



***Group Collaboration and Inclusive Education:  
A Symmetrical Inclusion Perspective  
Współpraca grupowa a edukacja włączająca.  
Perspektywa inkluzji symetrycznej***

**ABSTRACT**

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**RESEARCH OBJECTIVE:** This study aims to examine and describe practical activities developed through participant observation of both able-bodied and disabled youth involved in collaborative educational projects.

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**THE RESEARCH PROBLEM AND METHODS:** The research problem is articulated as follows: What elements of youth collaboration should be integrated into educational activities? Specifically, the study explores who constitutes the group, the objectives of the meetings, the substantive content of the activities, the locations where these activities occur, and the methods employed. These activities stem from an ongoing partnership between Special Education School Complex No. 3 in Krakow and the Institute of Geography and Spatial Management at Jagiellonian University, which has been in place since 2016. Methods used in the study include participant observation, surveys, interviews, and reflective analysis.

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**THE PROCESS OF ARGUMENTATION:** The study outlines its objectives and proposes practical solutions through a structured argument. It begins with an introduction to the issue, followed by a description of collaboration and inclusive education, a detailed explanation of symmetrical inclusion, and an examination of practical applications such as creating inclusive urban spaces, organizing forest expeditions, and designing geographical pop-up books. The study also provides guidelines for effective collaboration based on these experiences.

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**RESEARCH RESULTS:** The research presents examples of practical activities and collaborative efforts within the framework of symmetrical inclusion, involving both university students and intellectually disabled youth. These activities offer valuable insights and can serve as models for use in various educational contexts.

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**CONCLUSIONS, RECOMMENDATIONS, AND APPLICABLE VALUE OF RESEARCH:** Leveraging diverse learning styles and individual differences within youth groups not only enriches the educational experience but also supports the development of essential social and emotional competencies. The study highlights the importance of focusing on clear objectives and hands-on, multisensory activities to nurture partnerships, stimulate creativity, and seek solutions in relationship-building.

→ **KEYWORDS:** **SYMMETRICAL INCLUSION, INCLUSIVE EDUCATION, COLLABORATIVE LEARNING, INTELLECTUAL DISABILITY, UNIVERSITY STUDENTS**

## STRESZCZENIE

**CEL NAUKOWY:** Opis praktycznych działań opracowanych w wyniku obserwacji uczestniczącej młodzieży pełnosprawnej i z niepełnosprawnościami podczas realizacji wspólnych projektów edukacyjnych.

**PROBLEM I METODY BADAWCZE:** Pytanie problemowe sformułowano następująco: Jakie wy-miary współpracy młodzieży powinny być uwzględnione w działaniach edukacyjnych: kto tworzy grupę, jaki jest cel spotkania, co stanowi treść merytoryczną zajęć, gdzie prowadzone są aktyw-ności oraz w jaki sposób? Opisywane przykłady działań były prowadzone od 2016 roku w ramach stałej współpracy pomiędzy Specjalnym Ośrodkiem Szkolno-Wychowawczym nr 3 w Krakowie a In-stytutem Geografii i Gospodarki Przestrzennej Uniwersytetu Jagiellońskiego. W przedsięwzięciu wykorzystano metody: obserwacje uczestniczące, ankiety, wywiady oraz refleksje.

**PROCES WYWODU:** Spełnienie celu badawczego i zaproponowanie praktycznych rozwiązań zostały zawarte w procesie wyvodu, który obejmuje: wprowadzenie w zagadnienie, opis pojęcia współpracy i edukacji włączającej, charakterystykę inkluzji symetrycznej, opis praktycznych roz-wiązań – przyjazna przestrzeń publiczna w mieście, leśna ekspedycja, książeczka geograficzna pop-up, wskazówki do skutecznej współpracy.

**WYNIKI ANALIZY NAUKOWEJ:** Przedstawiono przykłady praktycznych działań i współpracy w idei inkluzji symetrycznej między młodzieżą akademicką a młodzieżą z niepełnosprawnością in-telektualną. Mogą one stanowić inspirację do wykorzystania w różnych placówkach edukacyjnych.

**WNIOSKI, REKOMENDACJE I APLIKACYJNE ZNACZENIE WPŁYWU BADAŃ:** Wykorzy-stanie różnorodności stylów uczenia się i różnic indywidualnych w grupie młodzieży to podejście, które nie tylko wzbogaca proces edukacyjny, ale także wspiera rozwój kluczowych umiejętności społecznych i emocjonalnych. Skoncentrowanie się na prostych celach i praktycznych działaniach w multisensorycznych przestrzeniach jest kluczowe dla partnerskiej współpracy, zachęcając do twór-czego podejścia i poszukiwania rozwiązań w relacjach.

→ **SŁOWA KLUCZOWE:** **INKLUZJA SYMETRYCZNA, EDUKACJA WŁĄCZAJĄCA, WSPÓŁPRACA GRUPOWA, NIEPEŁNOSPRAWNOŚĆ INTELEKTUALNA, MŁODZIEŻ AKADEMICKA**

## Introduction

In today's globalized world, the ability to collaborate is becoming an essential skill. It enables the creation of innovative solutions and the development of diverse, resilient communities that can work together to meet the challenges of the 21st century. According to a UNESCO report (2014), Global Citizenship Education (GCE) plays a key role in shaping communication skills and facilitating interaction with individuals from varied backgrounds, cultures, and with different viewpoints. Within the realm of education, it is essential to promote collaborative competencies at every level of schooling. This includes creating opportunities for students with disabilities, particularly those with intellectual disabilities (ID), to practice working effectively with others. Involving children and youth with disabilities into group projects and school activities not only enriches their educational experiences but also fosters empathy, tolerance, and an appreciation for diversity among other students. Schools become places where everyone, regardless of their abilities, can fully participate in social life and develop key communication, interpersonal, and cognitive skills that are indispensable for both personal growth and future careers. Joint activities and projects teach students teamwork, conflict resolution, and collective decision-making, preparing them for future challenges in a diverse, contemporary world.

This article outlines methods and practical strategies for promoting collaboration within the framework of symmetrical inclusion between college students and young individuals with intellectual disabilities (ID). Encouraging cooperation in educational settings, particularly in the context of integrating youth with ID, is an investment in building a society founded on mutual respect, solidarity, and teamwork, which is vital for achieving sustainable and inclusive social development. Symmetrical inclusion transcends traditional inclusive approaches as it utilizes the social competencies of both groups simultaneously, with the entire process of shaping attitudes and changing social perspectives occurring in diverse social contexts. This article describes collaboration and hands-on activities involving individuals with ID and their non-disabled peers. The idea underlying symmetrical inclusion is that the collaboration and mutual acquaintance between youth with ID and college students will prepare them for full participation in adult social, cultural, and professional life.

The effectiveness of this approach is supported by pedagogical research, which shows that students without special educational needs (SEN) benefit in various ways from engaging in interactive educational activities with peers with ID (Wlazło, 2019; Kulesza et al., 2021). Youth learn to respect others, acknowledge different abilities, and embrace diverse personalities, which fosters the development of new relationships. Additionally, young people develop skills related to helping others, showing patience, and gaining fulfillment from assisting their peers in learning and improving behavior (Molina Roldán et al., 2021).

## Group Collaboration Versus Inclusive Education

Defining and describing the concept of collaboration and its key elements involves understanding its various definitions, concepts, and terminologies (Saltiel, 2002). This requires consideration of the specific contexts in which the term is used, as meanings may vary depending on the user and the particular circumstances (Hernandez, 2013).

Collaboration in education is anchored in *collaborative partnerships*, which adopt a student-centered approach aimed at supporting the needs and strengths of young people. It promotes an inclusive school culture and fosters a community focused on achieving positive educational outcomes for students, while also creating a sense of belonging within the school environment (Tett et al., 2003; Billett et al., 2007). At the core of these educational partnerships is the synergy of efforts toward a shared goal, grounded in mutual assistance, and relationships built on trust, respect, and loyalty, which are key elements for both professional success and personal development (Saltiel, 2002).

Effective teamwork, particularly in groups with diverse intellectual abilities, requires a wide range of skills, including:

- **Communication skills:** The ability to convey information clearly, engage in active listening, articulate thoughts and emotions effectively, and offer and accept constructive feedback.
- **Social and adaptive skills:** Developing empathy, understanding others' perspectives, resolving conflicts, building trust, and demonstrating flexibility and openness to new ideas and methods.
- **Cognitive skills:** The ability to think creatively in new situations and to engage in reflective thinking.
- **Organizational skills:** Planning and coordinating activities, prioritizing tasks, and managing resources efficiently.

While both inclusive education and group collaboration aim to support effective learning environments, their objectives and characteristics differ. UNESCO (2017) defines inclusive education as "the process of strengthening the capacity of the education system to reach out to all learners." It emphasizes equal access to education for all students, regardless of their individual needs and abilities. Group collaboration, on the other hand, centers on teamwork and the collective effort to achieve shared goals. Key to this is the development of cooperation, communication, and problem-solving skills within the group.

To implement group work in inclusive education, the following aspects should be considered:

### Approach to Diversity:

- Group collaboration can encompass a variety of youth from different backgrounds, but emphasizes individuals working together to achieve a common goal.
- Inclusive education recognizes individual differences and seeks to adapt teaching methods so that each student can progress at their own pace and according to their abilities.

### Teaching Methods:

- Group collaboration may utilize teamwork strategies such as de Bono's Six Thinking Hats, the Molier method, World Café, or group projects.
- Inclusive education may employ multisensory methods, hands-on activities, adaptable learning environments (e.g., field trips), flexible groupings, and assistive IT technologies to support the learning process.

### Group Assessment:

- Group collaboration can be assessed through the analysis of group outcomes, the degree of goal achievement, and observation of subgroup dynamics and member interactions.
- Inclusive education may require a broader assessment that considers the diverse skills and needs of students as well as their individual progress.

When organizing activities for youth with intellectual disabilities (ID) and their non-disabled peers, it is important to:

- Keep group sizes small and carefully select team members.
- Ensure that the task is relevant and connected to everyday experiences.
- Make sure the objective of the activity is clear, easy to explain, and easy for all participants to understand and repeat.
- Use methods that engage all senses, and incorporate a variety of materials and commonly accessible resources.
- It is good practice to use methods that require frequent communication, interaction, consultation, and agreements.
- Consider diversifying the settings for group work, extending beyond the classroom into community or public spaces.

This approach is in line with the principles of symmetrical inclusion.

## Symmetrical Inclusion as an Educational Process for Collaborative Youth Groups

In their book, *Symmetrical Inclusion of Youth with Intellectual Disabilities and College Students: Practical Solutions* (Pietrzak & Sobocha, 2022), the authors of this article describe symmetrical inclusion as an educational process that goes beyond traditional integrative and inclusive education. In this model, positive relationships stimulate mutual development, where each person contributes to the growth of the other. Symmetrical inclusion is defined as

[...] a process of cultivating attitudes of understanding and acceptance of differences through collaboration between able-bodied youth and youth with intellectual disabilities (ID) in educational, academic, and social settings. Through peer interactions and education, the needs of both marginalized and majority group members (i.e., both able-bodied individuals and those with ID) are symmetrically met, while also fostering changes in their mutual relationships. Awareness of the differences between the groups emerges organically, without

conscious control, simply through shared experiences in an environment distinct from daily life (Pietrzak & Sobocha, 2022, p. 46).

The model of symmetrical inclusion follows a three-stage process:

**Stage I: Introducing and Getting to Know Each Other**

The goal of this stage is to develop interpersonal communication, an understanding of community norms, and adapting behaviors to different social contexts, based on the principle of “working with resources.”

**Stage II: Taking Action and Collaboration**

This stage focuses on peer discussions and shared activities, where college students support youth with ID, following the principles of “reflection in action” and “mutual assistance within the community.”

**Stage III: Meetings and Collaborative Actions in Public Spaces**

The goal of this stage is to make use of diverse resources available in public spaces, guided by the principle of “trust and authenticity.”

The activities outlined in this article have been ongoing since 2016 as part of a partnership between the Special Education Center No. 3 in Krakow (with 12 regular participants and 35 rotating participants) and the Institute of Geography and Spatial Management at Jagiellonian University (involving a total of 117 students). These efforts were observed by a special education teacher and a university lecturer using qualitative participatory research methods (Babbie, 2024). The success of this approach is reflected in accounts from professionals who describe how they “rely less on formulas learned in graduate school than on the kind of improvisation learned in practice,” as discussed in Schön’s 1983 book *The Reflective Practitioner*. Schön introduced ideas like reflection-on-action and reflection-in-action, building on Dewey’s (1998) notion of reflective practice through the study of experience, communication, and reflection.

Simultaneously, in-depth interviews were conducted with university students, based on their conscious reflections and observations, as well as through surveys. This allowed for a more nuanced understanding of participants’ attitudes and behaviors in their everyday environments. The observations and feedback covered activities both in school and in public spaces. The article describes three specific examples of these interactions: an art workshop at the Special Education Center No. 3, a field trip to Twardowski Rocks Park in Krakow, and a session at the Creative Collaboration Space on Jagiellonian University’s 600th Anniversary Campus. These observations, along with surveys, interviews, and reflections provided material for introducing new and more effective approaches to the activities. This material was used for qualitative analysis and was not intended as statistical documentation.

The eight years of collaboration have led to practical conclusions regarding the application of different forms of cooperation, aiming to accommodate the unique learning styles and personalities of both able-bodied youth and those with disabilities.

## Symmetrical Inclusion: A New Perspective on Diversity in Education – Practical Solutions

The following three examples of collaborative projects under the framework of symmetrical inclusion were carried out as part of the third stage, “Meetings and Collaborative Actions in Public Spaces.”

### Creative Collaboration Spaces: Inclusive Places in the City

Public spaces can be viewed as venues for dialogue, where relationships are forged through communication. The design, location, and arrangement of these spaces, based on the principles of social participation, are essential. Participation involves collective decision-making, where team dialogue plays a key role (Frejlich, 2021). Raising awareness of the involvement of diverse individuals in the participatory design of public spaces was the main objective of the meeting between university students and youth with intellectual disabilities (ID).

The session began with a group reading of a city map of Krakow and informational guides about significant places and landmarks. Participants then shared details about places they often visit. The next step involved collectively creating a list of welcoming places for social gatherings, recreation, culture, education, entertainment, and sports in Krakow. Using a whiteboard, the group worked together to construct a spatial map of the city, with symbolically labeled important locations (Figure 1). The session wrapped up with participants working together to prototype urban spaces through 3D spatial modeling.

The entire session took place in the Creative Collaboration Space at the Institute of Geography and Spatial Management at Jagiellonian University (IGiGP UJ) (Figure 1). The arrangement of this space is centered on human interaction, with an emphasis on understanding user requirements, promoting teamwork, rapid knowledge acquisition, idea visualization, and quick prototyping (Luc et al., 2020). The *team space* proved to be a fundamental component, supporting creativity, idea exchange, and communication. The playful and interactive atmosphere encouraged active participation and joint decision-making. The team had the opportunity to experiment and build in the *tinker space*, which was key during the prototyping of welcoming urban spaces. The ability to test and refine ideas in practice increased engagement and helped participants bring their urban design concepts to life through 3D models (Figure 1). The *presentation space* gave participants a platform to showcase their work and obtain feedback. This space was crucial for presenting physical prototypes and fostering communication between teams, helping them assess their progress and gain valuable input for further project development.

Fig. 1. Project Activities Titled “Inclusive Places in the City” in the Creative Collaboration Space at the Institute of Geography and Spatial Management, Jagiellonian University. Top Photo – Work in the Tinkering Space. Bottom Photo – Work in the Presentation Space



Own source.

These sessions demonstrated the importance of diverse spaces in the educational process, which enabled young people to fully engage in various stages of both team-based and individual work.



## Forest Expedition – Creative Workshops and Natural Discoveries

The “Forest Expedition” workshops took place in the green surroundings of the Skalki Twardowskiego Park and the Zakrzówek Reservoir, offering both cognitive and emotional benefits from immersion in nature (Karolak et al., 2013). The activities included terrain navigation, creating forest mandalas, and playing “forest bingo.” The outdoor tasks began with participants locating specific points in the forest using a map, compass, and mobile apps. Creating forest mandalas involved working in teams to design compositions using natural materials such as leaves, sticks, stones, flowers, pinecones, needles, bark, and feathers (Figure 2). The forest bingo activity required participants to identify various plant and animal species using mobile apps (e.g., Flora Incognita, iNaturalist) and specialized guides with descriptions, photos, and identification keys for local flora and fauna.

Fig. 2. Field Activities Titled “Forest Expedition.” Left Photo – Walk to the Skalki Twardowskiego Park Combined With a Forest Bingo Game. Right Photo – Presentation of Forest Mandalas



Own source.

Using maps, compasses, and mobile apps helped participants develop practical navigation skills, which can be useful in a variety of contexts. The students observed that teamwork and clear communication were essential for successfully locating all designated points, which reinforced their collaborative abilities. While working on the mandalas, the group had a chance to express their creativity and learn to appreciate the diversity of materials that nature provides. The forest bingo activity proved to be an excellent blend of fun and education. By observing and searching for different plant and animal species, participants – regardless of intellectual ability – gained a deeper understanding of the forest ecosystem. Moreover, both individuals with intellectual disabilities and their neurotypical peers demonstrated unexpected interests. For instance, one participant with a passion for herbal medicine shared her knowledge about the use of medicinal herbs and cosmetic recipes, sparking curiosity among her peers.

These shared experiences in a diverse forest environment helped the youth develop a greater appreciation for nature, while discovering new interests and sharing their knowledge with others. The teams had to communicate effectively to reach mutual

understanding. The students realized that actively exploring nature together was a far more engaging way to learn than traditional, passive classroom methods. The university students also honed their communication and teaching skills by explaining natural phenomena to participants with intellectual disabilities, which enriched the learning experience for everyone involved.

## Geography Pop-Up Book Project

Climate change, water resource protection, and awareness of natural hazards are some of the geographical topics important to both university students and youth with intellectual disabilities, as these issues impact quality of life and health. The collaborative pop-up book project is a fascinating and creative endeavor that requires both precision and imagination. It not only promotes environmental awareness but also enhances manual skills, planning abilities, and teamwork through creative collaboration, offering participants a platform for creative expression (Ta'ba et al., 2024). Making a pop-up book involves creating three-dimensional elements that pop up when the pages are opened, using techniques like cutting, folding, and gluing paper. The students explained concepts such as the factors affecting river water levels, changes in climate and vegetation at different altitudes on mountain slopes, the processes of volcanic eruptions and earthquakes, and the formation of clouds and strong winds. These concepts were illustrated through 3D models created collaboratively, which helped participants better grasp and remember the information (Figure 3).

Fig. 3. Interdisciplinary Workshops Combining Earth Science With Artistic Expression Through Geographical Pop-Up Books, Held at Special Education School Complex No. 3 in Krakow



Own source.

Collaborating on the pop-up book project proved to be a fulfilling and stimulating experience for both geography students and youth with intellectual disabilities. It was also an innovative way to blend scientific concepts with artistic expression. The geography students expressed enthusiasm for an opportunity to apply their theoretical knowledge in a practical setting and were curious about how to represent geographical phenomena in a pop-up format. Meanwhile, the youth with intellectual disabilities were captivated by the new artistic methods and the way simple paper could be transformed into dynamic three-dimensional models. After the sessions, the geography students reported feeling satisfied with the teamwork, as they were able to share their knowledge and skills, as well as learn from their peers' solutions. They also observed that the youth with intellectual disabilities enjoyed being part of a collaborative effort, reaching shared objectives, and receiving support from their peers.

All participants took pride in the tangible outcomes of their work, which resulted in an educational tool that others could use to learn about Earth's processes. Through the project, they developed skills in collaboration, communication, and creative thinking, while also enhancing their manual dexterity, concentration, and ability to follow instructions. After the workshop, the geography students reported they had gained a better understanding of the needs and capabilities of individuals with intellectual disabilities. The youth with intellectual disabilities, seeing the positive and real results of their work, felt appreciated and accepted by their peers. This boost in their self-esteem was evident when they eagerly and enthusiastically invited their academic peers to future meetings.

The challenge for university students involved using clear, accessible language, setting goals collaboratively, explaining tasks precisely, providing straightforward instructions, and monitoring progress collectively. They also needed to tailor tasks to individual capabilities, understand diverse perspectives, and communicate effectively, given the varying levels of knowledge and skill within the group. In summary, working together on the geographical pop-up book project offered not only an opportunity for learning and skill development but also a chance to build connections, facilitate understanding, and provide mutual support. Such projects have the potential to become memorable experiences that enhance both geographical knowledge and social skills for all participants.

## Conclusions

The practical examples presented within the framework of symmetric inclusion highlighted a holistic approach to educational activities, which recognizes the diverse composition of participants. These groups comprised both able-bodied youth and individuals with disabilities, each bringing a range of unique personalities.

It is recommended that educational initiatives consider the following aspects of youth collaboration: the composition of the group, the session's objectives, the content being covered, the location of the activities, and the methods of execution.

## Who: Embracing Diversity Within the Group

Creating a collaborative environment that includes both able-bodied youth and those with disabilities, each representing different personalities, is key. Participants are encouraged to acknowledge and appreciate each other's abilities and needs as sources of mutual inspiration. Drawing on the diversity of learning styles and personalities within the group strengthens communication skills, promotes knowledge sharing, empathy and emotional intelligence.

## Why: Focusing on Clear Goals and Hands-On Actions

Participants, together with facilitators, should define realistic goals for collaboration that allow them to take on meaningful roles within the group. These goals should be relevant for the participants and encourage creativity in working with peers.

## What: Understanding Everyday Life and the Surrounding World

The substance of collaborative projects should center on themes related to social and cultural life, understanding natural processes, the role of work in adult life, and the use of modern technology.

## Where: Diverse Collaboration Spaces

Facilitating collaborative projects in diverse settings – such as green spaces, cultural, educational, and research institutions, or sports and recreational centers – creates a conducive atmosphere for learning. Participants learn to overcome communication barriers and respond to real-world social situations, which promotes the natural development of interpersonal skills.

## How: Multidimensional Environmental Experiences

Collaborative projects should engage participants through both sensory perception and social interactions, as well as human behaviors. This approach provides youth with a holistic set of experiences – both physical and emotional – that lead to a deeper understanding and perception of their surrounding world.

The above recommendations stem from eight years of collaboration and shared initiatives between students at the Institute of Geography and Spatial Management (IGiGP) at

Jagiellonian University and youth from Special Education School Complex No. 3 (SOSW No. 3) in Nowy Sącz. These endeavors unfolded within the framework of symmetrical inclusion, which extends beyond traditional integrative and inclusive education by focusing on joint projects in multisensory environments. In this context, symmetry refers to balance and equality between the participants, where each partner maintains a comparable degree of influence, responsibility, and benefits from the collaboration. This form of symmetry nurtures seamless communication, mutual respect, and a shared commitment to achieving common goals.

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