UAB
Universitat Autònoma de Barcelona

Dipòsit digital de documents de la UAB

This is the **published version** of the bachelor thesis:

Guinot Comas, Clara. *Imagining the Future : How Can We Help Children with Special Needs to Represent their Future?*. Treball de Final de Grau (Universitat Autònoma de Barcelona), 2026 (Educació Primària). 27 pàg.

This version is available at https://ddd.uab.cat/record/336899

under the terms of the BY-NC-SA license.

Imagining the Future: How Can We Help Children with Special Needs to Represent their Future?

Clara Guinot Comas

Degree in Primary Education

Carles Anguera Cerarols

Department of Social Science Didactics

Universitat Autònoma de Barcelona

June 2026

ABSTRACT

Given the absence of any studies related to education for the future with children with SEN (Special Educational Needs), a study was conducted in Badalona on how students aged between 6 and 12 years old (primary education) envision the future. This article presents a qualitative study exploring how children can be supported through materials that help them represent the future they imagine. To this end, a control group consisting of neurotypical children and an experimental group made up of students enrolled in the Intensive Support for Inclusive Schooling were established. Once the results had been analyzed, it was considered necessary to extend the research to a special education school by adapting the materials in order to determine whether the students possess temporal awareness.

Keywords: education for the future, future studies, social representations, primary education, and Special Educational Needs (SEN).

RESUM

Veient que no hi ha cap mena d'estudi en relació amb l'educació pel futur amb infants amb NEE (Necessitat Educativa Específica), s'ha fet un estudi a Badalona sobre com els alumnes d'entre 6 i 12 anys (educació primària) s'imaginen el futur. Es tracta d'un estudi de tipus qualitatiu sobre com podem ajudar als infants per mitjà de materials que els ajudin a representar el futur que imaginen. Per tant, s'ha fet un grup control amb infants neurotípics i un grup experimental d'infants inclosos en el SIEI (Suport Intensiu per a l'Escolarització Inclusiva). Un cop extrets els resultats, es va considerar que s'havia de portar la investigació a un centre d'educació especial adaptant els materials per veure si els alumnes tenen consciència temporal.

Paraules clau: educació pel futur, prospectiva, representacions socials, educació primària, i Necessitats Educatives Específiques (NEE).

1. INTRODUCTION

Finding out that there has been almost no research done with children in primary education that have Special Educational Needs (SEN) has raised awareness of how these infants have always been marginalized when it comes to doing a study of any kind. This inquiry starts from a question that arose when reflecting on how we can give more importance to children with SEN: *How do children with SEN imagine a future?* Taking it as a starting point, we can also ask ourselves which materials we can provide to them for better comprehension of how they imagine the future.

The purpose of this study is to understand how children that are included in the Intensive Support for Inclusive Schooling visualize a possible future and investigate if they are able to comprehend the continuity between past, present, and future. To achieve this goal, different manipulative materials have been created to assess their knowledge.

2. THEORETICAL FRAMEWORK

In this section of the study, we will examine the concepts of future studies and education for the future, as well as various elements that are significant to the comprehension of those ideas or that are connected to the understanding of the temporal sequence. Additionally, we will deepen the definition of SEN education, its implications, and the tools and resources available for the Catalan educational system to meet the educational needs.

2.1. Future Studies and Education for the Future:

Authors such as Santisteban and Anguera (2014) have explored different areas inside the social sciences didactics, focusing mostly on future studies and education for the future and how they differ from each other. Both authors stated that future studies, also known as prospective studies, refer to studying the future by analyzing the present so we can project a future in which there is human welfare and preservation of our surroundings (Anguera, 2014; Santisteban and Anguera, 2014). According to Anguera (2014), education for the future leans towards a teaching perspective in which human temporality is considered, as well as preparing students to face tomorrow, implying that they must intervene socially and recognize ethical quandaries by listening to those who suffer from injustices (who represent the majority of the planet's inhabitants), which requires additional commitment (Hicks, 1991). It also implies having to analyze technical, scientific, economical, and social aspects that determine how the world is evolving (Cortinas & González, 2025).

Social interventions are focused on building a more democratic and sustainable future, and to achieve it, we need our students to learn how to think critically and be more responsible.

This can be done by exploring different future scenarios and thinking about which consequences and implications they may have (Anguera, 2014). There is a need to associate this work with having historical and geographical consciousness since time and space are inseparable, and there is a need to comprehend them to have a more critical point of view.

As stated in the work of Santisteban & Pagès (2009), related to historical consciousness development, there is a need to have a sense of time, to be able to place events in the past, present, and future to give meaning to temporality and to be oriented toward the future. This means we can comprehend our own experiences based on temporal recognition so we can contextualize the events in our lives socially, chronologically, and spatially. What is in our memories belongs to the past, what is happening belongs to the present, and the prospect belongs to the future. Benejam's (1999) key social concept—change and continuity—is a crucial idea that can aid in our comprehension of time. While some things may remain untouched, there are others that are modified; depending on how much time they have been changing, we can be facing a process of evolution (long-duration) or a revolution (short-time change). Understanding how changes occur and that some things stay the same over time can help our students visualize which possible items are likely to be modified and which are not while thinking about how the world should be transformed from a sustainable and democratic point of view.

Batllori (2009) explains the importance of learning about the geographical space and the different geographical conditions, including the natural and physical environment, economics and society, culture, and politics. Taking a close look into it, we can see how, all around the globe, places have different ideologies of social justice. The understanding of the events that happened in those places can help us have a more accurate belief in the future of countries. Examining a landscape, for example, brings us to the present and a specific reality that, when connected to its temporality, allows us to interrelate concepts from history and geography to extract our own subjective hypothesis of the future, leading us to the study of education for the future.

2.2. Imagining the Future:

Although there is a vast immensity of imaginations of the future, we can establish three categories according to education for the future perspective: preferable, probable, and possible futures. As Slaughter (2023, original work published 1986) states, possible futures cover all the scenarios that can happen, whether we want them to become real or not. If we narrow it down to a more down-to-earth perspective, we find probable futures, which are considered more likely to happen. Preferable futures are then those that we hope happen

and that we can work to create, as they are related to sustainability, welfare, peace, and justice. According to Hicks (2007), the point of exploring these three types of futures is to promote informed action for change. Hicks (2012) also states another classification for future types oriented towards geographical space. We have personal (involving oneself), local (representing the community), and global futures (including a holistic vision of the world). Hicks (1991) implemented in the UK the Global Futures Project, which tries to ensure that both teachers and pupils are able to have a wider perspective about their personal and global future, trying to search for alternatives that are fair and environmentally friendly while taking informed-based actions.

When students think about the future, what they mostly imagine is destruction and fatality, which reflects what is also shown by the media (TV shows, films, books, and art, among others) (Santisteban & Anguera, 2013; Cortinas & González, 2025). Authors like Santisteban & Anguera (2013) support this idea that passivism and discouragement are spread among the youngsters due to the constant stimuli provided by negative and hopeless images, which are a reflection of the welfare of the present and offer a magnified view of the current problems, which is why these representations tend to be negative. Therefore, we can use them to analyze the problems of our present from a different perspective, which is offered by a possible future, and critique our own society to construct a better future.

Cortinas & González (2025) affirm that education for the future sets the aim on the need to counter the generalized view of a pessimistic future generated by uncertainty due to the economic, political, social, and sanitary crises happening around the globe, such as climate change, pandemics, and social tension produced by political strategies. They create an atmosphere of danger, unpredictability, and instability. The goal of education is to give students the tools they need to be more critical thinkers and construct better futures. According to Hicks (2012), there are eight pillars that support the educational rationale for a futures perspective. i) Pupil motivation: expectations about the future have an impact on behavior in the present; ii) Anticipating change: being able to initiate change; iii) Critical thinking; iv) Clarifying values: democracy, human nature and society; v) Decision-making: investigate the action's consequences; vi) Creative imagination: envision alternative futures; vii) A better world: just and sustainable futures; viii) Responsible citizenship: critical participation.

Cortinas & González (2025) also think that we need to provide students with tools for a better critical analysis of what is provided by the media. Working with images that represent a future that includes democratic and sustainable values can be useful to engage students to be more participative towards creating a future that embraces equality among people and an

eco-friendly environment (Santisteban & Anguera, 2013). Meanwhile, the media distribute images from a determined type of future, as they are more appealing to the audience, often misleading the spectator and causing a loss of historical consciousness. Following the research of Santisteban & Anguera (2013), students need to be able to make connections between the past, present, and future, thereby facilitating an understanding of the changes and continuities that have transpired or may transpire, enabling them to discern these dynamics effectively.

The study of social representations (Cortinas & González, 2025) facilitates a deeper understanding of the processes through which collective meanings are constructed, as well as the relationships established through social interactions. These representations serve as frameworks for interpreting and attributing significance to a reality shaped by social experiences, which are both produced and subject to transformation. The Theory of Social Representations has two processes: objectification and anchoring (Moscovici, 2011). Objectification is the process that allows us to frame, visualize, and tackle a social idea with images, emblems, and recurrent topics, while anchoring is the process by which we familiarize those representations by connecting them to traditions, language, and known images.

2.3. Students with Special Needs:

The Catalan educational system supports the idea that special needs go much further than just impairments or disabilities, as referred to by the term SEN. From this point, the Generalitat de Catalunya (n.d.-a) proposes the concept of “Specific Needs of School Support” to encompass not only disabilities or impairments but also high capacities, low socioeconomic backgrounds, school abandonment, foreign students, or communication disorders. These specific needs are identified and assessed according to the needs of the student in his/her educational context. Its aim is to detect the abilities of the student, the competencies acquired, the most efficient way of learning, the curriculum challenges, and the personal or social conditions that may have an impact on the student’s learning capacities to provide each student with the corresponding supports and measures. Although it may seem contrary to the inclusion mindset, categories defining each condition or disorder were created to determine the supports and measures each student should receive according to the condition or disorder that the child has, whether it is temporary or permanent.

Inside the Catalan ordinary schools, there can be Intensive Support for Inclusive Schooling, which are additional professionals to give support to the students’ diversity in the school. In order to provide meaningful learning opportunities for children with SEN, this team of

professionals must work together and create spaces for 5 to 10 students. The kids enrolled have diagnosed intellectual disabilities or behavioral disorders, and additional and intensive measures are required to address the mismatch between the student capacities and the needs of the context (Generalitat de Catalunya, n.d.-b). This support is for children enrolled from preschool 5 (5 years old) to the 4th year of secondary school (15 years old). In spite of being incorporated into this group, these students have a reference tutor and a group where they belong, and its space should be readapted to the child's necessities (Generalitat de Catalunya, n.d.-c).

Each student that participates in the Intensive Support must be diagnosed or have a verdict and an Individualized Support Plan from which curricular adaptations and evaluation criteria are planned by teachers and signed by the family (Generalitat de Catalunya, n.d.-c).

Aside from the Intensive Support in the ordinary school, the Catalan educational system also has special education schools designed for children with special needs, whether from mental or physical disabilities or giftedness. According to the Inclusion Decree 150/2017, whenever possible, children with SEN have to be included in the ordinary school. If it is not possible, they have to attend a special education school. To ensure that no one faces discrimination, these centers must also be accessible to all (Ajuntament de Barcelona, n.d.).

3. METHODOLOGY

This study's method is based on the Grounded Theory (Glaser & Strauss, 1967), a qualitative research approach that focuses on exploring data obtained from social research. There are four steps described by Glaser & Strauss (1967): i) coding or fitting each incident into a category; ii) integrating categories and their properties by comparing; iii) delimiting the theory; and iv) writing the theory. We have adapted this theory to find results on how we can help primary school children with SEN to construct their representations about the future. Given the limited existing research focused on this specific group, a qualitative methodology allows for an in-depth understanding of students' ideas and conceptions that they have about the future, allowing us to construct the theory from the evidence gathered.

The purpose of this inquiry is to determine the usefulness of the materials provided when it comes to helping students to communicate how they imagine the future and if it is easy for them to manipulate and understand its functioning, along with knowing if these students show signs of historical consciousness development.

This study is set in Badalona, Barcelona, Catalonia's third-largest city and the fourth most populous in the region. It is situated between the Mediterranean Sea and the Serralada de

Marina. The city is also experiencing a migration process, which means that many families and children are newcomers going through a process of linguistic and cultural adaptation, while others are experiencing migratory grief. The majority of schools exhibit this, particularly those situated in low-income areas.

We are setting the focus on the public primary education center Baldiri Reixac, located in the La Salut neighborhood, where the socioeconomic capital is low. The school seeks to foster inclusive education from a global perspective, adapting it to each child's developmental stage and working pace.

This investigation will be done with a control group, established by three boys (C-01, C-02, and C-03) and three girls (C-04, C-05, and C-06) aged between ten and eleven that are neurotypical. The sample consists of three girls and two boys, aged between 7 and 12, who are included in the Intensive Support. The first participant (E1-01) is an eleven-year-old male who has a low intellectual disability. The second participant (E1-02) is a twelve-year-old female with a low intellectual disability. The third participant (E1-03) is a nine-year-old male who is autistic and has a Specific Language Impairment (SLI). The fourth participant (E1-04) is a nine-year-old female who has Dravet syndrome. The last participant (E1-05) is a seven-year-old female with Down syndrome.

Two instruments were designed for data collection, one for children to be able to make representations (as Hicks, 2016, states that creating future scenarios helps to think critically and creatively about the future) and the other to gather observations and children's reflections while doing the representations. The first one consists of four possible and local futuristic landscapes created with Genspark AI (representing a beach, a dystopia, a farm, and a city), with four blank squares with Velcro on them (refer to Appendix A), along with different images (created with Gemini AI) representing the past, present, and future of people, houses, animals, liners, and air transports (see Appendix B). Each of the students involved in the investigation had to place one image of each category (except for the liners that could only be placed in the beach landscape) into one of the blank spaces and attach it with the Velcro to make their social representation, following the process of objectification and anchoring (Moscovici, 2011). The second instrument is an observation diary in which notes were made about the landscape and image choices and the classification of the images according to the categories (refer to Appendix D for neurotypical students and Appendix F for students in the Intensive Support). Questions were made to know the reason why they had picked a particular image. The corresponding answers were written down for a posteriori analysis. The entire procedure is planned to be finished in a single day, with each data collection session lasting ten to fifteen minutes.

4. RESULTS AND DISCUSSION

This section presents the findings obtained from the groups participating in the study and discusses them in relation to the children's capacity to develop a historical consciousness and projection of the future. These results are organized thematically, from the general vision to the modification of the task to adapt it to SEN students.

4.1. Historical Consciousness and Future Projection:

Results have shown that the neurotypical students who did the task had a fully developed historical consciousness and could project changes in the future while some things still remained the same, linked to the key social concept by Benejam (1999), change and continuity. They all agreed on technological advances and the huge role artificial intelligence may play in the next years, especially student C-03. Student C-01 added that his belief in a future dystopia comes from the rise of the machines after being exploited by humans (as stated by Santisteban and Anguera, 2013, in their work, passivism and discouragement lead to negative representations of the future), illustrating a critical and reflective stance towards technological progress. Both students think about the consequences and implications of the future scenarios, as stated by Anguera (2014); recognize ethical dilemmas (Hicks, 1991); and can analyze how the world is evolving (Cortinas & González, 2025). The point of view these students have clearly differs from what students in the Intensive Support imagine; just one student, E1-01, imagines the future as a dystopia, while the others look for other options. Students E1-04 and E1-05 chose the farm landscape, which is the one that represents a more sustainable future, related to welfare and peace, which is linked to representing a preferable future, defined by Slaughter (2023), and which some of the neurotypical students also did, such as C-02, C-05, and C-06, when choosing the city and farm landscapes. However, we cannot know the reasons behind E1-04 and E1-05 choices, as they are nonverbal kids, and adapted communication tools were not available.

4.2. Image Classification Task: Levels of Autonomy and Guidance:

Building on these initial differences in future projection, the classification task offered a more concrete measure of how autonomously each child could organize temporal information. When classifying the images, the control group could do it without any type of help (as shown in Table 1), whereas the majority of the students in Intensive Support needed guidance, with the exception of student E1-03, who could do it autonomously (see Table 2).

Table 1. *Results from the control group.*

CONTROL GROUP KIDS	LANDSCAPE CHOSEN	CLASSIFYING	ELEMENTS CHOSEN

C-01	Dystopia	He is able to perfectly classify all the elements and can even deduce that one image in each category belongs to the past, another to the present, and another to the future.	Cleaning robot, futuristic house, flying car, and futuristic animal.
C-02	City	He is able to classify all the elements into the categories without needing help.	Birds, futuristic house, dog, and kid.
C-03	Dystopia	He is able to classify all the elements into the categories without needing help.	Robot, futuristic house, flying car, and futuristic animal.
C-04	Dystopia	She is able to classify all the elements into the categories without needing help.	Cleaning robot, futuristic house, flying car, and futuristic animal.
C-05	City	She is able to classify all the elements into the categories without needing help.	Cleaning robot, futuristic house, flying car, and futuristic animal.
C-06	Farm	She is able to classify all the elements into the categories without needing help.	Cleaning robot, futuristic house, drone, and futuristic animal.

As Table 1 shows, every student in the control group could accomplish the task autonomously, and it reflects that student C-01 went a step further by explicitly deducing the past-present-future logic underlying the activity.

Table 2. *Results from the sample in the Intensive Suport.*

KIDS IN THE INTENSIVE SUPPORT	LANDSCAPE CHOSEN	CLASSIFYING	ELEMENTS CHOSEN
E1-01	Dystopia	He could classify the elements by categories with some help provided at a specific time.	Birds, stereotypical house, dinosaur, and robot.
E1-02	Beach	She needed some help with particular images, but the overall classification was positive.	Plane, futuristic liner, futuristic house, cleaning robot, and dog.
E1-03	City	He understood all the indications given and did not need any help.	Flying car, futuristic house, dog, and kid.
E1-04	Farm	At first she did not know how to classify the images, but if you pointed out one of them and asked if that image belonged to the category, she could perfectly answer.	Robot, birds, Roman house, and dog.
E1-05	Farm	She could not classify the images, as the orders given were not understood.	Stereotypical house, plane, dinosaur, and cleaning robot.

The variability observed in Table 2 allows us to understand the wide range of levels of capabilities that children with SEN have, and when looking at the elements chosen by each child, we can appreciate an even bigger differentiation.

4.3. Selection and Interpretation of Futuristic Elements:

After the classification phase, they had to choose the one element of each category and place it in the blanks. It can be clearly seen that the neurotypical students understand the characteristics of a futuristic image and place the ones that are more future-oriented,

although student C-02 chooses other images, such as birds, to emphasize a balance between technology and sustainability (following the pillar "*A better world*" by Hicks, 2012); a dog to criticize that no technological animal can be a human's best friend; or a kid to point out that humans will still be alive and cohabitating with robots (see Table 1). In Appendix C the neurotypical student's representations can be found.

The interpretations offered by the Intensive Support group are notably more heterogeneous (see Appendix E). Student E1-01, who also chose birds in the sky, justified his answer, saying that flying cars do not exist, meaning either that he has no understanding of the task or that he cannot imagine a future because he does not understand its significance, implying that there is no historical consciousness development (Santisteban & Pagès, 2009). Strikingly, he also placed a dinosaur in the landscape because he believes that scientists will be able to recreate them in the future. Student E1-03, in contrast, chose all the futuristic images except the kid and explained that he would not pick a robot because they malfunction when in contact with water. When choosing the house, he said, "*I do not want to go back to the Romans*" (referring to the domus), which implies that he does show signs of historical consciousness development. With students E1-04 and E1-05, it was more difficult to communicate, as they do not have language, and when asking questions, they could not reply, but we can deduce by their representations that neither of them has a developed historical consciousness or is able to understand time sequences.

We may conclude that, according to the type of SEN the child has, they are more or less capable of understanding the task and sequencing time. Taking into account that the overall results state that there is a lack of understanding of the task, it was necessary to adapt the methodology for the next group of participants.

4.4. Methodological Adaptations for the Special Education School:

Seeing that not every child could understand the task but that they all comprehended the functioning of the activity, it was decided to change the methodology of the activity and try another version with the students in the special education school. Seven students were chosen, six boys and one girl, aged between ten and thirteen years old, all with severe intellectual disabilities. Students E2-01, E2-03, E2-05, E2-06, and E2-07 are autistic, and the last two are also non-verbal; student E2-02 has Börjeson-Forssman-Lehmann syndrome and is non-verbal; and student E2-04 has Down syndrome.

In this activity, three landscapes could be seen: one representing a village from the Middle Ages, another of a city of the present, and the last with a city in space (refer to Appendix G

to see the landscapes). Images were given to students, and they had to place them in the landscape where they thought they belonged. They can be found in Appendix H.

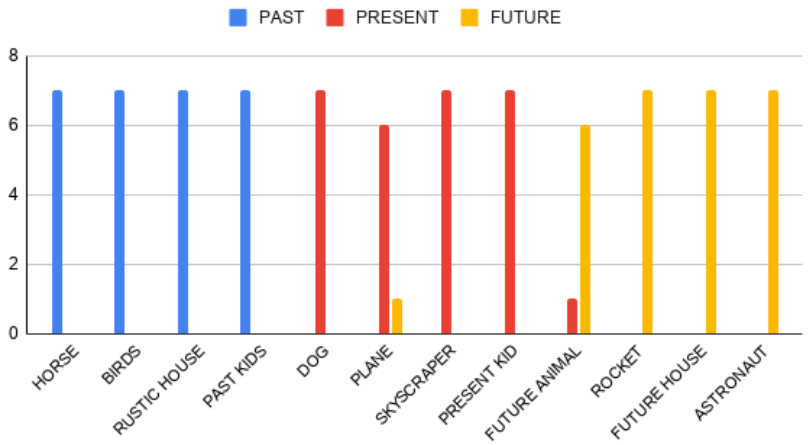
4.5. Communication Barriers and Adapted Tools:

All students were provided a communicator, which is an app called "Asterics" that enables nonverbal students to communicate by using PECS (Picture Exchange Communication System), a system of pictograms related to a word. Although it only provides limited vocabulary and can sometimes be difficult to navigate, the students who needed it were able to indicate which elements appeared in the given landscapes. In retrospective, it could have been useful to prepare, along with the speech therapist, a folder containing the specific elements appearing in the three landscapes with the corresponding PECS and upload it to the Asterics platform. This adaptation would have allowed students to locate the relevant vocabulary in a much more efficient way.

4.6. Understanding of Time Sequencing:

During the activity (evidence can be found in Appendix K), it could be observed that students looked for similarities between the image given and the elements appearing in the three landscapes and then paired them on that basis (see Appendix J to find the observation diary). They would also try to fit each image in the blanks of the landscape according to its shape; only when realizing none of the shapes matched did they go back to searching for resemblances (see Graph 1). On the whole, these students could not comprehend that the items were from the past, present, or future scenes but instead looked for shared visual characteristics between the images (the representations can be found in Appendix I). According to Santisteban & Pagès (2009), if there is no sense of time, there cannot be a historical consciousness development. However, if they could associate the items belonging to the same landscape, it means they are able to understand geographical space, as defined by Batllori (2009).

Graph 1. *Elements Chosen by Temporal Category.*



4.7. Comparative Analysis of Neurotypical and SEN Students:

When reading the three groups separately, a clear gradient emerges. The control group could do the activity autonomously, identifying future-oriented attributes and clearly introducing critical thinking in areas such as sustainability, social justice, or conflict resolution, as developed by Hicks (2012), showing that the group displays a fully developed historical consciousness. The Intensive Support students, however, could only manage the task with guided prompts, and some could not engage with the activity at all. Lastly, the special education school group could not approach the task, as they could do the activity through visual matching instead of by temporal categories, suggesting that the notions of the temporal continuum are not yet operative for them in the way the activity required.

These findings support the idea that the development of historical consciousness and understanding of time sequencing are mediated by the cognitive profile, language, and access to adapted communication tools.

5. CONCLUSIONS

The purpose of this study was to investigate how children with special educational needs envision the future and whether they recognize that they are a part of the temporal continuum and thus have a developed historical consciousness, a topic that has not gotten attention in earlier studies. This research has had some limitations, from the beginning until the very end. The starting point was to do a study together with ONCE- CREDV in Barcelona, but the organization declined the proposal due to confidentiality and the lack of children available. Then, the research had to change towards children included in the Intensive Support. As the sample only consisted of five students, it was decided to take the research to the special education school, and as the children's capacities were not the same, the activity had to be redesigned. However, we are aware that it was still a very small sample of twelve students, all from Badalona, forming a heterogeneous group with communication barriers. Additionally, the research was completed in a short amount of time, which made it impossible to fully comprehend each child's worldview or to scaffold the process for a better comprehension of the task.

This research has shown that depending on the degree of intellectual disability of the child, it will be more or less difficult to both understand the task and accurately represent their own thoughts. We can conclude that cognitive and communicative capacities are crucial for students to be able to create their own representations, as it has been proven that two out of twelve students show no signs of historical consciousness development, and eight of the participants also lacked communication tools with the adequate vocabulary to communicate their thoughts. Moreover, while three of these students were capable of having a critical

analysis on the elements chosen and why they placed them, the majority could not. In addition, the students in the special education school completed the task successfully but without understanding that the images represented the past, present, and future, meaning that they are not capable of understanding that time has a sequence. The findings show that ten out of twelve students were unable to comprehend the aim of the task, but they could understand the functioning of the material provided.

This study could be continued by a more comprehensive analysis of each student's answers. Scaffolding the task could be a complementary way of knowing the level that each student reaches or to determine if they can actually develop historical consciousness. Having deep knowledge of the results of both methods would allow us to determine which students, according to the SEN types they have, are able to develop a historical consciousness.

6. REFERENCES

Ajuntament de Barcelona. (n.d.). *Centres d'educació especial*. https://ajuntament.barcelona.cat/infancia/ca/canal/centres-deducacio-especial

Anguera, C. (2014). Per què educar per al futur? *Perspectiva Escolar*, (373), 34–38.

Batllori, R. (2009). Enseñar y aprender el espacio geográfico. En A. Santisteban & J. Pagès (Eds.), *Didáctica del conocimiento del medio social y cultural en la educación primaria: Ciencias sociales para aprender, pensar y actuar* (pp. 249–268). Síntesis.

Benejam, P. (1999). La oportunidad de identificar conceptos clave que guíen la propuesta curricular de ciencias sociales. *Íber: Didáctica de las Ciencias Sociales, Geografía e Historia*, (21), 5–12.

Cortinas, A., & González, M. (2025). La educación para el futuro más allá de la escuela: representaciones infantiles sobre el mundo que viene. *Enseñanza de las Ciencias Sociales, 23*(2), 108–121. https://doi.org/10.1344/ECCSS2025.2.6

Generalitat de Catalunya. (n.d.-a). *Necessitats específiques de suport educatiu (NESE)*. XTEC. https://xtec.gencat.cat/ca/curriculum/diversitat-i-inclusio/atencio-educativa-als-alumnes/nese/

Generalitat de Catalunya. (n.d.-b). *El SIEI, un suport per a tot el centre educatiu*. Projectes d'educació inclusiva (XTEC). https://projectes.xtec.cat/educacioinclusiva/portada/el-sieei-un-suport-per-a-tot-el-centre-educatiu/

Generalitat de Catalunya. (n.d.-c) *Suport intensiu per a l'escolarització inclusiva (SIEI)*. XTEC. https://xtec.gencat.cat/ca/curriculum/diversitat-i-inclusio/mesures-i-suports/intensius/siei/

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Aldine.

Hicks, D., & Holden, C. (2007). Remembering the future: What do children think? *Environmental Education Research, 13*(4), 501–512. https://doi.org/10.1080/13504620701581596

Hicks, D. (1991). Preparing for the millennium: Reflections on the need for future education. *Futures, 23*(6), 623–636. https://doi.org/10.1016/0016-3287(91)90083-E

Hicks, D. (2012). *Sustainable Schools, Sustainable Futures.* WWF-UK.

Moscovici, S. (2011). An essay on social representations and ethnic minorities. *Social Science Information, 50*(3–4), 442–461. https://doi.org/10.1177/0539018411411027

Santisteban, A., & Anguera, C. (2013). Las imágenes del futuro en los medios de comunicación y su influencia en la enseñanza de las ciencias sociales. En J. J. Díaz Matarranz, A. Santisteban Fernández, & Á. Cascajero Garcés (Eds.), *Medios de comunicación y pensamiento crítico: nuevas formas de interacción social* (pp. 253–267).

Santisteban, A., & Anguera, C. (2014). Education for the future: Estado de la cuestión de la investigación y de la innovación desde la enseñanza de las ciencias sociales. En J. Pagès Blanch & A. Santisteban Fernández (Eds.), *Una mirada al pasado y un proyecto de futuro: investigación e innovación en didáctica de las ciencias sociales* (pp. 659–668). Servei de Publicacions de la Universitat Autònoma de Barcelona.

Santisteban, A., & Pagès, J. (2009). Enseñar y aprender el tiempo histórico. En A. Santisteban & J. Pagès (Eds.), *Didáctica del conocimiento del medio social y cultural en la educación primaria: Ciencias sociales para aprender, pensar y actuar* (pp. 229–248). Síntesis.

Slaughter, R. (2023). *Critical futures study: A dimension of educational work*. Foresight International. https://foresightinternational.com.au/wp-content/uploads/2023/12/Crit_FS_Dim_Curric_Work_Final_1986_2023.pdf

APPENDICES

Appendix A: Futuristic landscape pictures:

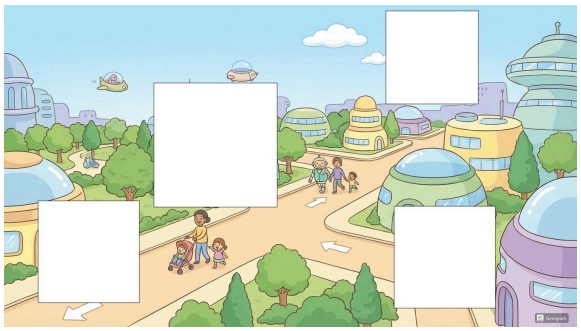


Image 1. Futuristic city landscape.

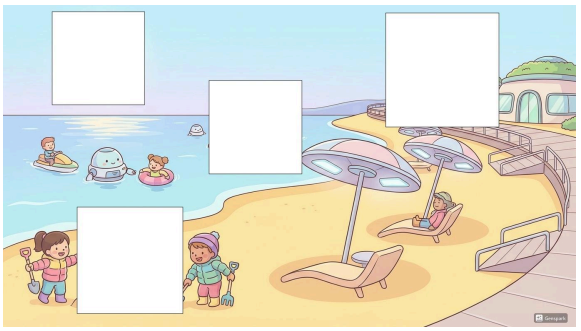


Image 2. Futuristic beach landscape.

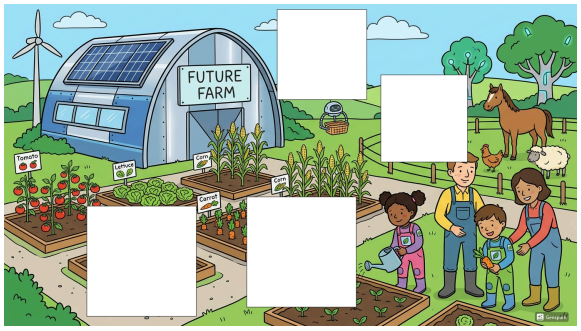


Image 3. Futuristic farm landscape.



Image 4. Futuristic dystopia landscape.

Appendix B: Images to choose:



Image 5. Roman house.



Image 6. Stereotypical house.



Image 7. Futuristic house.

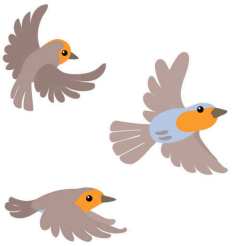


Image 8. Birds.



Image 9. Plane.



Image 10. Drone.



Image 11. Flying car.



Image 12. Prehistoric man.



Image 13. Present kid.

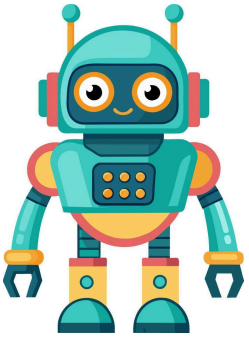


Image 14. Robot.



Image 15. Cleaning robot.



Image 16. Dinosaur.



Image 17. Dog.



Image 18. Futuristic animal.

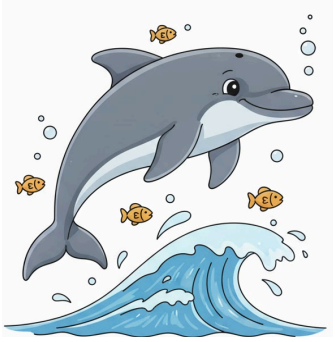


Image 19. Dolphin.



Image 20. Liner.

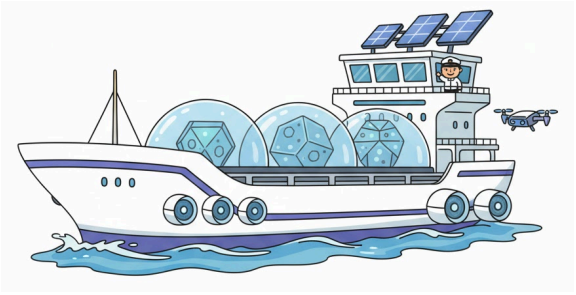


Image 21. Futuristic liner.

Appendix C: Representations of neurotypical students:



Image 22. Representation of student C-01.



Image 23. Representation of student C-02.

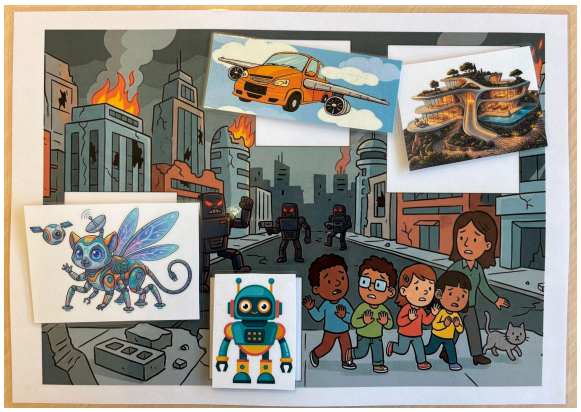


Image 24. Representation of student C-03.



Image 25. Representation of student C-04.

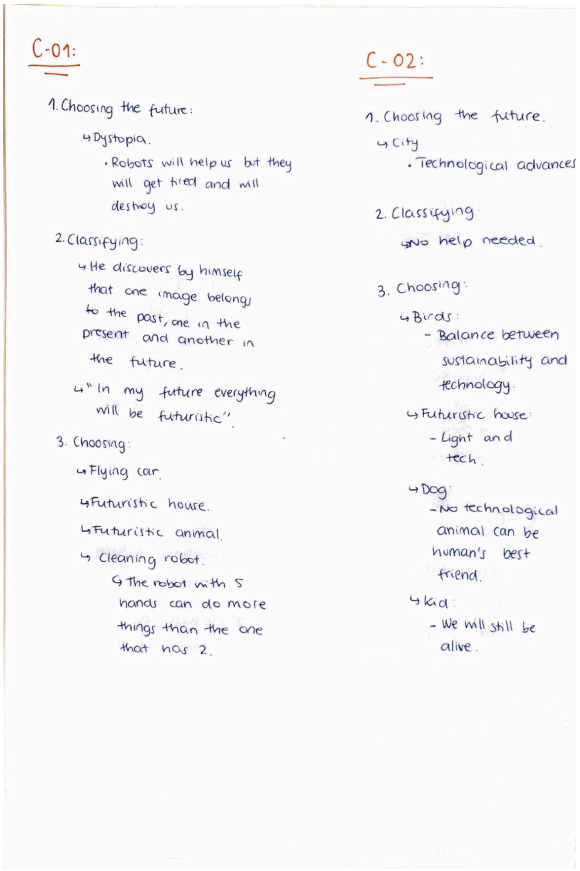


Image 26. Representation of student C-05.



Image 27. Representation of student C-06.

Appendix D: Observation diary of neurotypical students:



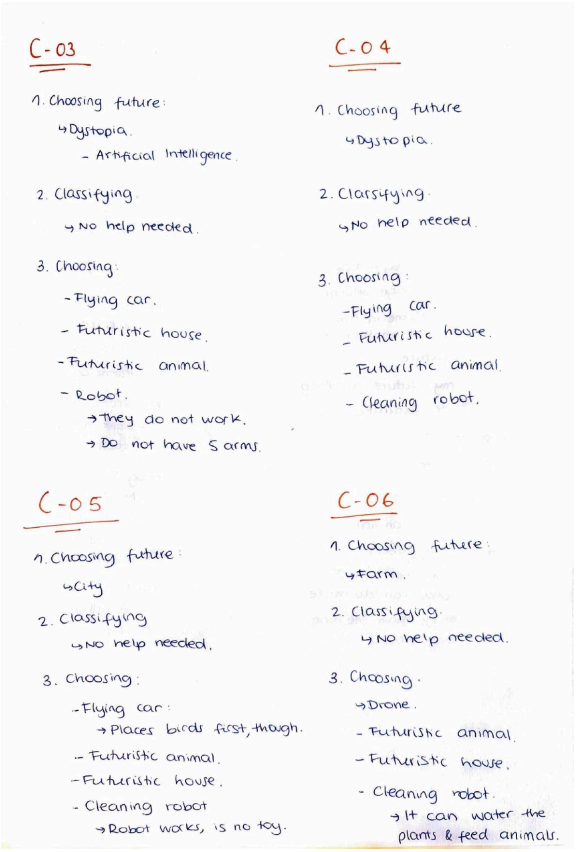
C-01:

1. Choosing the future:
   - Dystopia.
     - Robots will help us but they will get tired and will destroy us.
2. Classifying:
   - He discovers by himself that one image belongs to the past, one in the present and another in the future.
   - "In my future everything will be futuristic".
3. Choosing:
   - Flying car.
   - Futuristic house.
   - Futuristic animal.
   - Cleaning robot.
     - The robot with 5 hands can do more things than the one that has 2.

C-02:

1. Choosing the future.
   - City
     - Technological advances
2. Classifying
   - No help needed.
3. Choosing:
   - Birds:
     - Balance between sustainability and technology
   - Futuristic house:
     - Light and tech.
   - Dog:
     - No technological animal can be human's best friend.
   - Kid:
     - We will still be alive.

Image 28. Observation diary of students C-01 and C-02.



C-03

1. Choosing future:
   - Dystopia.
     - Artificial Intelligence.
2. Classifying
   - No help needed.
3. Choosing:
   - Flying car.
   - Futuristic house.
   - Futuristic animal.
   - Robot.
     - They do not work.
     - Do not have 5 arms.

C-04

1. Choosing future
   - Dystopia.
2. Classifying
   - No help needed.
3. Choosing:
   - Flying car.
   - Futuristic house.
   - Futuristic animal.
   - Cleaning robot.

C-05

1. Choosing future:
   - City
2. Classifying
   - No help needed.
3. Choosing:
   - Flying car:
     - Places birds first, though.
   - Futuristic animal.
   - Futuristic house.
   - Cleaning robot
     - Robot works, is no toy.

C-06

1. Choosing future:
   - Farm.
2. Classifying
   - No help needed.
3. Choosing:
   - Drone.
   - Futuristic animal.
   - Futuristic house.
   - Cleaning robot.
     - It can water the plants & feed animals.

Image 29. Observation diary of students C-03, C-04, C-05, and C-06.

Appendix E: Representations of students included in the Intensive Support:



Image 30. Representation of student E1-01.



Image 31. Representation of student E1-02.



Image 32. Representation of student E1-03.

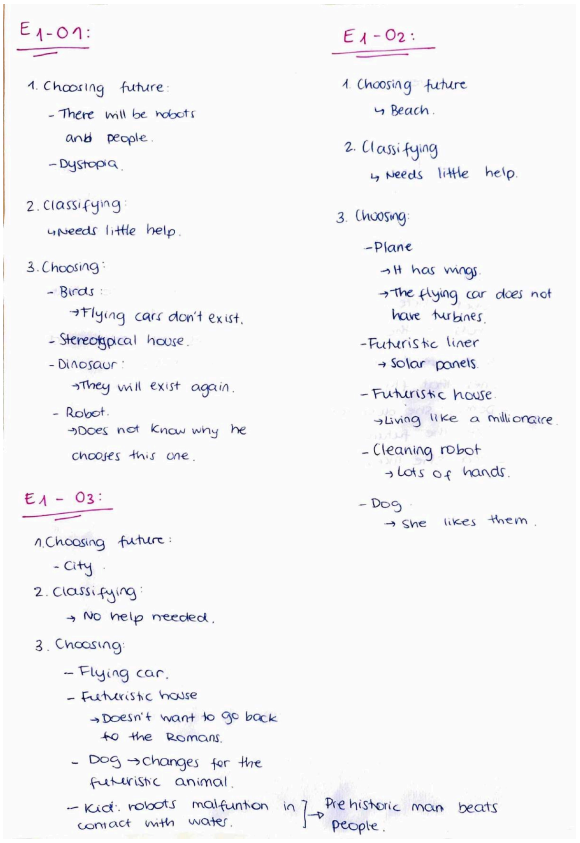


Image 33. Representation of student E1-04.



Image 34. Representation of student E1-05.

Appendix F: Observation diary of students included in the Intensive Support:



E1-01:

1. Choosing future:
   - There will be robots and people.
   - Dystopia.
2. Classifying:
   ↳ Needs little help.
3. Choosing:
   - Birds:
     → Flying cars don't exist.
   - Stereotypical house.
   - Dinosaur:
     → They will exist again.
   - Robot.
     → Does not know why he chooses this one.

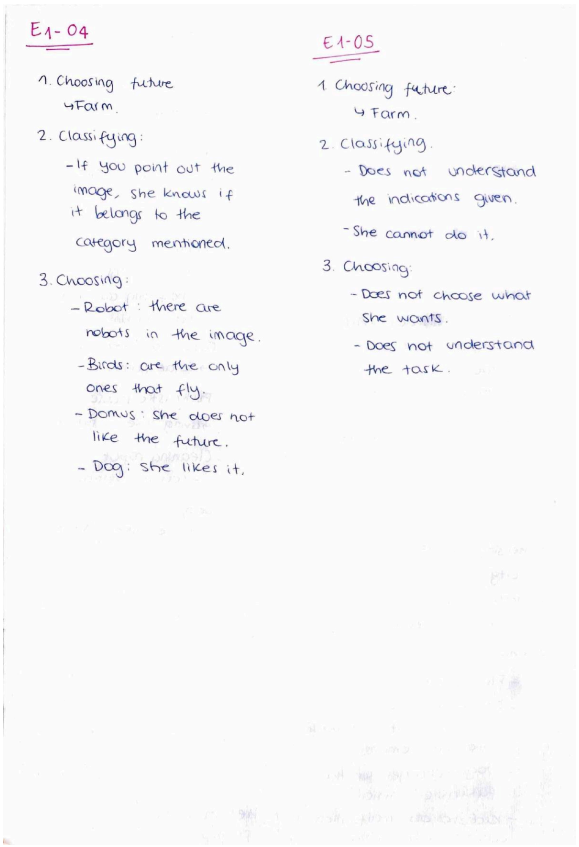
E1-02:

1. Choosing future
   ↳ Beach.
2. Classifying
   ↳ Needs little help.
3. Choosing:
   - Plane
     → It has wings.
     → The flying car does not have turbines.
   - Futuristic liner
     → Solar panels.
   - Futuristic house.
     → Living like a millionaire.
   - Cleaning robot
     → Lots of hands.
   - Dog
     → She likes them.

E1-03:

1. Choosing future:
   - City.
2. Classifying:
   → No help needed.
3. Choosing:
   - Flying car.
   - Futuristic house
     → Doesn't want to go back to the Romans.
   - Dog → Changes for the futuristic animal.
   - Kid: robots malfunction in contact with water. → Prehistoric man beats people.

Image 35. Observation diary of students E1-01, E1-02, and E1-03.



E1-04

1. Choosing future
   ↳ Farm.
2. Classifying:
   - If you point out the image, she knows if it belongs to the category mentioned.
3. Choosing:
   - Robot: there are robots in the image.
   - Birds: are the only ones that fly.
   - Domus: she does not like the future.
   - Dog: she likes it.

E1-05

1. Choosing future:
   ↳ Farm.
2. Classifying.
   - Does not understand the indications given.
   - She cannot do it.
3. Choosing.
   - Does not choose what she wants.
   - Does not understand the task.

Image 36. Observation diary of students E1-04 and E1-05.

Appendix G: Past, present, and future landscapes:



Image 37. Past landscape (Middle Ages).



Image 38. Present city landscape.

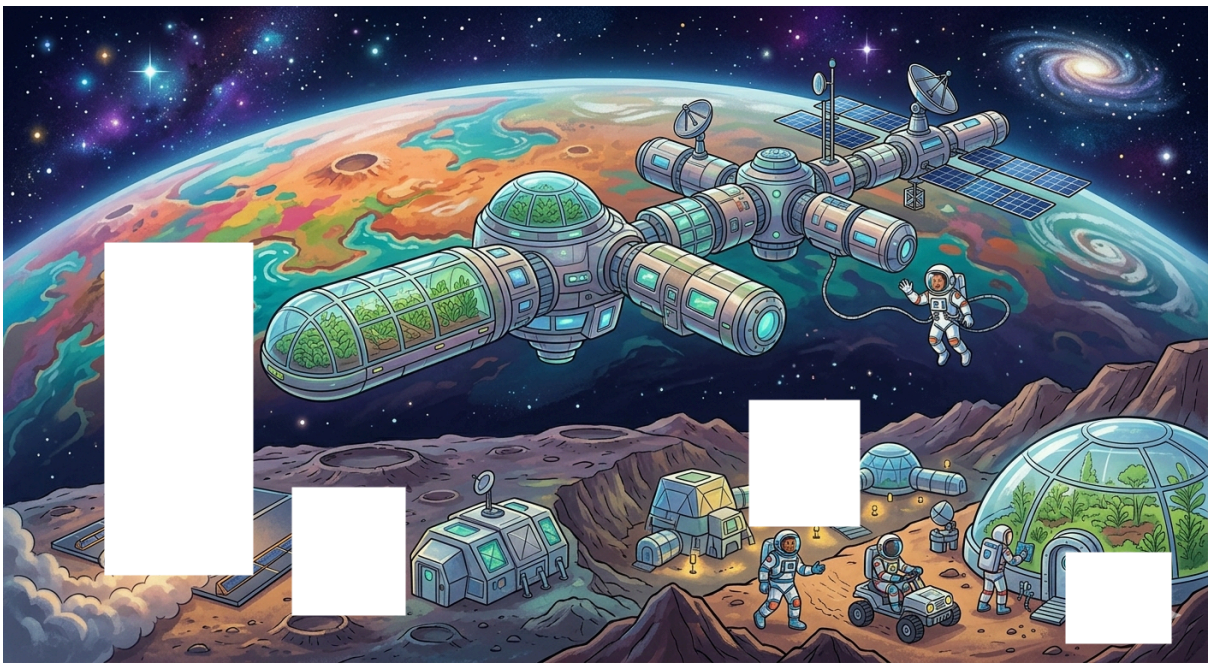


Image 39. Future landscape.

Appendix H: Images to choose:



Image 40. Birds.



Image 41. Past house.



Image 42. Past kids.



Image 43. Past animal.



Image 44. Plane.



Image 45. Present kid.



Image 46. Dog.

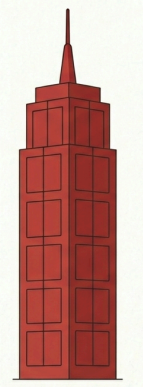


Image 47. Skyscraper.

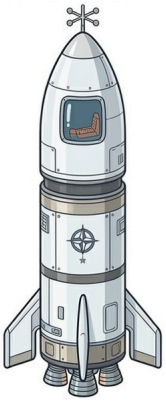


Image 48. Space rocket.



Image 49. Futuristic animal.



Image 50. Futuristic house.



Image 51. Astronaut.

Appendix I: Representations of students in the special education school:



Image 52. Representation of the past by student E2-01.



Image 53. Representation of the present by student E2-01.



Image 54. Representation of the future by student E2-01.



Image 55. Representation of the past by student E2-02.



Image 56. Representation of the present by student E2-02.



Image 57. Representation of the future by student E2-02.



Image 58. Representation of the past by student E2-03.



Image 59. Representation of the present by student E2-03.



Image 60. Representation of the future by student E2-03.



Image 61. Representation of the past by student E2-04.



Image 62. Representation of the present by student E2-04.



Image 63. Representation of the future by student E2-04.



Image 64. Representation of the past by student E2-05.



Image 65. Representation of the present by student E2-05.



Image 66. Representation of the future by student E2-05.



Image 67. Representation of the past by student E2-06.



Image 68. Representation of the present by student E2-06.



Image 69. Representation of the future by student E2-06.



Image 70. Representation of the past by student E2-07.

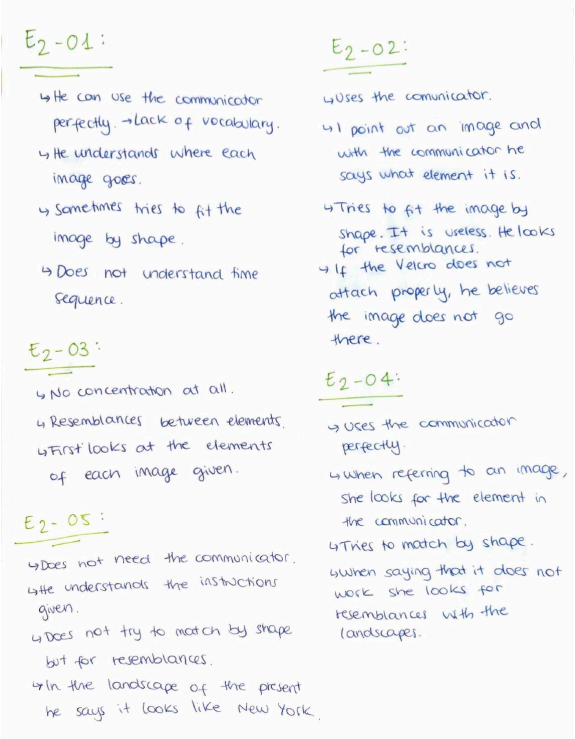


Image 71. Representation of the present by student E2-07.



Image 72. Representation of the future by student E2-07.

Appendix J: Observation diary of students in the special education school:



E2-01:

- He can use the communicator perfectly. → Lack of vocabulary.
- He understands where each image goes.
- Sometimes tries to fit the image by shape.
- Does not understand time sequence.

E2-02:

- Uses the comunicator.
- I point out an image and with the communicator he says what element it is.
- Tries to fit the image by shape. It is useless. He looks for resemblances.
- If the Velcro does not attach properly, he believes the image does not go there.

E2-03:

- No concentration at all.
- Resemblances between elements.
- First looks at the elements of each image given.

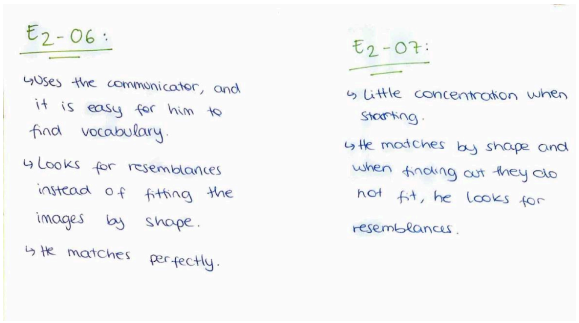
E2-04:

- Uses the communicator perfectly.
- When referring to an image, she looks for the element in the communicator.
- Tries to match by shape.
- When saying that it does not work she looks for resemblances with the landscapes.

E2-05:

- Does not need the communicator.
- He understands the instructions given.
- Does not try to match by shape but for resemblances.
- In the landscape of the present he says it looks like New York.

Image 73. Observation diary of students E2-01, E2-02, E2-03, E2-04, and E2-05.



E2-06:

- Uses the communicator, and it is easy for him to find vocabulary.
- Looks for resemblances instead of fitting the images by shape.
- He matches perfectly.

E2-07:

- Little concentration when starting.
- He matches by shape and when finding out they do not fit, he looks for resemblances.

Image 74. Observation diary of students E2-05 and E2-06.

Appendix K: Evidence of the task performance in the special education school:



Image 75. Evidence of the task with student E2-04.



Image 76. Evidence of the task with student E2-06.



Image 77. Evidence of the task with student E2-07.