' opinions on equity in relationships among people of different sexual orientations can be found in Appendix D. For about a third of them, as of 2021, neither the strong predominance of the egalitarian view nor the minority segregating position has changed. For a similar portion, these behaviors and attitudes have increased. A larger fraction (just over a quarter) refrained from expressing an opinion on the matter.

The prevailing opinion is that actions coming from outside the school, students' actions, and school professionals' actions are equally important as causes of continuity or change in behavior and attitudes.

Therefore, the landscape of relationships among people of different sexual orientations is characterized by the predominant perception of an egalitarian and integrative vision. The presence of the action research process, which has an origin outside the school, has practically the same great weight as the actions of professionals and students in the continuity or transformations of this landscape.

5.5 Responses from educators

5.5.1 Relationships between people with and without disabilities

In the opinion of most respondents (44.1%), people do not believe that there should be certain educational activities for people with disabilities and others for people without disabilities. Therefore, there is a large perception of egalitarian views. The segregationist position is perceived by a minority, since 18.6% of respondents believe people think there should be this division in educational activities. In turn, there is a large proportion of neutrality on the point: 37.2% neither "agree" nor "disagree."

For 46.4%, it is not true that students without disabilities do not want their peers with disabilities to participate in the activities they are carrying out. Thus, there is a strong perception of an egalitarian view. There is also a large percentage of neutrality: 41.8% neither "agree" nor "disagree" that people do not want this participation.

The perception of predominantly integrative behavior is reinforced by the fact that 69.7% of respondents believed that students without disabilities collaborate in tasks with their colleagues who have disabilities. The contrary position is small although expressive, reaching around a quarter of responses (16.2% "disagree" and 9.3% "strongly disagree" there is such collaboration).

A perception of prevalent egalitarianism is also expressed in the fact that 55.8% of respondents believed that students without disabilities value the appearance, ideas, or conduct of their peers with disabilities. However, a significant perception (although a minority) of a discriminatory attitude was expressed as 34.8% of respondents "disagree" with the same statement.

According to 37.2% of respondents, students have increasingly shown either egalitarian views or discriminatory attitudes towards people with disabilities since 2021. For another large proportion (34.8%), such behaviors and

attitudes remained unchanged during this time frame. The 18.6% who did not know or chose not to answer constitute a minority but represent a significant portion of respondents who refrained from expressing an opinion on the dynamics of behaviors and attitudes surrounding this issue.

The opinion of 83.7% of educators, who attribute the growth or continuity of behaviors and attitudes from 2021 onwards to the actions of school professionals—such as teachers, principals, and staff—is strongly predominant. A significant portion (39.5%), although much smaller than the first group, believes that this increase or continuity also results from actions originating outside the school, including those by families, local groups, or external organizations. A larger segment (48.8%) cited students' actions as another influence in changing behaviors and attitudes, while just over half (51.1%) attributed the maintenance or increase in these behaviors to other actions as well. These actions are detailed in Appendix O.

A summary of educators' opinions on equity in relationships between individuals with and without disabilities is provided in Appendix E. Considering the balance of opinions regarding the maintenance or change of students' behavior related to this issue, and acknowledging the greater weight attributed to the actions of school professionals in these dynamics, the influence of the action research process was indeed observed; however, it was not particularly strong or clear.

5.5.2 Relationships between people of different races/ethnicities

For 44.1% of respondents, students do not consider any educational activities as being specific to one race or ethnicity, predominating also here the perception of an egalitarian environment. There is a large percentage of neutrality, with 37.2% neither "agreeing" nor "disagreeing" that students consider

some activities in this way. There is also the perception (small but nonetheless important) of segregating attitudes: 18.5% answered there are students who see certain educational activities as specific to one race or ethnicity only.

The perception of egalitarian attitudes also predominates, with almost half (48.8%) "disagreeing" or "strongly disagreeing" that students do not want to have classmates of another race/ethnicity participating in their activities. A group of 27.9% remained neutral regarding whether this tendency exists among students. However, there is once again a significant minority that perceives some segregating position, with 11.6% "agreeing" and 4.6% "strongly agreeing" that some students do not want classmates of another race/ethnicity participating.

The view of 67.4% who perceive egalitarian attitudes is strongly predominant: they "agree" that students collaborate in tasks with their classmates of another race/ethnicity. However, a large portion identifies segregating views, as 28% "disagree." A small minority is neutral: 4.7% neither "agree" nor "disagree."

The view of egalitarian behaviors also strongly predominates in the next question, with 62.7% of professionals believing students value the appearance, ideas, or conduct of colleagues of another race/ethnicity. On the other hand, 18.6%, a minority but significant position, do not recognize that this value exists.

A large portion (44.1% of teachers) understand that the egalitarian view has grown since 2021: they believe that in this time frame, students have started to have more of those behaviors and attitudes towards people of another race/ethnicity. A smaller, but still large, portion (34.8%) has the perception that the behaviors and attitudes have not changed. The abstention from giving an opinion on the dynamics of behaviors and attitudes is significant, with 13.9% not knowing or choosing not to answer.

There is also a strong prevailing opinion (86%) that school professionals' actions are the main factors in the continuity or change of conduct and attitudes. The actions mentioned are in Appendix P.

The summary of the educators' opinions on equity in relationships between people of different races/ethnicities is in Appendix F. A large portion understands that the egalitarian view has grown since 2021. A smaller portion, but still important, has the perception that behaviors and attitudes have not changed. The abstention from expressing an opinion on the dynamics of behaviors and attitudes was significant, but a minority.

The opinion predominates that school professionals' actions are the main factors influencing behavior and attitude patterns—either their continuity or change.

Opinions are similarly distributed regarding the factors of continuity or change of behaviors and attitudes, but there is an expressed tendency to consider the actions of school professionals as the main causes of their maintenance or change. Thus, there are no signs of impacts from action research on the equity of relationship patterns between people of different races/ethnicities.

5.5.3 Relationships between people of different genders

The prevalent perception is that students prefer co-educational activities (mixing boys and girls, or all genders), as almost half (48.8%) of respondents "disagree" or "strongly disagree" that students believe some activities should be only for girls or only for boys. However, a large portion (27.4%) perceive a segregated position, whereby some activities should be separated by sex. There is also significant neutrality on this point, as 23.2% neither "agree" nor "disagree" that students reason this way.

Regarding participation, the egalitarian view also predominates among educators, since 48.8% "disagree" or "strongly disagree" that female students do not want male students to participate in their activities and vice versa. However, a large portion (27.2%) see a segregating position, believing students in fact do not want the participation of colleagues of the opposite sex in their activities. Neutrality on this point is small, yet significant, with 16.2% neither "agreeing" nor "disagreeing" with the statement that students do not want the participation of people of the opposite sex in their activities.

Likewise, the perception of egalitarian and inclusive attitudes predominates, as 65.1% believe that female students collaborate in the tasks that male students perform, while male students collaborate in the tasks that female students perform. However, a large portion perceives segregating views: approximately one quarter (23.2%) "disagree" or "strongly disagree" that this reciprocal collaboration exists.

Once again, the majority (60.5%) understand that girls value the boys' appearance, ideas, or behavior, and vice versa. However, another large portion (30.3%) reports discriminatory views and "disagrees" with the perception of this reciprocal appreciation. Finally, the neutrality of the 9.3% who neither "agree" nor "disagree" is also notable, although small.

The perception prevails that the indicated egalitarian attitudes, or else the identified segregating positions, have been a constant scenario since 2021. The largest portion of educators (44.1%) sees continuity, from 2021 to the present day, in the behavior patterns of students towards individuals of the opposite sex. However, for another large portion (32.5%), the behaviors and attitudes designated in their responses have intensified during this period. Finally, a minority but significant (13.9%) portion believes that these perceived behaviors have weakened.

The opinion that actions by both students (72%) and school professionals (79%) have similar weight as causes of this situation is strongly predominant. Not as strong, but still predominant (53.4%), is the opinion that also points to actions originating outside the school. A small minority of 2.3% "totally disagree", while a large portion of 27.9% neither "agree" nor "disagree" that the increase, maintenance, or reduction of the indicated behaviors and attitudes are due to actions of another type. These actions are described in Appendix Q.

A summary of the educators' opinions on equity in relationships between people of different genders can be seen in Appendix G. The predominant opinion is that neither the perceived egalitarian views nor the perceived segregating or discriminatory positions has changed. For a large portion, these behaviors and attitudes have increased. A minority, but significant portion, believes that they have decreased.

As the opinion prevails that the predominant egalitarian vision has been maintained or increased, and as the understanding remains strong that this dynamics is due to actions from outside the school, the impact of action research is noticeable, although it is not vigorous.

5.5.4 Relationships among people of different sexual orientations

There is a predominant view of integration among people of different sexual orientations, as a significant majority (58.1%) "disagree" or "strongly disagree" that, for students, certain activities are only for heterosexuals and others are only for people with other sexual orientations. However, a large portion perceives segregating positions, as a quarter (25.5%) "agree" that there is such separate treatment. The neutrality on this point is a minority, but still significant: a smallest portion (16.2%) neither "agree" nor "disagree."

Regarding the statement that students do not want their peers of other sexual orientations to participate in the activities they are carrying out, the perception of an integrative view predominates: just over half (53.4%) "disagree" or "strongly disagree." However, there is a large perception of segregating positions, as around a quarter (23.2%) "agree" or "strongly agree," and the same number are neutral to the point, who neither "agree" nor "disagree."

The perception of an inclusive environment also prevails in the next question, with 65.1% of respondents sharing the view that students collaborate on tasks with their peers of different sexual orientations. However, a significant portion holds opposing views, with 9.3% "disagreeing" and 11.5% "strongly disagreeing" that such collaboration exists, while the 14% who neither "agree" nor "disagree" express a small but significant neutrality.

Once again, the perception of egalitarian behavior prevails, with the majority (58.1%) agreeing that students value the appearance, ideas, or conduct of their peers with another sexual orientation. There is though a large portion perceiving discriminatory views, with 11.6% "disagreeing" and 14% "strongly disagreeing," and there is also a minority, but significant neutrality on the point, with 16.3% neither "agreeing" or "disagreeing."

The majority (46.5%) believe that, from 2021 until now, students have started to have more of the behaviors and attitudes indicated in the responses. For a large portion (32.5%), the egalitarian attitude or segregating position perceived towards people of other sexual orientations has not changed. For a small minority (6.9%), the behaviors and attitudes indicated have weakened. The abstention from giving an opinion on this point is small, but important: 13.9% of educators did not know or chose not to answer.

The opinion that both actions by students (72%) and those by school professionals (also 72%) have similar weight as causes of the continuation or change in behavior and attitudes is strongly predominant. Not as strongly, but

still predominant (58%) is the opinion that attributes these causes also to actions originating outside the school (by families, external organizations, groups or local associations). For another large portion (53.4%), what happened to behavior and attitudes also resulted from other actions. The description of these actions can be found in Appendix R.

The opinions of educators on equity in interactions among people of different sexual orientations are summarized in Appendix H. The prevailing perception is that behaviors and attitudes have increased, but for a large portion, the scenario has not changed, whether it is perceived as predominantly composed of egalitarian attitudes or segregating positions. For a small minority, the behaviors and attitudes indicated have decreased. The abstention from expressing an opinion on this point is a minority, but significant.

The majority opinion is that both actions by students and those by school professionals have equal weight as causes of the perceived continuity or change in behavior and attitudes. Another opinion, still predominant but less strong, attributes these causes to actions from outside the school. There is also a large portion for whom the perceived continuity or change in behavior and attitudes is the result of other actions.

Two results combined suggest the impact of action research: the predominance of the perception of egalitarian and integrative attitudes, and the view that this is an effect of actions from outside the school (although other factors are more prominently indicated as causes of this egalitarian and integrative environment, namely the actions of students and faculty).

5.6 Responses from students and educators

As can be seen in Appendix J, students and educators have the same opinion regarding how relations between people with and without disabilities

have evolved recently in their organization: the prevailing perception is that the egalitarian attitude has been strengthened, and that this increase is also due to the influence of the action research process, along with the (stronger) influence of the actions of professionals and students.

Regarding relationships between people of different races/ethnicities, an egalitarian and integrative perception predominates. In the opinion of students, this predominance would have increased or been maintained as a result of three types of actions of the same intensity: those from outside the school (which include the action research process), those of professionals, and those of students. The opinion of educators differs only in that they consider their own actions as the most important causes of maintenance or change in behaviors and attitudes. However, this downplays the significance students attribute to external (extra-school) actions.

Regarding relationships between people of different genders, both students and educators perceive the prevalence of an integrative and egalitarian posture. The increase or maintenance of this type of relationship is seen, both by students and educators, as an effect of actions originating outside of school, but with less weight than the actions of the students and educators themselves.

Likewise, students and educators agree in perceiving interactions among people of different sexual orientations as predominantly governed by an integrative and egalitarian vision. For students, the pattern of relationships indicated in their responses was influenced, in practically the same proportion, by actions originating outside the school (including the action research process), by actions of students, and by actions of educators. For the latter, actions from outside the school have significant weight, but less than those of students and professionals.

6 INTERVIEWS WITH MEMBERS OF REFERENCE SCHOOLS

As part of our research, interviews were conducted in 19 educational organizations across all five macro regions of Brazil. In the Northeast region, we focused on 1 organization in Natal (Rio Grande do Norte), 1 in Pentecoste (Ceará), and 2 in Salvador (Bahia). In the North region, we had 2 organizations in Manaus (Amazonas), 1 in Santarém (Pará), and 1 in São Gabriel da Cachoeira (Amazonas). In the Southeast region, there were 3 in Belo Horizonte (Minas Gerais), and 4 in São Paulo (São Paulo state). In the South region, we had 1 in Sapucaia do Sul (Rio Grande do Sul), and 1 in Almirante Tamandaré (Paraná). Finally, in the Center-West region, we involved 1 organization in Cidade de Goiás (Goiás), and 1 in Brasília (Federal District). Between October 2023 and July 2024, 122 people were interviewed, spanning across a wide age range (the youngest was 6 years old), male and female, with different functions or roles, including teachers, managers, students, administrative/operational employees, mothers of students (some of whom were also operational employees), and community leaders.

These interviews were intended to provide qualitative information that would assist in the interpretation of the data collected by the survey, always with the aim of seeking evidence regarding the relationship between action research and equity. We expected to use this information to help gauge the veracity of the hypothesis that the action research process is associated with a change in the school environment in favor of greater equity in gender relations, interethnic relations, and relations between students with and without disabilities.

6.1 On people with and without disabilities

All individuals interviewed were aware of the existence of people with disabilities[5] in their educational organization and often specified the types, such as reduced mobility or autism. This fact can be read as a sign of equity compared to other situations in which people with disabilities are not accepted for enrollment, or are even ignored by those who attend the same organization.

An example of acceptance and attention is given by a 12-year-old student who said she has two classmates with disabilities. One of them is autistic, with whom she has had the most contact since the 1 grade of elementary school. She added that, in the 7 grade, the school sent this classmate to a lower class, "less advanced." The students "got upset" and the classmate ended up returning to the class he was already in. According to this girl, the students always try their best to help this classmate "when he gets nervous." She explained that "the classroom is very noisy and autistic students are sensitive to noise," so the classmates "try to control it, for his well-being."

We also sought to identify the interviewees' perception of the general willingness to interact with people with disabilities. The question was: **should certain educational activities be limited to people with disabilities, and others to people without disabilities?** The most common answer was the affirmation of equality through the refusal to conceive some activities as inherently limited to people with disabilities: this would be seen as a form of exclusion, or unacceptable segregation. Activities should, however, be adapted to include those people. One teacher said: "We should have activities adapted for students with disabilities. But that does not prevent them from participating in any activity with their peers." In the same tone, a teacher from a community school stated: "It depends on the level of difficulty. Specific activities need to be

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[5] It was made clear in the interview that "disabilities" were understood as long-term impediments, such as reduced vision or blindness, deafness, reduced mobility, intellectual disability (low cognitive capacity) or mental disability (autism, for example).

created so that they can participate along with the others." The manager of an educational center corroborated this position with an example: "In the photography workshop, a blind girl took a photo. Any activity is possible—with adjustments."

Sometimes, pressure is exerted on teachers to put these adaptations in place. One school principal said: "We began to 'scold' the teachers who refuse to implement activities adapted for students with disabilities. Unfortunately, there are still colleagues in the field who think the students with disabilities should not be here at school."

The most common opinion in the interviews was that none of the people without disabilities reject the participation of their classmates with disabilities in the activities they are doing. The question was specifically that: **do kids without disabilities not want their classmates with disabilities to participate in the activities they are doing?** The answers indicate it is common for students without disabilities to collaborate with their classmates with disabilities in their tasks. Many people expressed themselves in the same spirit as this 13-year-old student: "We are always together. In general, people without disabilities help those with disabilities. Sometimes, of course, there is some friction."

Occasional cases of discrimination or lack of attention have been reported, which teachers try to address. As one female teacher said: "At school, there are positive signs of respect and collaboration between students with and without disabilities, but there are also cases of discrimination. Teachers try to take strong action to prevent this from happening." The most common view, however, echoes that of a female community leader, for whom children without disabilities "welcome" others; for example, when there is a student who uses a wheelchair, "everyone is careful: they stop, they talk, they wait, they don't touch [without consent]."

A blind adult female student from another educational center holds the opinion that students without disabilities do not want their disabled peers to participate in the activities they are doing. She said that it is not common for them to collaborate in tasks, giving the example of a person with an intellectual disability, about whom "others make jokes." At this same educational center, a 16-year-old student sees things differently: "It [the exclusion from activities] doesn't happen. On the contrary, they [students with disabilities] are helpful."

The interview also sought to obtain statements conveying general perceptions about people with disabilities, in order to detect either egalitarian or discriminatory attitudes. It asked students to **identify differences in the appearance, ideas, or behavior of students with disabilities**. In general, the responses indicated that they could not identify any differences, described those differences in a neutral tone, or even depicted them in a positive light. A 10-year-old girl stated: "Our autistic classmate gets more upset when he loses the game and very excited when he wins: he jumps for joy." Another 10-year-old female student reported: "Sometimes their ideas are better than ours. They have skills that we do not have in many subjects." In another school, a 12-year-old girl remarked about her autistic classmate: "He has a more prepared mind for certain things; an advanced creativity." A 15-year-old boy from yet another school mentioned that, in his class, everyone helps and plays with their autistic classmate. However, he noted that there is another boy with a disability who is quieter, sometimes has meltdowns, and ends up being aggressive towards his classmates, which makes people stay away from him.

An Indigenous teacher who works at her village's school pointed out the following differences regarding a student with a suspected disability: "She is very quiet—she doesn't do anything; she just sits and watches us do things, observing the way we write... She does write, but she doesn't do the activities; she doesn't play." Another Indigenous male teacher from the same school described these

traits as characteristics of students without disabilities: "They generally demonstrate greater ability, agility, assiduity, and punctuality."

In a large city, a mother of two students said that children with disabilities sometimes don't want to come into class or stay in class; they don't always adhere to rules; but they do participate in activities. On the other hand, a teacher at another school (far away from the first one) noted that students with disabilities often need more frequent breaks: they don't have to do separate activities, but they occasionally need moments to "clear their minds," "to take a walk, or a take break."

An administrative employee at the same school drew attention to the difficulties. She reported that a student with Oppositional Defiant Disorder has crisis moments in which he physically and verbally assaults others: he has hurt several people, tried to throw rocks at passing cars, and even broke a window, injuring a female student.

After obtaining information on the relationships between students with and without disabilities, the interview sought to determine whether, **from 2021 until now, those groups continued to relate to each other in the same way** or whether their relationships had worsened or improved. The year 2021 serves as a reference point for when the action research projects began to be developed and implemented in the schools. It also happened to be an eventful year regarding the Covid-19 pandemic.

Many interviewees believe that these relationships have remained unchanged, as reflected in this teacher's response: "It continues the same: an already positive environment. People have always helped [says the name of a student with a disability]. Even those who arrived this year are also helping." Very few considered that these relationships had worsened.

A high school female teacher, echoing the sentiment of many others, believes there has been a significant change: "During the pandemic and

emergency remote teaching, each one was in their own space. Today, we can see an improvement in understanding and acceptance of others, as well as improvement around many psychological issues. Things have improved largely with Escolas2030. This movement has further changed students' behavior, enhancing empathy, collaboration, etc."[6] A female teacher from another school also notes that conditions have improved, stating that "after the pandemic, [there has been] more contact, more meetings with parents, which strengthens empathy and caring for others."

For the pedagogical coordinator of a school, on the contrary, the pandemic led to greater difficulties: "Social relationships have weakened. There is less collaboration between students with and without disabilities since 2021. There has been a decrease in altruism and empathy after the pandemic." According to her, the phenomenon is observed in several other schools.

Students echoed this sentiment: a 12-year-old boy reported that "many people came back totally different after the pandemic." He noted a tendency toward individualization: a girl with a disability, "who used to talk to everyone and was outgoing, came back from the pandemic more withdrawn." However, he also stated that others "came back more welcoming, including people who used to be quarrelsome and started to reach out to others."

A teacher said that students began to relate to each other much better: "In other schools, they [students with disabilities] are bullied. Here they are welcomed by the school and their classmates, because our school is focused on emotion and brings students to have empathy and perceive how other people feel."

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[6] Empathy and collaboration are two of the five learning outcomes prioritized by educational organizations in the Brazilian Escolas2030 program. The others are agency, creativity, and self-knowledge.

Many students also reported positive changes since 2021. A 15-year-old boy told about his peers: "They had difficulty relating to students with disabilities. They would fight. But now they are getting along better." Following the same lines, the principal of another school stated: "Empathy and acceptance were better emphasized; we had further training, staff meetings, group dynamics, lectures." A boy student from yet another school, aged 9, noted an improvement: "People are more aware. I personally felt that I also became more aware."

In many interviews, people were unable to say whether relationships had changed or not. One Indigenous high school student reported that there was only one student in her school who was suspected of having a disability. He entered the school in 2021, so that she considered it impossible to compare relationships between people with and without disabilities before and after the school adopted action research, that same year.

When respondents were asked to **report a situation involving people with and without disabilities that had caught their attention**, the responses were divided into situations in which people with disabilities caused difficulties for others, or in which they were discriminated against, or in which they were welcomed. An example of the first case is the report of a teacher: a student "lost something and became very stressed, became aggressive; a classmate tried to calm him down, help him, but many were scared."

Among the situations of discrimination is one occasion narrated by an 11-year-old boy mentioning a classmate who wanted to humiliate a wheelchair user, "saying he could do things that a wheelchair user cannot."

Meanwhile, a male teacher recalled a cultural festival in which "special needs students participated, singing or dancing." A female school manager also said that, during the pandemic, when a girl with a physical disability was unable to climb the stairs, her classmates worried that she might hurt herself and "each one acted as a caregiver so she could move around the school grounds."

A woman whose two children attend the same school said that one of her son's classmates had reduced mobility and was unable to climb the stairs. "Three or four boys came down to get this boy to go up. I thought it was cute." In line with this, there was the report from an operational employee at another school: "The boys insist on first going up with them [students with visual impairments] to snack time, and only then they go back down and get their own snack. They are very supportive."

In the final part of the interview, the person was asked **whether they knew that an action research process was taking place at the school, and whether they believed this process had anything to do with the relationships between people with and without disabilities**. The vast majority of the interviewees were not informed about this. Usually, the same school had professionals who were unaware of the action research process and others who, in addition to being aware, were directly involved and stated that the process was indeed associated with the relationships between people with and without disabilities.

Some respondents were unable to say whether the action research had a direct impact on the relationship between people with and without disabilities. This was, for example, what a female pedagogical coordinator stated. However, she added that, since her institution joined Escolas2030, she had noticed that some actions, mainly by the Student Assembly and Decentralized Management, enabled "immense progress, as the children feel more like protagonists and belonging to something, which helps them develop more empathy with those around them."

A very prominent case of engagement was presented by a teacher: "Our entire school is involved in the activities of the Escolas2030 program. The students' identification with the school space [belonging] is the great contribution of action research."

At another school, efforts aimed at fostering equitable relations with individuals with disabilities had been underway since 2018. A teacher there highlighted positive outcomes, stating that since then, "the students kept relating to each other in the same way." In her view, the action research had no particular impact on these relationships, and the Escolas2030 program merely reinforced lines of work that the school was already implementing. The principal of this school expressed a similar opinion.

At yet another school, an 11-year-old boy said he knew about action research because there is a mural about the research project, and stated, regarding its purpose: "I don't know exactly, but I think it's to improve schools." However, at the same school, a 10-year-old girl, also aware of the project, made this connection, when stating its aim: "To see how the school treats autistic people and people with disabilities."

Among the other respondents who declared to be aware of the action research being carried out in their schools, a female teacher referred to the process as concerning "everything related to learning, to improving, to developing a new perspective on education and relationships at school." For an administrative employee at another school, action research also concerns "relationships between people with and without disabilities"; and, with the school's bakery project, which is the object of action research there, they seek to adapt activities for students with disabilities.

According to a male teacher from another school, although action research is recent, "we are managing to identify some strengths and weaknesses in our work. In the case of our study guides, for example, we began to realize that students with disabilities need better adaptations."

An Indigenous teacher reported that, in his school, the action research project had collaborative learning as its central objective. Previously, the school focus was on teaching, not learning. Later, "we brought the teachers in to

understand the difference between teaching and learning (…) not only did we bring this perspective into the classroom, but we also expanded it to include the community and the territorial dimensions." For him, learning is more important, and he mentioned a teacher who used to say: "Let's at least teach just to say that we are teaching, without worrying about the learning." She then reflected and decided to change, saying: "Let's stop being content with 'at least' and start fighting for 'the most'."

The principal of another school stated that action research is "a big leap for us, making us review our concepts." For her, this process "complements and strengthens what we practice; it gives us a boost of energy, and it is gratifying: we are on the right path."

The response of a female teacher from another school goes in the same direction: "The action research has made a great contribution. The children have learned to communicate better. The 5th grade, for example, has seen a particularly significant change. We have a student with ADHD who was very aggressive; after her participation in the action research project, I noticed that she has become a more humane kid and has started to treat people better."

A 10-year-old student participated in several of his school's action research isolated activities, but was unaware of the existence of such research behind them. Among students who said they were aware of the existence of the action research project, a 10-year-old girl pointed out its connection with the topic of relationships between people with and without disabilities, which she knew about "because of the training that takes place at school." A 14-year-old girl from the same school noticed this connection "because Escolas2030 shares knowledge with the school and the school, in turn, shares this knowledge with the students." For her, "there was a change in the behavior, perspective, and relationship of students without disabilities towards people with disabilities."

One 15-year-old boy had heard little about action research. But another, aged 12, told that he had indeed participated in the Peace Circle, a school practice chosen as the subject of the investigation, and that there had been "an increase in awareness" in school about students with disabilities.

6.2 On people of different races/ethnicities

To introduce the topic, the interview inquired **whether there were many individuals of different races/ethnicities within the educational organization, and, if so, which ones**. In general, no clear or shared distinction was found regarding the various races and ethnicities. This diffuse definition was highlighted by one teacher: "There is still tremendous confusion on the issue of racial identification; many people do not know, for example, whether they are Black, or Indigenous."

In other cases, on the contrary, there was no doubt. A 15-year-old girl, who was a former student at an Indigenous school, named each ethnic group present (Baniwa, Koripako, Tukano, Desano, Baré, and Kubeo), explaining that some of her classmates were children of interethnic marriages. A teacher at the same school mentioned all these ethnic groups and added that a survey had identified students from 14 different clans within the Baniwa ethnic group.

At another school, a teacher referred to nationalities (Venezuelans and Peruvians) alongside Indigenous peoples (Mura community), and Black people. "[The school] mixes the Indigenous, the Cafuzo [of Indigenous and Black ancestry], the Caboclo [of Indigenous and White ancestry]."

In order to detect the respondents' integrative or segregating positions, the interview asked **whether they believed that certain educational activities should be limited to a certain race/ethnicity (Black people, White people, Indigenous people from different groups, immigrants, people of Asian**

descent, etc.). The rejection of such a separation was general, as stated by one female teacher: "There are Indigenous, Black, White, and people of Asian descent at the school, but I don't think there should be specific activities for each ethnicity. We are all equal, and we collaborate well in all group activities. I am a Black person and I have never experienced any type of discrimination here at school."

In line with this view, the mother of a student from another school stated: "When you learn about other people's cultures, you learn to better live together. Others are different and need to be respected. Here, you learn about Indigenous and popular cultures. It's good. It's good that everyone is together."

For a 14-year-old girl, "there shouldn't be specific activities according to each race, but here at school it is necessary to offer specific activities for some immigrants due to linguistic diversity. But this is temporary, only during the adaptation period." According to her, "there have been cases of racial offenses, but nowadays, this doesn't happen anymore." For a 12-year-old boy, at another school, "everyone is human and deserves the same treatment."

The interview continued by asking **whether some kids of a certain race/ethnicity do not want their peers from another race to participate in the activities they are doing**. One teacher responded: "I have never noticed any kind of segregation among them [students], no one refuses to participate in an activity because of their race/ethnicity." Most said that this discriminatory behavior does not occur. However, some people explicitly mentioned the existence of prejudice and discrimination, as stated by one teacher: "We have students from Bolivia, Afghanistan, Pakistan, Angola, Peru, Ecuador. (…) The coexistence between different races/ethnicities generates some tension. I feel that the Bolivian community is the one that suffers the most from discrimination, whether inside or outside the school, but we teachers are constantly working to reduce this."

A 15-year-old boy from another school stated: "When playing, students exclude others because of their skin color, they make jokes. A student once refused to play with a Black student and called her a monkey." He stated that he himself went to the school principal to tell them what was happening, and the girl who had suffered racism was welcomed by other classmates. A teacher from another school said that there were occasional refusals of this type and "some minor bullying situations."

A female administrative employee at another school reported that she and the rest of the staff discern "subtle traces of structural racism" in some jokes: "Sometimes, in moments of anger, racism appears through insults. But teachers and school staff are always instructed to intervene."

To assess the willingness to interact equitably, we also inquired **whether it is common for students to collaborate with peers of different races/ethnicities in their tasks**. Once again, there was near unanimity in the responses, indicating that collaboration occurs. As an example of actions and outcomes in this regard, one teacher stated, "Students work collectively, regardless of race," and added that they collaborated during "the school-organized awareness event about Black hair, where children had the opportunity to style their hair in various ways."

Only a few responses were in the opposite direction: one female teacher noted that "students often use nicknames and insults, even when a Black person is talking about another Black person." A female school principal highlighted the attitudes of newly arrived students, stating, "White newcomers show prejudice; they don't want to be around the Black kids."

To detect prejudiced tendencies, the interviewees were asked **to point out differences in the appearance, ideas, or behavior of students of different races/ethnicities**. In general, the descriptions were not accompanied by any

value attribution, or else groups that are frequently discriminated against were given positive appreciation.

According to a mother of two students, "the children of Black immigrants end up creating a community of their own within the school. They leave school together for the bus stop. During the media literacy workshop, Black children brought up stories of racism and how they had been abused. Children are aware of the phenomenon of racism."

A teacher from another school pointed out that, among her immigrant students, "the family is very involved: during parent-teacher meetings, they want to know how [their children] are behaving, and if they are treating the teachers well. You don't see that as much with Brazilians." Another teacher said that "Black children are more skilled in music, *capoeira*, and art, and sometimes have greater difficulty with reading and writing." A 10-year-old student from a school in another city pointed out a difference presented by Haitian immigrants and how she benefits from it: "Their language [is different], they speak Creole, and they are teaching me words."

According to an administrative staff member, the school organized an event called "Me and My Hair," aimed at promoting acceptance of Black girls' hair. She emphasized that the event was more than just an aesthetic issue, but also a cultural issue: "There was storytelling, portraying that braids are an important aspect of Afro-descendant cultural identity."

An Indigenous teacher highlighted differences in physical appearance and language use: "Each [ethnic group] has its own physiognomy, and one can also notice linguistic differences. The Baniwa would rather speak their own language, as would the Koripako; however, both groups can communicate with each other, and there are no major conflicts in the classroom." A young Indigenous girl who is a former student noted that it is necessary to speak in Portuguese with students from outside the Baniwa ethnic group.

To identify changes that might have occurred after the beginning of the action research processes, the question was asked **whether, as of 2021, students of different races/ethnicities continued to act and interact in the same way**. A few responses said those relationships remained constant, sometimes emphasizing they were equitable since before, due to the type of education undertaken by the school. As one teacher said, "there was no change, because the school has always worked on the racial issue. The ethnic-racial agenda is always present in the learning plans and experiences."

A young Indigenous woman stated that, both before and after 2021, everyone treats each other well because "after all, everyone is from the same community; there are no conflicts, there is harmony among ethnicities."

In another school, the principal highlighted "a positive change in perspectives," but attributed it to "the school's action" and to "parents as multipliers of the anti-racist vision by supporting, for example, the awareness-raising actions on Afro hair that were promoted by the school." In turn, a high school student expressed doubt as to whether there had been any significant change: "Maybe it has improved a little. Maybe, with the Escolas2030 project, it might have improved. Just a little, but not like, 'wow'!"

But most of the interviews indicated that positive changes had occurred. One teacher stated, "There are fewer fights." Another said, "Most people feel more open about racial issues." According to a teacher from another school, "work on anti-racist issues has been intensifying" and she had noticed "progress among the students."

A 12-year-old student said, "The school has always been welcoming, and it has only gotten better since then." He mentioned action research and having participated in two activities promoted by Escolas2030, one of which was with children from schools across the country, in a meeting with the program's Advisory Committee, the objective of which was to hear their demands. He also

participated in a virtual meeting with the Portuguese Minister of Education and students from Portuguese schools, at the Escolas2030 Global Forum. In his opinion, these experiences were positive for addressing racial issues, given that there were children of different races/ethnicities. A 10-year-old student at another school said that "most people feel more open about racial issues."

At an Indigenous school, a male teacher noted a positive impact on students' self-esteem: "They can feel like they belong to the school." At a secondary school, a female teacher stated, "Few have stayed the same; there has been more reflection on empathy."

A female teacher from another school reported that there have been more projects aimed at involving immigrant students, namely a cultural fair. Another teacher from that school also found that relationships have improved, associating this change with the presentation of the local project's action proposal and study texts by her colleague, who is a mobilizing agent for action research: "We have improved our performance by reflecting more on our practice." According to a female operational employee at that same school, interracial relationships have changed: "There used to be bullying, but now we don't have it."

Seeking to obtain more information and better understand the interviewees' points of view, each was asked to share **a significant story involving people of different races/ethnicities**. A female teacher reported an incident of racism involving a 15-year-old boy who made a prejudiced comment about an 11-year-old girl. The situation was addressed through conversations with the boy's family.

Racist acts by newcomers to schools that seek to educate for equality were mentioned more than once. A female teacher noticed that a child "didn't like her Black [Haitian] friends, she wanted to switch desks." The teacher assigned her an

activity about countries and put her in the group with Haitian peers: "Today, she gets along well; we discuss racial segregation, we've been working on it all year."

Only once was there mention of racism perpetrated by teachers, reported by a mother of students: "We were at the water park; a female teacher touched a child's coily hair and said [mockingly] that it doesn't get wet." This mother suggested that the school provide training on derogatory comments like these.

Conversely, anti-racist teaching was highlighted by an 11-year-old student. He reported that classmates in his class were making fun of an autistic Black boy: "The teacher scolded them, and they stopped." A teacher described the work of a White male colleague of hers, who taught students a workshop on making turbans, explaining Black history and culture. She pointed out that, in writing classes, they use characters and works by authors from Black literature.

A teacher from a school with a majority of Black students stated that her behavior changed, and they began to identify as Black, but that "it is a daily struggle because the very family does not recognize itself as Black and tries to 'whiten' their children. It has to be done with the family too." The female librarian from another school alluded to a girl student who pejoratively called a teacher a "little Black doll." She also recalled the mother who was looking for the coordinator and, upon finding her, was surprised: "Is this Black lady the coordinator?".

The interview also probed **connections between the action research process and relationships of people from different races/ethnicities**. About half of the respondents reported not seeing this association. Others expressed doubts or inklings about it, such as a female teacher who perceived there had been "notable progress," particularly in the rapport and closeness among students and teachers engaged in action research. She remembered an activity called "Knowledge of the Self," which encouraged students to reflect on their identity and included meditation, yoga, and conversations about feelings and

self-awareness. She also mentioned working with self-portraits, "encouraging children to look in the mirror and love themselves."

At a high school, a teacher stated, "I don't know much about action research." A student simply answered, "I don't know." However, a male classmate was emphatic about action research's connection with racial relationships: "Definitely, because it has to do with equality in all areas of the school."

A female teacher from another school noted that their action research project also addresses racial issues because "all the projects at our school do." Considering the impacts of action research, a 15-year-old boy remarked, "People didn't get along and fought a lot, but now they understand each other better." A female student explained, "Now that I understand how action research works at school, I believe it is related to interethnic relations." Another girl, aged 10, agreed with this connection and stated, "[Action research works] to find out what happens to people of different races and whether they stay apart."

One teacher reaffirmed the adequacy of action research processes for helping children "from Black communities to rediscover themselves." She noted that Black children sometimes used green crayons to represent their skin color, and teachers had advised them "never to paint themselves green."

A female teacher from another school expressed a similar perspective regarding relations with immigrants: "We did research and held faculty meetings to find the best way to work, learning about these families' realities and daily lives." Another female teacher highlighted the importance of equity in daily interactions, emphasizing the effort to "make children aware of the importance of respect, empathy, and collaboration." A third female teacher from this school added, "The research team brings information; we improve it to a language that children use, and we take it to the classroom."

For a male high school student, relations between people of different races/ethnicities have improved "during games, etc.," and he believes that the

action research process has contributed to this change. A boy classmate agreed: "Before, we didn't know each other." A community leader from another school also identified an improvement in these relationships, remarking that this can be "seen in the children's responses," especially with a teacher who serves as a mobilizing agent for the Escolas2030 program. The principal of another school pointed out the connection between the action research project and behavioral changes, particularly among adolescents, who have engaged more intensely with the project. According to her, "there were a lot of fights and bullying. This year, there were no fights." The principal of yet another school remarked, "Studying and researching makes us reflect and review our practices. Action research makes us rethink. This reflects on the children: empathy."

At an Indigenous school, a Baniwa teacher believes that action research fosters a sense of unity among an ethnic group divided into multiple clans. A young woman who is a former student at the school reiterated that interactions among ethnic groups are consistently harmonious, adding, "With the [action research] project, there was a greater exchange of cultures, knowledge, and experiences. We learned something about each other's history."

Based on the information obtained from these interviews, the hypothesis that action research may be associated with changes in the school environment that promote greater equity in relationships between students of different races/ethnicities should be considered valid. However, this association was indicated only in some researched schools and was not universally reported by all interviewees at the same institution. There exists thus a discrepancy in occurrences and an unequal perception.

6.3 On female and male individuals

To address the issue, the triggering question was: **Should some school activities be designated for girls only or for boys only?** Overall, the responses emphasized a preference for inclusive activities that encompass both genders. Some participants indicated that this is already the norm, as one male student who remarked, "Boys and girls participate in all activities; there is no exclusive focus based on gender."

Nevertheless, some responses highlighted the need for specific instances to address gender-related issues by separating girls and boys. For example, a female teacher stated, "We separate boys and girls only in activities that address specific topics related to sexuality."

Another female teacher echoed this sentiment: "Depending on the subject—especially with topics such as the body, domestic violence, or sexual violence—it is better to work specifically with an all-female group so that women feel comfortable. Separately, they want to address the issue of harassment with male students."

A young Indigenous student highlighted a cultural peculiarity. She explained that in her community, men and women engage in different activities; then at school, boys study and research basketry because "ceramics are rather feminine and [wood and basketry] crafts are rather masculine." However, she noted that "inside the school there are no such differences; everyone is equal."

When responses indicated restrictive indications regarding equal gender participation, it was primarily in sports. One student remarked, "The activities intended for boys only or girls only are those that belong to the world of school games: there are male and female teams." There were also expressions of hesitance concerning participation in artistic activities. A 17-year-old female student stated, "Boys don't like to take part in activities that involve dance and theater." However, this perception is not unanimous: one student offered a

contrasting view, reporting a unique aspect of her school: "I don't see any type of resistance on the part of boys or girls to participate in a certain activity. For example, I coordinate a robotics group made up of girls. This is not very common in other schools."

A minority believes that separate activities should exist, as noted by a 12-year-old girl: "For example, [some think that] 'boys can't play with dolls' and 'girls can't play with cars'."

To identify segregating tendencies, the following question was posed: **Do girls not want boys to participate in their activities, and do boys not want girls to participate in theirs?** Most respondents indicated that they saw no issue with this acceptance. A female teacher noted that while she did not observe any exclusion, she also did not see "much interest from girls in getting together with boys and vice versa." A 10-year-old female student echoed this sentiment: "Sometimes, girls do not invite boys to play because they prefer different games. Girls and boys generally prefer to engage in activities separately." Another 11-year-old girl stated, "Yes, it happens a lot in my class: girls only want to be with girls and boys only with boys."

Responses also highlighted preferences for certain activities based on gender. A 14-year-old female student remarked that "some girls do not want to participate in physical activities, and some boys do not like to participate in activities that involve dancing." One female teacher observed that these preferences vary by age: "Teenagers tend to talk a lot among themselves. [It's] mostly the younger children [who prefer same-gender activities]: girls want to play with dolls and do not allow boys to join; while boys want to play ball and do not allow girls to join." In line with this, a female pedagogical coordinator at another school noted that many children hold family-influenced views, expressing sentiments such as "ball games are for boys," or resisting

mixed-gender interactions. Additionally, "older students often repeat homophobic remarks and make offensive jokes."

For a 12-year-old girl, instances of sexism primarily occur in contexts related to sports competitions: "I feel that many boys are ignorant of women's issues; they think that women want to undermine men's existence. It's nothing like that; we're just fighting for social equality."

The staff groups strive to uphold the schools' egalitarian orientation, as illustrated by the words of a female teacher: "We have that issue around soccer, which I consider to be a classic case. In other words, girls are somewhat distant when it comes to soccer. However, I also see that both girls and boys have begun to understand the collective proposal of our school: they already know they will participate in everything." This same teacher noted that there is "a group of five or six boys who are very sexist," but she also reported that "they are improving through the discussions we are promoting." Another female student remarked, "Some boys don't want to share the [sports] court, because they only want to play soccer, while the girls want to play other things. Sometimes, the girls prefer to play among themselves, but the teachers insist that everyone should play together."

A statistical minority felt that distinguishing between girls and boys was necessary in certain activities. One Indigenous male teacher stated, "At the end of the school day, when there are games and playtime, girls and boys play together. Alson in the classroom, activities are conducted jointly, without distinction. However, during competitive occasions—for example, soccer tournaments—there are separate teams for girls and boys, and they do not compete against each other." For one female teacher, it makes sense to have separation at times "because girls feel very shy around boys, especially as they grow older due to the nicknames and gossip that arise." Furthermore, she noted, "Boys also need their own space to address their issues." She observed, "There is

a group of girls who are aware of the fight for equal rights and are becoming more accustomed to the idea that they should not be prohibited from participating in any activities."

Collaboration was also a subject of investigation, framed by the following question: **Do girls collaborate in the tasks that boys are engaged in?** The prevailing view among respondents was that girls do indeed collaborate in boys' activities. Admitting to this, an 11-year-old boy student pointed out, though: "There are things that only girls know, and others that only boys know." A female teacher from another school noted that collaboration occurs in actions such as tying shoelaces or putting away bottles and toys. Another teacher provided additional examples of collaboration among children: "In putting away materials or during cooking activities."

To gain insights into egalitarian inclinations regarding gender, interviewees were asked to **identify differences in the appearance, ideas, or behavior of boys and girls**. Generally, differences were noted concerning aspects of communication and sensitivity. As one female teacher remarked, "In terms of ideas, girls are more participative and talkative; they express their opinions more. In the student union, there are more girls in leadership roles." A 12-year-old female student added, "Girls are more organized; they make no fuss; they stay in their own corner. Boys are more messy and playful." A 14-year-old boy echoed these views: "Yes. Girls have more ideas than boys. In the student union, a friend of mine is a leader; she conducts interviews, while the boys in the student union don't do that."

According to one female teacher, "Girls are much further developed: while boys are more into messing around and playing around, girls dress up and put on makeup." Another female teacher highlighted the way students speak: "Girls think more before they speak, while boys are more impulsive, hasty, and rushed." For one female student, boys are more "rough" and "immature," and

tend to engage in physical play, such as slapping someone and running, or taking something from a classmate and hiding it. According also to a female teacher, "Boys like physical play more, while girls engage in other types of play, so our work consisted in trying to integrate all this. Girls are more collaborative and resolve conflicts through verbal strategies. Boys, on the other hand, tend to manifest physical aggression." Another female teacher reported that "girls are more engaged in reading, or research… while boys are more engaged in sports."

An Indigenous teacher stated that the culture of his Baniwa people is still marked by sexism, evidenced by the predominance of men in leadership positions and the subordinate role of women in relation to their husbands, which reflects a hierarchy of power between the genders. According to him, Indigenous teachers seek to subvert this logic, for example, by ensuring that both a girl and a boy occupy positions representing the class.

Another female teacher also highlighted the struggle for gender equality—the same teacher who noted that "there is a group of girls who are aware of the fight for equal rights and are becoming more accustomed to the idea that they should not be prohibited from participating in any activities." For her, boys pursue a very strong notion of a "macho" man and are often exposed to pornography, which frequently represents a violent sexual initiation.

One of the mothers interviewed brought up another distinction: "Boys and girls watch different YouTubers."

To determine whether gender relations underwent any changes after the beginning of the action research projects, we asked **whether, as of 2021, girls and boys have continued to behave the same way toward each other**. In general, respondents indicated that behaviors had not changed in that regard; however, paradoxically, they highlighted an increase in actions for equality and an enhancement in their effects. According to a female student, "Everyone has always treated each other as equals," but "with the [action research] project, this

intensified even more because they [the boys] started to talk more with the girls to better understand their side, and the girls reciprocated." From her point of view, the action research helped girls recognize that they have rights just like men: "Everyone is equal before the law." She mentioned that before the project, "there was less participation from the girls because they were shy and embarrassed." A teacher from another school confirmed: "[Relationships] have improved; we have been working with them. Boys now ask to play with dolls because they want to be fathers."

An Indigenous male teacher stated that there had been significant change after action research had begun, in terms of collaborative learning: "When we introduced this collaborative learning, even the way we talk in the classroom began to change—we transformed this environment of conversation into circles. Everyone there is equal to everyone else. In this sense, we can highlight the progress our students have made in terms of equality."

To better understand the aspects that matter in gender relations, each interviewee was asked to describe **a significant situation involving interactions of boys and girls**. A 15-year-old male student reported an episode of discrimination: a friend of his who is transgender was mocked outside of school for wearing makeup and a wig. A group of five girls attacked her, and the father of one of these girls threatened her and her family. "Despite the fear, she continued to attend school."

Another 14-year-old female student emphasized the importance of collaboration, noting it as positive that boys support girls in activities. She cited physical activities as an example: "If a girl is having difficulty, boys offer help."

In the final part of the interview, we asked **whether the action research process has anything to do with relationships between boys and girls**. A significant number of them thought so, claiming that, with the action research, actions and discussions about gender equality have intensified. A female teacher,

for example, stated, "Yes, it helps teachers think of actions to develop these aspects. For example: student monitors [to assist teachers] are quite active and participatory. The school's project and philosophy help these student monitors develop more. They feel important. They value this."

Another female teacher associated the action research with an improvement in attitudes, the same one who said that "boys ask to play with dolls because they want to be fathers." A third female teacher reinforced: "Gradually, they deconstructed these patterns, through discussion groups and also through the division of tasks in responsibility groups, conceived through action research: cleaning, conflict mediation, and study support. With the cleaning groups, for example, the notion that cleaning is a woman's role was deconstructed."

According to this teacher, the action research project was essential and, when she understood the proposal, she felt relieved to be able to identify ways to improve her practices. She stated that, in the interactions in her class, the children are maturing, "and conflicts are important to highlight issues that need to be worked on, such as those related to gender and race." The principal of this school had the same understanding of the action research process: "Yes, we started talking more [about these topics after the project begun], in assemblies or in conversations with teachers."

There were also students who agreed that the program encouraged egalitarian conversations and attitudes between boys and girls. A 12-year-old boy stated that during the virtual meetings of Escolas2030, he witnessed "moments when the boys welcomed the girls." Another boy, who is in high school, expressed his certainty about the connection between the action research process and "gender equality, and how [this subject] is being addressed at school and inside the classrooms." A student from a different high school confirmed that interactions between genders have improved: in his class, there used to be a

group of girls separated from another group of boys, but "now we are more united; with the [Escolas]2030 action research project, as we interact in cooperative cells, that separation into [same-gender] cliques is not as strong anymore. I participated in the interviews, and I saw how cooperative cells helped individuals who had relationship difficulties to overcome them and engage with others." Teachers who affirmed the program's connection with gender equity also reported its contribution to reflections on pedagogical practice. One teacher remarked, "This research has begun, and [the teacher who serves as a mobilizing agent] has provided us with a lot of material. This makes things much easier. We exchange many ideas. There is more foundation for our work; we are better prepared for the classroom."

A male Indigenous teacher associated action research with sporting events, describing them as "moments when both girls and boys have the opportunity to showcase their skills and talents." He noted that girls did not participate in these events before: "The female category was only recently included in the sports tournaments held in the communities." The teacher saw this inclusion as a step forward in increasing diversity.

A male teacher from another school emphasized the importance of the initial step of action research, which involved drafting the "Ground Zero[7]" document: "That helped me revisit certain points, […] allowed me to recall the real reason I chose this school 20 years ago, […] and served to draw our attention to the issues that are being urgently discussed in our society."

Few individuals responded negatively to the question; among them was the female principal at a Quilombola school, who stated, "I do not see a direct

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[7] The coordination team of the Escolas2030 program advised that the development of the action research project in each school should be preceded by the collective writing of a document called Marco Zero, chronicling the trajectory and explaining the main characteristics of the proposal and practices of the educational organization.

relationship between the action research being conducted at the school and the issue of gender."

6.4 On people of different sexual orientations

To characterize more or less egalitarian forms of interaction, we also sought to detect the interviewees' willingness to interact with people of different sexual orientations. The question was: **Should some school activities be only for heterosexuals and others only for people of other sexual orientations?** The answers emphasized that the topic is rarely discussed at school, but the most widespread opinion was that separate activities generate exclusion and therefore should not occur. A female teacher commented that such separation leads to discrimination and that, when there is investment in inclusion, there is more acceptance and respect among people.

A pedagogical coordinator reported that there are transgender individuals in her institution, and that the school created an LGBT (Lesbian, Gay, Bisexual and Transgender) collective of students. A 10-year-old girl said she has a male friend who likes boys and that her classmates treat him well: "My class is like a family, he is not excluded from anything." In the interviews, the opinion that segregation should be avoided was common. A 16-year-old girl student from another school thought about it and said she would prefer there not to be a separation of activities, as this could lead to exclusion.

A 15-year-old Indigenous girl reported that there were no people of different sexual orientations at her school. She added that in her village, "people of other sexual orientations have always been respected."

To form an image of welcoming or exclusionary attitudes, the question was asked: **Are there any students who do not want their classmates of other sexual orientations to participate in the activities they are doing?** The

answers varied among schools, and also within the same educational organization.

There were good examples of equal treatment, as seen in the testimonies of a male and a female student from different schools, both 14 years old. According to the girl, "Generally, people feel comfortable discussing topics related to sexuality here at school; everyone supports it. We have a tradition of organizing committees to address these issues." The boy stated, "There are gay, lesbian, and transgender students at the school, and people are free to express themselves. In fact, these individuals hold lectures here at the school to discuss this topic."

Echoing this perspective, a former student and volunteer from one of the schools noted that there was no rejection: "We must have zero prejudice," corroborating the prevailing vision of inclusion and respect for people of different sexual orientations. Younger students also show respect for others of different sexual orientations; as a 12-year-old girl remarked, "The students are very welcoming. There is a transgender boy (who was assigned female at birth), and he always participates in the activities."

A 17-year-old male student from another school expressed a similar view: "Everyone here is very liberal when it comes to sexuality; everyone feels comfortable stating their sexual orientation." A school administrator noted the importance of family relationships: "We have a lot of lesbian and gay students, as well as some who have transitioned. We often see these students empowering themselves and coming out to their families."

Several testimonies indicated that in school environments where equity is prioritized, prejudice can still occur, manifested through jokes, teasing, name-calling, and bullying. One teacher remarked, "They all [students] get along, and homosexual individuals are integrated into the groups. Homophobic insults used to be common, but, as with the issue of racism, we emphasize that

homophobia is a crime." According to another teacher, "[Students] treat each other well, but sometimes there are disagreements; there is a certain degree of respect, but also unpleasant jokes among them." Similarly, another teacher stated, "During my time here, I have only witnessed one case of homophobia, but we resolved it through dialogue."

For a 13-year-old girl, "most of the time, it's not us, the students, who exclude others because of their [sexual] orientation; instead, it's the family members who don't support those kids. For instance, there was a case of a girl who left school because her parents believed her friends were negatively influencing her sexuality; in other words, it was pure prejudice." A teacher from another school noted that cisgender and gay boys tend to avoid mingling, while in the case of girls, there is no friction. A 16-year-old girl from another school also pointed out that boys have greater difficulty developing egalitarian relationships: "The boys didn't want a transgender boy and a gay boy to participate because they said they wouldn't know how to play a percussion instrument in the same way as straight boys."

For a female teacher at a vocational high school, "It seems that [students] don't want the [different] person to be there, sharing activities with them. In one class, there is a group of transgender students who are isolated from the others, away from the people who harass them. Lesbian girls are another separate group. The lesbian kids in the front; the transgender kids in the back; other groups in the corner, the evangelical kids, the Black kids." A 9-year-old boy from another school stated that one of his friends had been bullied because of her sexual orientation; the adults at the school did not see the situation happening and, therefore, did not take action.

For a male Baniwa teacher at an Indigenous school, different sexual orientations are a sensitive subject for his people, and he was unable to say whether there were LGBTQIA+ students at his school. Regarding the

collaboration of students with their peers of another sexual orientation in tasks, positive responses predominated, such as this one from a 14-year-old girl who said, "Heterosexual students do not refuse to participate in an activity together with students who have another type of sexual orientation. Everyone collaborates."

To detect prejudiced tendencies, the interviewees were asked about **the differences they noticed in the appearance, ideas, or behavior of students with different sexual orientations**. The descriptions were generally neutral; when any connotation was attributed, it tended to be a positive difference in reference to non-heterosexual students.

One teacher highlighted, "This is something that positively impresses me here at school: I see that the students feel free to express their homosexuality, bisexuality, and so on." She added, "We do have students who exhibit more homophobic attitudes, but we try to work to address this behavior, and the other students often distance themselves from those individuals as well."

Another female teacher pointed out differences in attitudes, using a specific student as an example. She noted that he speaks and gestures in peculiar ways, has more affinity with girls, and exhibits "more feminine attitudes." A female teacher from another school highlighted differences in ideas: "[Non-heterosexual students] defend their beliefs and those of the LGBTQIA+ community; and the other kids try to understand them, recognizing that their classmate is fighting for certain rights, such as the use of their chosen name'." A 16-year-old male student from the same school emphasized differences in appearance: "Generally, people of other sexual orientations adopt different postures, wear different clothes, and are more open."

A female teacher from another school stated, "They are discovering themselves. The girl who sees herself as a boy comes [to school] presenting as a boy. Similarly, some boys wear earrings. There is a case of a girl who uses a

different name than the one in the Class Diary. She stands by this. We respect it." According to this teacher, "Appearance is a strong difference"; students with diverse sexual orientations indeed differ but coexist without conflict. Furthermore, they are "often much more informed than we are." Another female teacher, from yet another school, echoed this observation, saying, "They bring clarification about concepts to the class." The female principal of this school underscored these students' extroversion and their awareness of their rights, commenting, "They are more empowered; they are not ashamed of coming out, speaking out, and asserting their rights." A male teacher from another school remarked, "Homosexual individuals are very intelligent; I don't think they are even in need of [other people's] collaboration."

However, there are also difficulties. A female teacher reported, "Some seem to want to hide: they wear masks. The homosexual students." At the same school, a staff member who is also the mother of a student stated, "We know who they [the non-heterosexual kids] are […], but they don't show it."

To explore the links between the state of educational equity—specifically in interactions among people of different sexual orientations—and the initiation of action research projects, participants were asked **whether, since 2021, girls and boys have continued to act and interact in the same way toward individuals with different sexual orientations**.

Several testimonies indicated that these interactions have improved in terms of equity. A 14-year-old girl student said, "There is a significant improvement in the acceptance of differences. Previously, there was a lot of prejudice." She reported that there is a specific project at the school called "Diversity Connection," which addresses issues of sexual orientation, gender, race, and disabilities.

A 10-year-old boy from another school did not comment on whether relations had changed, but he noted, "I think it's absurd that people don't accept

LGBT individuals. Everyone has the right to choose their sexuality. What's wrong with that? For example, I'm a religious person and I can't have a different orientation, but I respect my classmates who are gay." He also mentioned that the topic is "widely debated," citing "a project organized by the students themselves, without any kind of intervention from the teachers, to discuss the different issues involving sexual orientation." A female teacher from yet another school stated that there has been increasing acceptance and "more space to talk about these issues." Echoing this sentiment, a female principal from another school stated, "Until 2021, [sexual diversity in the school] was very camouflaged; today, it's more natural to talk, to take a stand, and to come out."

There were also responses indicating that relationships among people of different sexual orientations were already egalitarian and continued to be so. According to a female teacher, people have been seeking equity since her school was founded, in 1990; she reflects, "I have seen neither improvement nor worsening." For a 16-year-old vocational high school student, relationships remained free of prejudice, a fact he associated with the action research process. He added that "the internet has also helped to reduce prejudice."

Another female teacher stated that she could not yet identify any changes in relationships because the action research was still in its infancy—a task for which she, in fact, had little time available: "We are in the initial phase, with no visible results. We want to see the impact of the discussion groups on students' perceptions of the school. But my efforts are consumed by dedication to study support[8], due to external [large-scale] assessments."

A 12-year-old girl pointed out that inequality persists: "There is still a lot of prejudice." Another girl, aged 13, noted, "Our school still approaches this topic superficially. Every now and then, we have a discussion group, but that's it."

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[8] Organizing "study assistance" classes ("reforço escolar" in Portuguese) is a common practice to help students with their learning and assignments outside of regular school hours.

To better define the meanings attributed to the topic by the people interviewed, they were asked to report **any significant situations involving boys or girls of dissident sexual orientation**. A 12-year-old girl student said that her school addresses the topic of sexual orientation in various ways "and the students participate without any type of restriction." She said that a girl and a boy in the 7th grade are transgender; and that many people "don't come out because they fear reprisals from their classmates" and "don't want to be teased." The interviewee explained, "There are boys, for example, who tell transgender students to go wash the dishes, or make fun of them with something related to pregnancy."

A female teacher at a vocational high school highlighted demonstrations of opposition by teachers: "I didn't imagine that there were teachers so radically against the fact that there are students with a sexual orientation that differs from the conventional. And that the psychological well-being of the student could be insignificant compared to what they [those teachers] consider correct. They even openly stated that religion could reorient the student, and that schizophrenia could lead to confusion in terms of sexual orientation. And the student's suffering was belittled with the suggestion that he could wait longer until he could truly define or 'cure himself.' It doesn't matter if the transgender boy self-harms or wants to kill himself; all of this in their view could be the result of confusion in adolescence," all notions with which she disagrees.

A male teacher who works in youth and adult education also pointed out the prejudice of teachers: "Here at school there is a debate, for example, about the use of bathrooms. There are teachers who say, 'If I catch someone [of a different gender] in the bathroom, I'm going to hit them'."

A female principal referred to the behavior of the students' family members, recalling the time when a father saw a message from his son declaring his love for another boy: "The father was shocked"; he blocked the messages

"and took away his son's cell phone." At another school, a 15-year-old boy reported a similar situation with a different outcome: a friend of his was bisexual "and was afraid to come out to his father." As his friend, the interviewed student supported him during this process, "and, in the end, the father accepted his son's sexuality." Another female principal reported an activity in which students wrote letters with gift requests. A boy asked for a doll and his mother was informed about this: "Unfortunately, she didn't accept it and said he would have to choose another gift."

One female teacher recalled a situation that surprised her: "Recently, a student brought up the concept of calling oneself a fluid person: sometimes identifying as a girl and sometimes as a boy. They brought up this notion, seeming to already know a lot about it." She emphasized that, like her fellow teachers, she was unfamiliar with the idea.

Some situations mentioned emphasized the importance of the teacher's role in mediating conflicts or manifestations of prejudice. A male teacher reported that "one time, they didn't want a bisexual person on the team. I put him on the team. They accepted him because I told them to. After that, they continued to accept him without us having to tell them to." Another male teacher commented on a student who identifies as a woman and who had "dropped out of school for a while because he suffered a lot at his original school. When he arrived here, I talked to his new classmates and also to his father to improve the acceptance of this student." A third male teacher reported that there was "a trans student, and the kids didn't respect his chosen name. I wielded my authority to establish respect."

A female teacher recalled a student who "only wanted to play with girls" and, at the age of 10, already understood a lot about his own sexual orientation. He expressed awareness that he would face a lot of discrimination. "Among them

[his classmates], there was some teasing, but it stopped because he excelled in school, read a lot, was well-known at school, and made friends easily."

One female teacher from another school reported that "in previous years, a boy used to like to dress up as a princess. The children, aged 5 and 6, said he couldn't." A 16-year-old girl described situations where "people treat others in a way they shouldn't: not calling them by the name or gender they want to be called."

To more directly assess the influence of action research in schools, we asked **whether the action research process affected the students' relationships with classmates of different sexual orientations**. The majority of responses indicated that participants were aware of the action research projects and that they did address, among other aspects, issues of equity among people with different sexual orientations. One female teacher stated, "I feel that, with the arrival of the action research project, the students involved began to interact better with their peers, changed their behavior, and developed greater responsibility toward the group." A male student from a vocational high school who joined in 2023 believed that since the action research began, relationships among people of different sexual orientations had improved: "In the action research, the collaborative cells helped a lot with conviviality: they helped us learn to live together, respect limits, and become more united. This helped the class evolve."

A female student, also in vocational high school, stated that action research indeed affects these relationships, but that they were already positive and had not changed: "It has always been something [diverse sexual orientations] against which we don't have prejudices." A female teacher from the same school also sees a connection between these interactions and action research, believing that relationships have improved in this regard: "Trans

[students] are more open to showing themselves and have been more respected in this way."

One female employee from another school noted that these relationships have recently improved in terms of the attitudes of students and faculty. She attributed the change to the influence of the action research project—which, at her school, focused on learning agency and empathy—and stated that it "helped with the dynamics of understanding and schoolwork." In a similar vein, a teacher from another school commented that her institution has many projects and workshops (with themes such as dance or philosophy), and action research "has helped a lot: it has improved respect and conviviality." Commenting on a specific case, this teacher said, "The team was better prepared to help and talk to this boy [who wanted to kiss his male classmates]." She added, "If I hadn't been provided this background, I wouldn't know how to deal with it. Teachers are trained and seek to be researchers [on these topics]." For another female teacher at the same school, action research "helps us learn to overcome barriers of prejudice and to collaborate without these barriers." The principal of this school also explained that action research "opens new perspectives on respect for others and tolerance. Action research makes us reconsider our stance."

Several participants were unaware of action research, attributing the drive for equity to the work that was already being developed at their school. Conversely, a small group did not see the action research process as associated with the students' interactions with classmates of different sexual orientations or chose not to answer whether this influence exists.

7 CONCLUSION

This research was proposed to identify evidence-based solutions for promoting equity in education, specifically in the field of action research approaches. Part of the task was to systematically review investigations on action research in schools around the globe, to gather previous quantitative and qualitative evidence regarding its impacts on educational equity. More research is needed to verify this potential in different contexts of social vulnerability and cultural diversity, since the review of the literature revealed a significant gap in existing studies. Very few investigations present evidence of such an influence; while other works, although addressing the issue of equity, have imprecise methodological designs and inconclusive results.

The best available evidence on the relationship between action research and educational equity is found in only two works. One is an investigation into the distributed leadership experiment, which led to improved student performance on language and mathematics tests. The other focuses on teacher training on prejudice and bias, concluding it led to increased student motivation to learn, strengthened their sense of belonging at school, and reduced educational disparities between Black and White students.

Impact of action research on educational equity

We also sought to clarify whether action research in the innovative educational organizations of the Escolas2030 network promoted greater equity in gender relations, interethnic relations, and between students with and without disabilities. The hypothesis focused on was that the action research process is, in fact, associated with a change in the school environment in favor of greater equity in these relationships. Although the action research projects are still in their initial phase, the results showed signs that they favor learnings manifested in greater equity in social relations within the institutions investigated. Overall,

the results obtained indicate that *action research contributed to the promotion of more equitable environments, although the effects of the initial phase of this methodological line in the schools involved are subtle*.

One of the central procedures of the research was participant observation in five schools of the Escolas2030 program, tracking the focuses of each action research project and its effects on the dynamics of equity. The results varied according to the context of each school, but some patterns were found. In terms of ethnic-racial equity, for example, there were no records of explicit racial discrimination, and some schools have actions aimed at anti-racist education and the promotion of racial equality.

With regard to gender relations and relationships among people of different sexual orientations, action research has helped transform students' perceptions and attitudes. This has led, for example, to the inclusion of girls in sports activities and to open discussions about gender equality.

Regarding the interaction between individuals with and without disabilities, an increase in empathy and respect has been observed. One specific school staff began to notice difficulties in welcoming students with invisible disabilities, such as autism or ADHD, which require greater attention and accommodation in teaching methods.

A heterogeneity of the positive impact of action research on equity in relationships was observed. In each school, this impact may manifest in interethnic relations or in relations between individuals with and without disabilities, but not necessarily in gender relations as well.

The information gathered through participant observation supports the understanding that action research has generated slight but positive impacts, primarily in raising awareness and fostering dialogue about equality. The creation of committees and other opportunities for reflection on daily practices has contributed to the development of more inclusive environments that are sensitive to differences.

However, the challenge remains for these practices to lead to significant learning outcomes that effectively surmount inequity in interactions among students.

<u>Teacher training for educational equity</u>

To contextualize the potential contributions of action research processes to teacher training for educational equity, we also sought information on the training provided on these topics by the management bodies of the participating schools' respective regional networks. In two of these networks, there is no such training available; meanwhile, in the three locations where in-service training initiatives addressing aspects of educational equity do exist, these efforts are isolated, and their reach is limited to a smaller portion of the faculty, typically a minority.

Action research is fundamentally a process of learning about one's own practices, whether individually or collectively. Being locally developed in each school, it can complement externally originated training initiatives, and may enhance the effectiveness of pedagogical efforts aimed at promoting educational equity.

The interviews revealed that the action research approach impacts teacher training for educational equity by encouraging participants to review their viewpoints and concepts about learning; by modifying current practices; or by encouraging teachers to confirm their ongoing equity procedures, in addition to sharing knowledge that is usually concentrated in universities. The approach also created situations that led to greater proximity among students, during anti-racist practices dedicated to reflecting on identity. In addition, it had an impact because participants experienced dealing with new information and translating it into language that was accessible to children. Furthermore, action research meant teachers are studying, reflecting on, and reviewing usual teaching procedures, thus helping to identify ways to improve practices and develop

actions in favor of egalitarian gender relations. It also had an impact by encouraging more conversations, including among teachers, and by allowing the sharing of study materials that provide a foundation and better preparation for teaching work.

It was also found that the preparation of a Ground Zero document for each action research project encouraged the conscious reformulation of the institution's trajectory and the tendential traits of its performance. The action research approach also represented a means of identifying the effect that certain activities may have on students' perceptions. Finally, the act of focusing on certain learning outcomes such as "agency" and "empathy" helped participants to create their personal understanding about them and work to develop them.

Influence of action research for an egalitarian and integrative vision

The quantitative survey conducted by this research on educators' and students' perceptions regarding equity in their organizations indicated an enhancement in the egalitarian view of relationships between people with and without disabilities. This increase is attributed to several factors, including the influence of the action research process, although this influence is not as strong as that of other actions by professionals and students.

Regarding relationships between people of different races and ethnicities, a predominant perception of an egalitarian and integrative view was noted. For students, this trend either increased or remained stable, primarily due to actions originated outside the school (including the action research process), which were deemed equally important as the regular efforts of professionals and students. Educators, on the other hand, identified their own actions as the main contributors to this positive environment.

For both groups, an integrative and egalitarian view of relationships between people of different genders prevailed. The predominant opinion was that the increase or constancy of these relationships also stemmed from actions originating outside the school, but chiefly from other actions undertaken by students and educators themselves.

Both groups also believe that an integrative and egalitarian view predominates in interactions among people of different sexual orientations. The students attributed either the increase or continuity of this pattern, roughly in equal measure, to actions originating outside of school, as well as their own actions, and the initiatives of educators. For the latter group, in turn, actions originating outside of school still hold significant influence, but less so than the other actions taken by students and educators.

Consequently, the results of the quantitative survey indicate that action research, situated among the educational initiatives originating outside of school, has influenced the perceived maintenance or increase of educational equity as reflected in student relationships. However, this influence was considered to be equal to or smaller than that of other actions taken by students and educators.

As a complementary activity, this research conducted interviews with members of the Escolas2030 program's reference schools, including people of different ages, functions, and regions of the country. *The information obtained supports the veracity of the hypothesis that action research is associated with a change in the school environment in favor of greater equity in relationships between students with and without disabilities, between students of different races/ethnicities, between females and males, and among people of different sexual orientations.* However, this occurs only in some of the researched schools, in which this association is furthermore variable, being perceived as stronger only by a small portion of participants.

The interviews conducted revealed that in each school, only a small portion of the community was aware of the ongoing action-research process and could link it to efforts promoting educational equity or observed changes in the targeted relationships. Schools operate across multiple daily shifts, with distinct classes and teachers often working varying schedules and days. These structures are entrenched in employment contracts, forming a restrictive tradition that undermines the development of each institution as a cohesive collective. This fragmentation also extends to the student body and students' families. Within this framework, communication challenges intensify, and the diverse learning initiatives occurring within the school struggle to gain visibility across the broader school community.

Not all action research processes in schools participating in the Escolas2030 program in Brazil generate learning outcomes that are expressed in greater equity. There are discrepancies in occurrences, and unequal perceptions of these cases' implications.

Varied impact of action research among students

The dissemination of information within organizations is often uneven, and this is especially pronounced in educational organizations. This is an important reason why the impact of the action research approach is felt differently by different students. Many note improvements in terms of equity in interactions with individuals with disabilities; the occurrence of this change coincides with the progress of the action research processes, but only a small portion see these processes as the cause of the perceived change.

There are those who believe that equity has improved in interethnic relations, with greater unity and better mutual understanding. There are also those who expressed doubts about the magnitude of this change or even its

occurrence. Beyond this perception, the impact varied: some students recognize their anti-racist stance as legitimized, while others refuse to allow peers of another race/ethnicity to participate in activities, or commit other racist acts.

The reflections and actions generated in the action research processes provided learning outcomes expressed in greater equality in relationships between students of different genders. Distinct impacts, with a complementary character, were perceived on boys and girls. The proposed approach helped to dissolve the everyday separation into same-gender groups; some boys began to talk more with girls and understand them better; others gave new meaning to playing with dolls, considering their possible future role as fathers, and incorporating care for babies. Among the girls, more clearly, the approach supported them to participate in activities with less shyness and embarrassment, and to understand that they have the same rights as their male peers. In some cases, girls did not participate before in sports tournaments and began to participate.

The impact of the action research approach was also manifested in different ways in relationships among people of different sexual orientations. Some responses indicated improvement in equity, with greater acceptance of differences and greater unity. In others, the impact was perceived in actively maintaining the already egalitarian nature of these relationships. When previous occurrences of prejudice were perceived, very few participants indicated that this remained unchanged.

Action research, different learners, and learning differences

Regarding gender relations, interethnic relations, and relations among people with different sexual orientations, the results of the interviews allow us to say that action research helps teachers to identify and support the variability of learners in

these profiles and their learning differences. This help was not detected in relation to students with disabilities. It was not necessarily due to action research: teachers who directly conduct these research projects were already dedicated to identifying students with disabilities and their characteristics related to learning, so much so that they emphasized the need to make accommodations so that these students could participate with their peers.

Action research was mentioned as an ally in redefining the identity of Black children and in supporting their learning about themselves, thus strengthening a positive self-image. By using action research methodologies, these experiments are controlled, allowing the detection of variations in their effectiveness, that is, of individual learning differences. Also in relation to immigrants, an action research project made it possible to understand the reality of families and seek better ways of teaching. In the participant multi-ethnic Indigenous school, the process enhanced knowledge of the variety of local cultures.

The action research approach was regarded as a valuable resource for improving relationships between boys and girls, as it encouraged reflection and promoted initiatives that challenged social conditioning and gender stereotypes.

Furthermore, based on the perceptions of the participating teachers, action research created opportunities for more positive relationships among students, increased respect for individuals with diverse sexual orientations, and fostered "greater responsibility toward the collective." The research processes were viewed as a means for teachers to reexamine outdated perspectives in their pursuit of greater respect for diversity. They also served as opportunities to prepare educators to address behaviors of students that fall outside of heteronormativity.

In the Brazilian case analyzed, teachers employed action research procedures to evaluate existing practices that they believe would generate favorable learning outcomes for equitable relationships between individuals with and without

disabilities, fostering a more inclusive, welcoming, and respectful environment that acknowledges students' unique characteristics. These procedures have demonstrated significant potential for achieving these goals.

Regarding gender equity, the application of action research methodologies by teachers holds substantial promise for identifying role learning—specifically, how the performance of these roles perpetuates unequal power dynamics. This information can be utilized to develop and experiment with activities that promote the acquisition of new roles based on more egalitarian models. Such activities fundamentally involve empowering female students.

However, action research methodologies have not been specifically directed to promoting learning outcomes for students with disorders or impairments such as dyslexia, dyscalculia, and dysgraphia. Additionally, there was a lack of elements to assess the effectiveness of these methodologies in teaching practices related to students of diverse sexual orientations.

Particular aspects of action research and impact on educational equity

One notable aspect of action research is that the researchers are chiefly the very individuals from the context being investigated. This fosters greater involvement among students, particularly in participatory practices previously adopted by the school and examined through action research. This heightened engagement is reflected in statements such as, "Children feel more like protagonists and feel a sense of belonging, which helps them develop greater empathy for those around them."

This participatory orientation positively impacts educational equity. In the case of Escolas2030 in Brazil, equity is defined by five learning outcomes, that encompass behaviors and states of conscience: self-knowledge, creativity, collaboration, empathy, and agency. Furthermore, equity is intertwined with the

aforementioned sense of belonging within the school environment, which may also stem from the type of participation encouraged by action research. As one male student articulated, this approach seeks to "see how the school treats autistic people and those with disabilities." Moreover, the participatory nature of action research reinforces traits found in educational practices that empower students to influence decisions regarding their own education. This has led to improving communication among children, including those with disabilities who previously exhibited aggressive behavior.

In educational organizations, action research groups were primarily composed of teachers. These projects provided opportunities to share insights about the ethnic diversity of the student body and collaboratively develop strategies aimed at promoting educational equity.

Within educational organizations, there is generally little incentive or favorable climate for systematic critical examination of teaching practices. Action research addresses this issue by positioning local groups as subjects in the investigation of their own realities. This approach encourages a methodical exploration of various aspects of learning phenomena, generating specific information aimed at improving these areas, including those related to educational equity.

Another distinctive feature of action research is its focus on practices identified for investigation by the practitioners themselves, such as initiatives related to learning the attitudes of collaboration, empathy, or agency. The emphasis that action research places on particular practices not only promotes their very development, but also fosters educational equity by addressing barriers of prejudice, reducing asymmetries in interactions, and enhancing mutual respect and unity among students.

Implications for policies to improve educational equity

In schools, action research projects are conducted primarily by teachers, sometimes exclusively. These initiatives run counter to the "managerial tendencies" of educational policies (Ball, 2005) that remove professional autonomy from the teaching profession, prescribe and direct teaching purposes and means, reduce teachers to executors of external and superior determinations, and seek to minutely control teaching practices. These tendencies dampen the enthusiasm of professionals; they eliminate opportunities for experimentation; and they limit the teachers' versatility, which is essential for dealing with dynamic, surprising, and challenging realities, considering the diversity of learners with disabilities, or pertaining to various ethnicities, genders and sexual orientations.

To be better understood and improved, action research projects require the systematic gathering of information on the educational practices prioritized by teachers. *Strengthening educational equity demands policies that disseminate action research projects, since their nature favors the free and prominent role of teachers in directing teaching. Therefore, teaching staff should be encouraged to take responsibility for being at the forefront of research into their activities. This encouragement includes, especially, the allocation of paid work time and technical support resources for teachers to do so.*

At the institutional level, action-research projects must maintain ongoing dialogue with broad segments of the school community, with special emphasis on fostering intense and growing student participation. This approach goes beyond merely informing students about project objectives and outcomes; it seeks to fully integrate these stakeholders from the outset—in project design, data interpretation, and decision-making processes throughout implementation. Achieving this will require innovative communication practices and will face significant barriers rooted in entrenched routines, such as fragmented class

schedules, rigid timetables, and uniform school regulations. However, efforts to promote active and inclusive participation will expand the reach of action-research projects across more classes while garnering local support to challenge restrictive measures that hinder equity-focused innovations.

Despite dissemination efforts by the Schools2030 program in Brazil, ongoing action-research projects remain poorly understood and lack robust external collaboration. To address this, educational teams leading these projects could engage universities to study action-research case studies, integrate findings into pre-service and in-service teacher training, and provide advisory support for project design and execution. Those teams could also establish or join forums for presenting and debating action-research experiences, including organizing exchange visits to institutions where such initiatives are underway. Widespread, multifaceted sharing of practices is likely to prioritize equity-oriented learning across diverse relational contexts (e.g., racial, gender, disability), moving beyond isolated efforts that address only one dimension of inequity.

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9 APPENDICES

9.1 Appendix A – Equity in the relationships between people with and without disabilities: students' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	The perception of an integrative vision predominates, but there is a significant segregating position perceived, and significant neutrality regarding the issue.
Collaboration with people with disabilities	The perception of an integrative vision predominates, but there is a significant segregating position perceived, and significant neutrality regarding the issue.
Appreciation of appearance, ideas, and behavior	The perception of an integrative vision predominates, but there is a significant segregating position perceived, and significant neutrality regarding the issue.
Change in behavior and attitudes	The prevailing opinion is that the egalitarian view has grown. There is also a significant perception that neither the strong predominance of the egalitarian view nor the minority discriminatory position has changed. The abstention from expressing an opinion on the dynamics of conduct and attitudes is significant.
Causes of change or continuity	The opinion strongly prevails that the actions of students and school professionals stand out as causes of the continuity or change in behavior and attitudes, with considerable weight also being given to actions from outside the school and actions of other types.

9.2 Appendix B – Equity in the relationships between people of different races and ethnicities: students' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	The perception of an integrative vision predominates, but segregating positions are also markedly perceived; however, neutrality regarding the issue is statistically greater than the perception of segregating positions.
Participation of colleagues of another race/ethnicity	The perception of integrative views is strongly predominant, but segregating positions are also clearly perceived. Statistically, the neutrality regarding the issue is slightly less than the negative perception.
Collaboration with people of another race/ethnicity	The perception of an integrative vision predominates very strongly.
Appreciation of appearance, ideas, and behavior	The perception of an egalitarian view strongly predominates. There is significant neutrality on the issue, and a very small perception of discriminatory positions.
Change in behavior and attitudes	There is a significant abstention (approximately a quarter of the respondents) from expressing an opinion on the dynamics of conduct and attitudes. About a third of the population believes that neither the strong predominance of the egalitarian view, nor the minority perception of discriminatory positions, has changed. Another third believes that the egalitarian view has grown. Less than a fifth believe that this egalitarian view has diminished.
Causes of change or continuity	The prevailing opinion is that actions originating outside the school, as well as those of students and school professionals, have similar weight as causes of the continuation or change in egalitarian behavior and attitudes. However, almost half of respondents also attribute the continuation, increase, or reduction of these behaviors and attitudes to actions of another type.

9.3 Appendix C – Equity in the relationships between people of different genders: students' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	The prevailing view is that there is a preference for mixed participation in activities. There is a minority, but significant, perception of segregating positions. However, neutrality on the issue is statistically greater (about a quarter) than the perception of segregation.
Participation of colleagues of another gender	The perception of an integrative environment is strongly predominant. There is a minority, but significant, perception of segregating positions. Statistically, indifference regarding the issue is slightly greater than the negative perception.
Collaboration with people of another gender	The perception of an egalitarian and inclusive environment predominates. However, for almost a fifth of respondents, there is no collaboration. There are also expressions of neutrality on the issue.
Appreciation of appearance, ideas, and behavior	The perception of an egalitarian view strongly predominates. Neutrality, small but statistically significant, was also expressed regarding the issue.
Change in behavior and attitudes	More than a third of the respondents believe that neither the strong predominance of the egalitarian view nor the minority segregating position has changed. For almost a third, these behaviors, and attitudes have increased. There is a significant abstention (one fifth of respondents) from expressing an opinion on the dynamics of behaviors and attitudes. A small but significant minority believes that the egalitarian view has decreased.
Causes of change or continuity	The prevailing opinion is that actions originating outside the school, as well as those of students and school professionals, have similar weight as causes of the continuation or change in behavior and attitudes. However, just over half also attribute the continuation, increase, or reduction in behavior and attitudes to actions of another type.

9.4 Appendix D – Equity in the relationships among people of different sexual orientations: students' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	The prevailing view is that there is a preference for integration among people of different sexual orientations. There is a minority but significant perception of segregating positions; however, neutrality on the topic is statistically higher (just over a quarter of respondents) than the perception of separations.
Participation of colleagues with another sexual orientation	The perception of an integrative environment strongly predominates; there is a minority, but significant perception of segregating positions and—statistically slightly greater than this position—there is neutrality on the issue.
Collaboration with people with another sexual orientation	The prevailing view is that there is collaboration. However, for almost a quarter, collaboration is not perceived. Neutrality on the question was also expressed, statistically small, but significant.
Appreciation of appearance, ideas, and behavior	The perception of an egalitarian view predominates strongly. There is a small but significant neutrality on the issue. For a small minority, there are discriminatory views.
Change in behavior and attitudes	For almost a third, neither the strong predominance of the egalitarian view nor the minority segregating position has changed. For a similar portion, these behaviors and attitudes have increased. The abstention rate (just over a quarter) in expressing an opinion on the dynamics of behaviors and attitudes is significant. A small but significant minority believes that the egalitarian view has declined.
Causes of change or continuity	The prevailing opinion is that the actions originating outside the school, the actions of students, and the actions of school professionals have similar weight as causes of the perceived continuity or change in conduct and attitudes.

9.5 Appendix E – Equity in the relationships between people with and without disabilities: teachers' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	A large portion perceives an egalitarian environment. There is a minority, but significant, perception of segregating positions, and also a large portion of neutrality regarding the issue.
Participation of people with disabilities	A large portion perceives an egalitarian environment. There is a minority, but significant, perception of segregating positions, and also a large portion of neutrality regarding the issue.
Collaboration with people with disabilities	The perception of an egalitarian environment predominates. The perception of segregating positions is a minority, but significant. The proportion of neutrality on this issue is very small.
Appreciation of appearance, ideas, and behavior	The perception of an egalitarian view predominates significantly, although there is a minority, but very significant, perception of discriminatory positions. Neutrality on the issue is also a minority, but still significant portion.
Change in behavior and attitudes	A large proportion of people perceive an intensification of the behaviors mentioned, whether they are egalitarian or discriminatory. However, an equally large proportion believe that the attitudes mentioned have remained unchanged. The abstention from expressing an opinion on the dynamics of behaviors and attitudes is a minority view, but it is nonetheless noteworthy.
Causes of change or continuity	The opinion that the actions of school professionals stand out as the causes of the continuity or change in behaviors and attitudes is strongly predominant. Around half of the respondents also attribute these movements to actions by the students themselves and, in the same proportion, to actions of other types.

9.6 Appendix F – Equity in the relationships between people of different races/ethnicities: teachers' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	The perception of an egalitarian view predominates. There is a minority, but significant perception of segregating positions, and a large portion of neutrality on the issue.
Participation of colleagues of another race/ethnicity	The perception of an egalitarian view predominates; there is a large portion of neutrality on the issue and a significant minority reported segregating positions.
Collaboration with people of another race/ethnicity	The perception of an egalitarian environment strongly predominates; but there is still a great perception of segregating views; and neutral responses from a small minority.
Appreciation of appearance, ideas, and behavior	The perception of egalitarian views predominates strongly. There is a minority, but significant, perception of discriminatory positions, and there is an insignificant proportion of neutrality on the issue.
Change in behavior and attitudes	A large portion understands that the egalitarian vision has grown. A smaller, but still notable, portion has the perception that behaviors and attitudes have not changed. The abstention from expressing an opinion on the dynamics of behaviors and attitudes was a minority, but still significant.
Causes of change or continuity	The opinion strongly prevails that the actions of school professionals are the main factors in the continuity or change of conduct and attitudes.

9.7 Appendix G – Equity in the relationships between people of different genders: teachers' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	The prevailing view tends toward equity, stating that there is a preference for mixed-gender participation in activities. However, there is also a large proportion that perceives segregating positions; and also a large proportion of neutrality on the issue.
Participation of colleagues of another gender	The perception of an egalitarian vision predominates; but there is a large portion that perceives segregating positions; and a statistical minority of neutrality regarding the issue, yet still significant.
Collaboration with people of another gender	The perception of an egalitarian and integrative vision predominates. However, there is a large portion that perceives segregating views. There is also a minority, but significant, neutrality on this issue.
Appreciation of appearance, ideas, and behavior	The perception of egalitarian views predominates. There is a large portion that perceives segregating views. There is a minority, but significant, indifference regarding the issue.
Change in behavior and attitudes	The perception predominates that behavior has not changed, whether it is the perceived prevalence of an egalitarian view or a perceived discriminatory position. However, for another large portion, the indicated behaviors and attitudes have increased. A smaller, but still significant, portion understands that they have decreased.
Causes of change or continuity	The opinion that both actions by students and school professionals have similar weight as causes of the perceived continuity or change in behavior and attitudes is strongly predominant. Not as strong, but still predominant, is the opinion that also points to actions outside the school. A large portion is neutral when it comes to attributing influence to actions of other types.

9.8 Appendix H – Equity in the relationships among people of different sexual orientations: teachers' opinions (survey carried out in this research)

Topics observed	Opinions of respondents
Preference for exclusive activities	The prevailing view is that there is a preference for integration between people of different sexual orientations. However, a large proportion still perceives segregating positions, with neutrality on this issue being a minority but significant.
Participation of colleagues with another sexual orientation	The perception of an integrative vision predominates, but there is a large portion that perceives segregating positions, and another large portion that expresses neutrality regarding the issue.
Collaboration with people with another sexual orientation	The perception of an egalitarian and integrative vision predominates, but a large portion still sees a segregating position. There is a minority, but significant, neutrality on the issue.
Appreciation of appearance, ideas, and behavior	The perception of an egalitarian view predominates, but a large portion sees a discriminatory position. There is a minority, but significant, neutrality on the issue.
Change in behavior and attitudes	The perception that the indicated behaviors and attitudes have increased predominates. For a large portion, however, the indicated behavior has not changed, whether it is the egalitarian attitude that the majority reported, or the minority perception of segregating positions. For a small minority, the indicated behaviors and attitudes have decreased. The abstention from expressing an opinion on the issue is a minority, but significant.
Causes of change or continuity	The opinion that actions both by students and by school professionals have similar weight as causes of the continuation or change in behavior and attitudes is strongly predominant. Still predominant, yet not so strongly, is the opinion that attributes these influences both to actions from outside the school and to actions of another type.

9.9 Appendix I – Educational organizations in which the survey was carried out (survey carried out in this research)

Educational organization	City	State
Associação Cultural Pisada do Sertão	Poço de José de Moura	PB
Centro Juvenil de Ciência e Cultura	Salvador	BA
Centro Municipal de Educação Profissional de Ipojuca	Ipojuca	PE
CIEJA-Centro Integrado de Educação de Jovens e Adultos Campo Limpo	São Paulo	SP
Colégio Equipe	São Paulo	SP
Comunidade de Aprendizagem de Paranoá	Brasília	DF
Escola Estadual de Ensino Fundamental e Médio Ministro José Américo de Almeida	São João do Rio do Peixe	PB
Escola Municipal Antonio Coelho Ramalho	Ibiúna	SP
Escola de Ensino Médio Júlia Catunda	Santa Quitéria	CE
Escola Municipal Anne Frank	Belo Horizonte	MG
Escola Municipal Luis Eduardo Cumin	Almirante Tamandaré	PR
Escola Municipal de Ensino Fundamental Desembargador Amorim Lima	São Paulo	SP
Escola Municipal de Ensino Fundamental Espaço de Bitita	São Paulo	SP
Escola Municipal de Ensino Fundamental Luiz Gonzaga do Nascimento Jr	São Paulo	SP
Escola Municipal de Educação Infantil e Ensino Fundamental Doutor José Dantas Pinheiro	São João do Rio do Peixe	PB
Escola Municipal de Educação Infantil e Ensino Fundamental Roberto Remigi.	Castanhal	PA
Escola Municipal de Educação Infantil e Ensino Fundamental Professor Francisco Cassiano Sobrinho	Poço de José de Moura	PB
Escola Municipal Indígena Baniwa Eeno Hiepole	São Gabriel da Cachoeira	AM
Escola Comunitária Luiza Mahin	Salvador	BA
Escola Nossa Senhora do Carmo	Bananeiras	PB
Escola SESI de Ensino Médio Arthur Aluízio Daudt	Sapucaia do Sul	RS
Fundação Instituto de Educação de Barueri Alphaville	Barueri	SP
Fundação Instituto de Educação de Barueri Professora Dagmar Ribas Trindade	Barueri	SP
Fundação Instituto de Educação de Barueri Professora Maria Theodora Pedreira de Freitas	Barueri	SP
Fundação Gol de Letra	São Paulo	SP
Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Câmpus São Roque	São Roque	SP

9.10 Appendix J – Equity in relationships between people with and without disabilities, of different races/ethnicities, and of different genders and sexual orientations: students' and teachers' opinions (survey carried out in this research)

	Students' opinions	Teachers' opinions
Relationships between people with and without disabilities	The action research process is visible, but not as a strong presence. The prevailing opinion is that the egalitarian attitude has increased, but the perception that attitudes and behaviors have not changed is still significant. The actions originating outside the school, which include the action research process, were also significant for the perceived increase or continuity of the egalitarian environment, although the dynamics indicated are mainly attributed to the actions of professionals or students.	Given the balance between the perceptions of maintenance or change in egalitarian behaviors, and given the prevailing attribution of this dynamics to the actions of the schools' professionals, the influence of the action research process could indeed be detected, although it is not strong or clear.
Relationships between people of different races/ethnicities	Activities from outside of school, including action research, have the same great weight as the actions of professionals and students in terms of influencing behavior, whether for the perceived continuity or for the perceived intensification of egalitarian attitudes among people of different races/ethnicities. The framework of relationships between these people is predominantly perceived as egalitarian and integrative.	Opinions are distributed similarly regarding the perception of continuity or change in behaviors and attitudes, but there is a tendency to consider the actions of school professionals as the main causes of such maintenance or change. Thus, there are no perceptions of the impact of action research on the equity of relationships between people of different races/ethnicities.
Relationships between people of different genders	The action research process is associated with the prevalence of an integrative and egalitarian attitude between genders, but not with the same degree of influence on behaviors as the actions of students and school professionals.	As the opinion prevails that an egalitarian environment has been maintained or increased, and as the understanding remains strong that this continuity or increase is due to actions from outside the school, the perception of the impact of action research is detected, although it is not shown to be vigorous.
Relationships among people of different sexual orientations	The framework of relationships among people of different sexual orientations is predominantly perceived as egalitarian and inclusive. It is believed that the action research process, among activities originating outside of school, has the same great weight as the actions of professionals and students in the perceived dynamics involving this framework.	Signs of the impact of action research can be detected in the predominance of an egalitarian and integrative perception, and in the opinion that this environment results from actions outside the school—although the attribution of actions by students and professionals as the cause of the predominant egalitarian and integrative attitude is statistically greater.

9.11 Appendix K – Actions mentioned by students for learning equity in relationships between people with and without disabilities (survey carried out in this research)

- "Inclusive events" were mentioned in which people with disabilities participate fully, show their skills and interact freely;
- Other actions were mentioned, as learning sign language;
- Bringing students together to help their peers with low vision;
- Teachers informing the classes about the condition of students with disabilities;
- Meetings with coffee, community snacks, dancing, and activities in partnership with local public agencies and services;
- Clarifying "preconceptions";
- Greater visibility of people with disabilities in the media;
- Assistance from teachers and peers in lessons and assignments;
- "social interaction";
- Teachers and other educators giving voice to people with disabilities in the classroom and at school events;
- Teachers and different media teaching students to respect people with disabilities;
- Group work in which everyone needs to help each other;
- Family and mothers teaching respect;
- Discussion of the subject in school assemblies;
- Research assignments on human differences and respectful attitudes;
- Counseling from the pastor at church to ensure respect;
- Teacher explaining how to be helpful;
- Actions by students promoting welcoming, helpful, patient, and respectful attitudes;
- Community coexistence, intercommunity events, games, and free play;
- Discussions about respect within the student body;
- Lectures by the students themselves;
- Conflict mediation committees;
- Discussion groups;
- Tasks in places outside the school;
- Tasks that stimulate the creativity of people with disabilities.

9.12 Appendix L – Actions mentioned by students for learning equity in relationships between people of different races/ethnicities (survey carried out in this research)

- Creation of an anti-racist collective to educate and raise awareness about racism in Brazil;
- Reading classes of the book *Pequeno manual antirracista* ("The Little Anti-Racist Manual");
- An ethnic seminar;
- An indigenous meeting;
- A conflict mediation committee;
- Teachers who provide information on racial issues;
- Dissemination of "other cultures," their characteristics, and difficulties;
- Workshops;
- A collegiate on the issue;
- A women's conversation circle;
- A leadership council;
- Lectures;
- Addressing the issue in assemblies;
- The family teaching respect;
- Educators promoting visibility of Black men and women in art;
- Posters at school;
- A literary fair;
- An ethnic-racial meeting;
- Research assignments on different races;
- Theater games on race and ethnicity;
- Groups composed of children of different races;
- Teachers treating students equally regardless of race.

9.13 Appendix M – Actions mentioned by students for learning equity in relationships between people of different genders (survey carried out in this research)

- Projects in the community were highlighted that now include the presence of women (before, they were exclusively aimed at men), such as games and sports competitions;
- Workshops;
- Inclusion of girls in the soccer group;
- "the teacher always talks about this";
- Search for information by the student union and feminist studies center;
- Student board;
- Conflict mediation committee;
- Discussions on gender issues through the media;
- Conversation circles;
- Conversations between siblings;
- Leadership councils;
- Lectures;
- Girls playing soccer with boys;
- Boys playing with dolls;
- At church, the pastor said that boys and girls can play and do whatever they want;
- There is nothing separate for boys and girls at school;
- When there is a conflict about the subject, we talk among ourselves, children, and if necessary, we call the teachers or take it to the assembly.

9.14 Appendix N – Actions mentioned by students for learning equity in relationships among people of different sexual orientations (survey carried out in this research)

- The positioning of students, both heterosexual and homosexual, against homophobic prejudice;
- Debates and artistic productions reinforcing the importance of diversity;
- Thematic conversations between young people of different sexual orientations;
- Information on social networks;
- Lectures;
- Pamphlets;
- Study of texts and songs;
- Conversations in class; information (news, reports from family members) about discrimination against people of other sexual orientations;
- Discussion groups;
- Group work.

9.15 Appendix O – Actions mentioned by teachers for learning equity in relationships between people with and without disabilities (survey carried out in this research)

- Participation of students with disabilities in physical education activities, artistic presentations, and field trips; investment "in accessibility";
- Sports events;
- Presence of a sign language interpreter and a braille reader, and good relationships between students and these employees;
- Lectures;
- Debates;
- Artistic demonstrations;
- "individualized monitoring";
- Approach to the issue of equity by educators;
- Increase in the number of people with disabilities in the school;
- Classmates with disabilities in the classroom ensure that most students know and understand diversity;
- Guidance for interns and new teachers regarding "inclusion students";
- Hiring of specialist professionals;
- Joint action by the support center for people with specific educational needs (napne), companhia siderúrgica do pecém (csp) and teachers in adapting to specific needs of teaching activities;
- "inclusion in collective work," encouragement of group work;
- "perception of different learning times";
- Moments of reflection during collegiate meetings, assemblies, and committees; workshop; conversation circles.

9.16 Appendix P – Actions mentioned by teachers for learning equity in relationships between people of different races/ethnicities (survey carried out in this research)

- Classroom debates, extension activities and research assignments on different ethnicities;
- Lesson plans with the theme;
- Artistic-political demonstrations;
- Lectures;
- Open classes;
- Round tables;
- Workshops;
- In-service teacher education;
- Racial equality as a cross-curricular theme;
- Visits to cultural spaces;
- Presence of the black collective dragão do mar;
- "teaching-learning" moments;
- "committee actions";
- Conflict mediation committee;
- Improvement of the library collection;
- Institutional projects for anti-racist education.

9.17 Appendix Q – Actions mentioned by teachers for learning equity in relationships between people of different genders (survey carried out in this research)

- Teachers who bring the discussion into the classroom;
- Discussion groups, group activities, games, and activities;
- Improvement of the library collection;
- Reflection and conversation with students and tutors;
- Continuing education group;
- Gender equality as a cross-curricular theme, addressed in history, geography, art, and sociology classes;
- Games during recess;
- Girls playing soccer;
- Workshops;
- Discussion groups;
- Debates;
- In-service teacher education;
- Lectures;
- Artistic-political activities;
- Visits to cultural spaces;
- Psychological assistance.

9.18 Apêndice R – Actions mentioned by teachers for learning equity in relationships among people of different sexual orientations (survey carried out in this research)

- The conviviality between people of different sexual orientations during study periods, collective activities, and actions of committees and collegiate bodies;
- Actions to "raise awareness that each person should be welcomed in their specificities";
- Student collegiate body;
- Debates;
- Teachers who take the discussion to the classroom;
- Workshops;
- Conversation circles;
- In-service education for teachers;
- Students who assume their sexuality through their clothes, hairstyle, and attitudes;
- Lectures;
- Involvement of the theme in area plans;
- Artistic-political manifestations;
- Visits to cultural spaces.