

Drawing an inclusive educational strategy: “Human Communication Strategies within the disability culture that works what not?”

Diseñando una estrategia educativa inclusiva: “Estrategias de comunicación humana dentro de la cultura de la discapacidad: ¿qué funciona y qué no?”

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Abstract / Resumen

A more inclusive education will be possible if, “from now on” profound transformations are promoted in the educational system as a whole, with schools having the following dimensions: a) in teacher training “learning to teach in the face of diversity”; b) in the training of school managers, “learn how to manage, in a participatory and democratic way, the major themes of the school”; c) in the design and development of the curriculum for basic education “an open, holistic, comprehensive, interdisciplinary, intercultural curriculum”; d) Developing systematic evaluation and planning processes at school and classroom level to promote “inclusive values, policies and practices”. (Martínez Silva, 2018. P.204)

The theory that we applied in the intervention and design of the work was: Ramsey’s theorem: A mathematical model, adapted to the classroom, with subjects as tangible elements, the results obtained have two basic characteristics. First: They are not constructive, show the existence of a structure and therefore does not issue a procedure to find it (other than the brute force search).

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Secondly, a sufficiently large object must necessarily contain a given structure, often the proof of these results requires that these objects be enormously large with limits that grow exponentially.

As a conclusion, education is too large a field with a transforming force of the human being and the structure that we have given to educational institutions require subjects, who are involved in its operation, because it does not move a school, without pupils, does not give, learning, there is interest, experience, trust, respect, communication human factors.

Keywords: Education; Inclusion; Ramsey's theorem; Intervention and communication

Una educación más inclusiva será posible si, “de ahora en adelante”, se promueven transformaciones profundas en el sistema educativo en su conjunto, con escuelas que presenten las siguientes dimensiones: a) en la formación docente, “aprender a enseñar frente a la diversidad”; b) en la formación de directivos escolares, “aprender a gestionar, de manera participativa y democrática, los grandes temas de la escuela”; c) en el diseño y desarrollo del currículo para la educación básica, “un currículo abierto, holístico, integral, interdisciplinario e intercultural”; d) desarrollar procesos sistemáticos de evaluación y planificación a nivel de escuela y de aula para promover “valores, políticas y prácticas inclusivas”. (Martínez Silva, 2018. P.204)

La teoría que aplicamos en la intervención y el diseño del trabajo fue el teorema de Ramsey: un modelo matemático adaptado al aula, con los sujetos como elementos tangibles; los resultados obtenidos tienen dos características básicas. Primero: no son constructivos, muestran la existencia de una estructura y, por lo tanto, no emiten un procedimiento para encontrarla (más que la búsqueda por fuerza bruta).

En segundo lugar, un objeto lo suficientemente grande debe contener necesariamente una estructura determinada; a menudo, la demostración de estos resultados requiere que estos objetos sean enormemente grandes, con límites que crecen exponencialmente.

Palabras clave: Educación; Inclusión; Teorema de Ramsey; Intervención y comunicación.

APPLYING THE RAMSEY THEOREM MODEL

According to the Ramsey Theorem model, it comprises two variables, which we will identify as A and B. A refers to the teacher, and B refers to the student. In the Ramsey Theorem model, the variable represented by the letter (n) represents, in the case of students, those who enroll in the course with the aim of learning and passing, and therefore have a number of opportunities to pass the course. In the case of the teacher, it refers to their adherence to the course syllabus, their ability to impart knowledge and skills, and their compliance with the course schedule (n) opportunities.

According to the Ramsey Theorem model; Teachers and students do not know each other; before the course begins, there is no reference to them. Therefore, they are: unknown subjects whose only connection is the field of education. For the project, this model was applied to the subject of human communication. (B) identifies the teachers who develop their lesson plans, support materials, and courses on a digital platform (if they include virtual components). They do not know the students who will enroll. (n) Possible characteristics or situations that may arise. On the other hand, (A) are the students who enroll in the subject. Sometimes there is enough space, and they are enrolled in their preferred schedule. Other times, they were not allowed to register because the spaces were already full, and they may even enroll simply because there was availability. (n) Possible circumstances.

Table 1. Model Ramsey's theorem

E (n possibilities)	Use/ achievements
True	$Yes_{-qiSi} = (1-qi) Yes$
False	$-qiS_i$

Adapted from the model Ramsey's theorem

Explanation of Table 1: If (Ei) occurs, (B) will achieve the goal of completing the course. This also includes achieving (S) (Knowledge) and (q) (particular interests) (Si-qiSi). Subtracting from the gain (Si) generated by the expectation and recorded effort, dedication, or lack thereof, to pass the course, (QiSi) the loss. If (Ei) does not occur, (B) will lose (qiSi).

This is the result of not attending, not committing, or perhaps not even connecting with the group. Therefore, it is important to create environments where everyone can communicate and reach agreements. This includes reasonable adjustments and getting to know the group.

To achieve the reward or result of the semester, (A), in turn, experiences the opposite losses and gains. If the students are not interested, do not know each other, and do not connect, they are left out of the learning process because they lack the characteristics of a group. The teacher also loses out. It is important to highlight that (B) (student) does not know (S_i) the outcome, does not know if they will pass, if it will be easy or difficult, or if it will require effort and time to complete the course at the time of registering for it. In particular, they do not know if it is positive or negative. If they knew that ($S_i > 0$), they would be interested in establishing a (q_i) of zero interest in being in the classroom, in not learning, in not completing the course (even negative).

The most appropriate thing would be to maximize the integration and inclusion of the group with activities that reinforce and transcend knowledge and apply it to the students' daily lives. If (E_i) is true, it would minimize losses (or even transform them into strategies to avoid school dropout and maximize learning gains) if (E_i) is false; and vice versa. Coherence \rightarrow (A): Intuitively, the proofs of this axiom express that no one would buy a lottery ticket if it were the losing ticket; one always seeks that the effort that one is going to put into an action will bring me positive consequences and greater than the effort that one gave it, that is, the greatest benefit, betting on a price higher than the greatest benefit that one could obtain with it.

If, as teachers we are going to start a course assuming that we will be tired, not wanting to work, because the students do not put effort into it, do not read, do not commit themselves, if also the pupils register with a teacher, who is not going to teach them anything or they will not learn, all effort to attend or deliver work will be in vain. That is why the importance of delimiting, we focus to draw this project Finetti's Ramsey theorem, which constitutes one of the greatest achievements of the theory of the subjectivity of probability. Just like responses, they can reflect star responses, if we order them or follow patterns. The teachers, we acquire, the ability to mold, these subjectivities, perhaps the students, come with good or bad will, we can transform, mentalities to change, realities and make a difference.

APPLYING THE RAMSEY MODEL IN THE CLASSROOM

1. **Resources:** In the educational context, resources include, subject registration, class time, materials, teacher attention, making rational adjustments and planning, according to student characteristics and student effort, whether it is foreign or not.
2. **Objective:** To maximize learning and the development of skills over time, to insert everyone in the classroom, respect and mutual admiration. Not to be defeated by adversity
3. **Restrictions:** Time constraints (schedule for homework or extracurricular activities), space, material resources, and individual abilities of students. Do not leave any student out by any circumstances design the work plan for the situations that arise, know the tools you have in the university center to know the limitations we will have.
4. **Utility Function:** Utility can be represented as the level of knowledge acquired, work by units and integrative work, skills developed by students, together with teachers' satisfaction in seeing their students progress.

SYNTHESIS

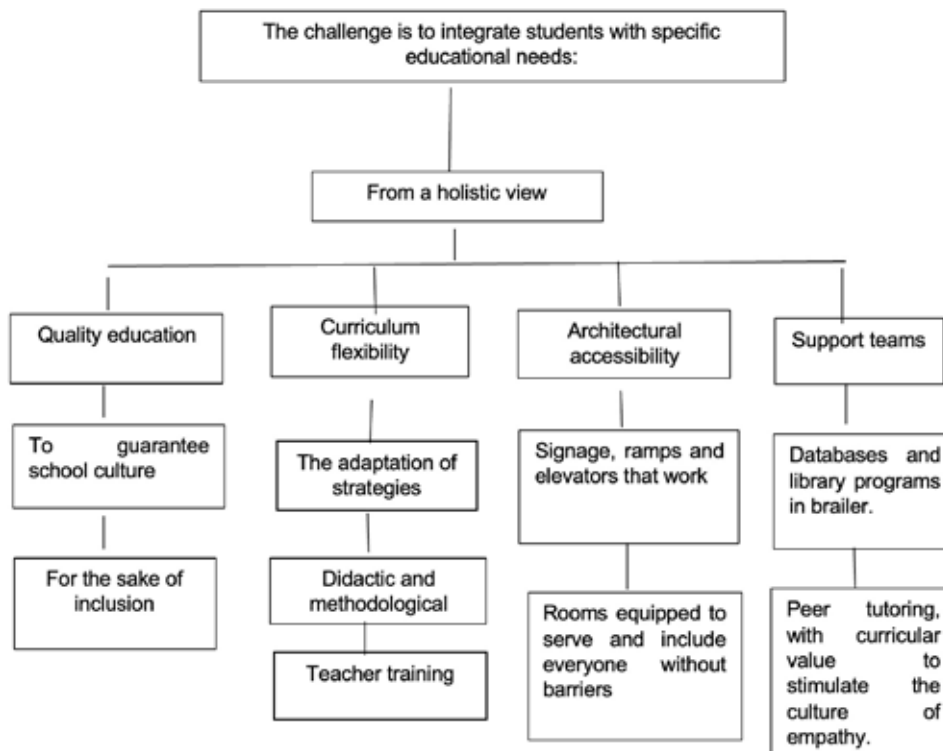
1. **Long-Term Planning:** As teachers you should plan the teaching activities so that each class builds on previous knowledge and prepares students for future learning without limiting only some students, including all
2. **Investment in Education:** Investment of time and resources in effective teaching strategies, such as interactive classes, use of technologies, tutoring, counselling and educational guidance
3. **Balance between Present and Future:** Teachers must decide how much time to devote to topics that are important for generating knowledge that would be part of their career-long learning avoid abandonment and a strengthening of critical thinking.
4. **Feedback and Adaptability:** Incorporate constant feedback to adjust teaching methods and classroom interaction, ensuring that usefulness (learning) is maximized at each stage.

EXAMPLE OF IMPLEMENTATION

- **Context:** A Human Communication class for Bachelor of Psychology students.
- **Plan of classes:**
 - Weeks 1-2: Introduction to Human Communication; time is spent building examples of communication models.
 - Weeks 3-4: Practical applications; students work on projects that use human communication, messages, posters, and language functions in real-world situations.
 - Weeks 5-6: Review and evaluation, incorporating activities such as short videos or documentaries to ensure learning has been maximized.
- **Assessment:** At the end of the unit, students complete a self-assessment which measures both acquired knowledge and application skills.

The following conceptual map allows us, outlines the level of challenge of working with neurodivergent students in an inclusive classroom designed within the field of education with a planning that adapts and adjusts to the immediate environment.

Figure 1. Integration of students with educational needs.



Adapted from the model Ramsey's theorem

We first characterized what the literature describes the mechanisms that must be followed or taken into account if we want to include, subsequently the map was drawn up as a route once schematized with a situation that participates in the class and that is identified with the autistic spectrum then the challenge was to include him design the course accordingly so that he manages to be in the classroom and is not restricted to participate in the measure of everything possible.

Recognizing the personal, educational, social and labor development of people with disabilities is one of the great challenges facing the Mexican population. It is not in vain, and not only in Mexico, that people with disabilities are among the most stigmatized and discriminated against in all areas of their lives (Blanco, 2006; Morin *et al.*, 2013; Verdugo and Schalock, 2013)

There are programs for people with disabilities, who need the help of caregivers at state and federal level, also within the University of Guadalajara and the unit of scholarships with priority to receive the benefit, we believe in the idea that scholarships do not prevent abandonment, By massing the classrooms we are doing quality education is necessary to do something more and in that but it is in which, this work was thought.

Including a student with disabilities means not only assigning him or her a place where he or she can attend classes, but also setting up a range of academic, financial and material supports and services, technological, psychological and self-management skills that enable them to integrate fully into school life (Fuller, Bradley & Healey, 2004; Getzel, 2008), a situation for which very few universities are prepared (Pérez Castro, 2016)

REASONABLE ACCOMMODATION AND VISUAL, HEARING AND MOTOR DISABILITY

Reasonable adjustments to learning units within the classroom is an attention that we must pay if we want to offer a teaching service from the disability culture.

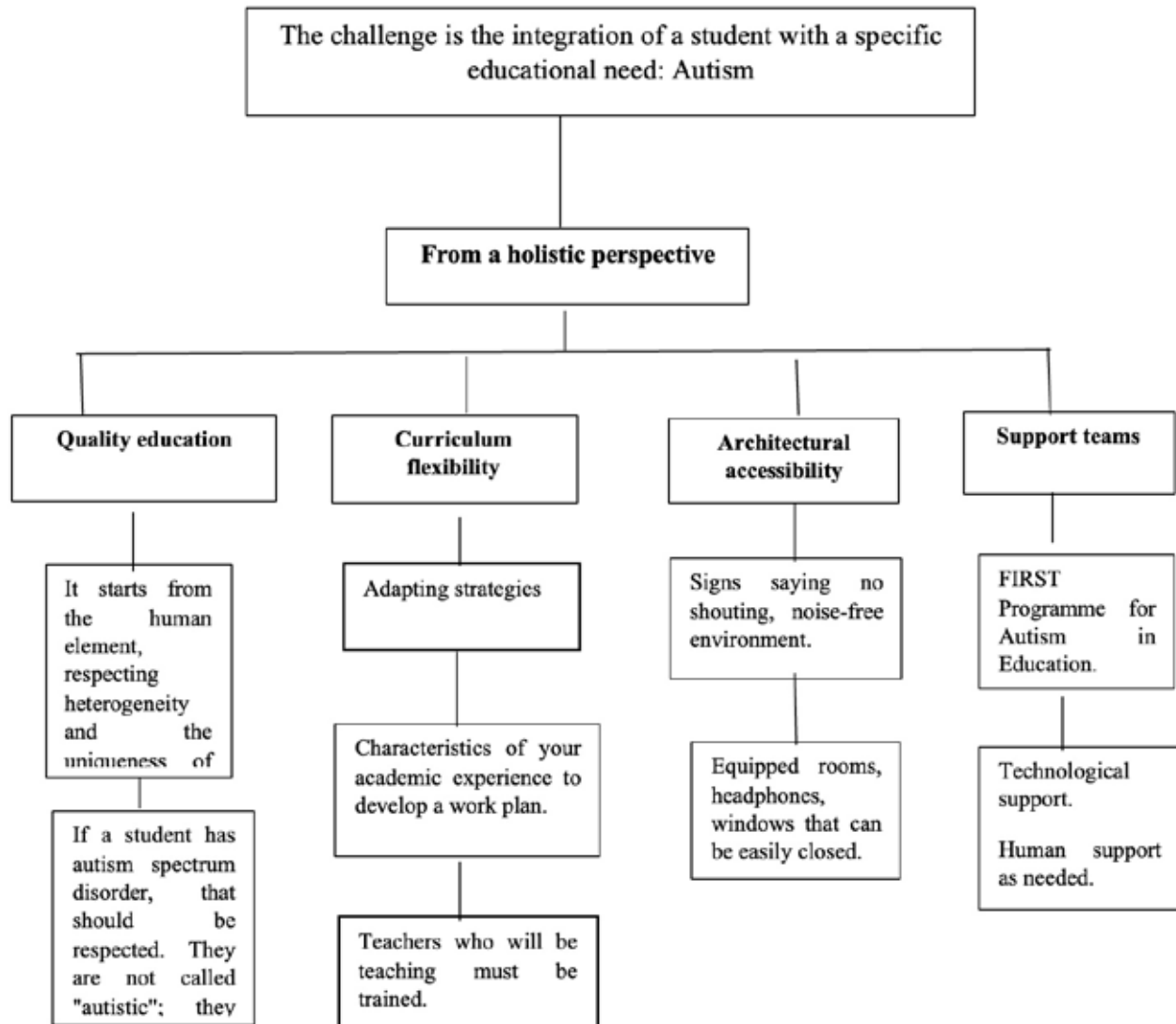
Table 2. Proposed human communication program, with reasonable adjustments, visual, hearing and motor disability

EDUCATIONAL PROGRAMME	Course	REASONABLE ACCOMMODATION			ARGUMENT FOR ADJUSTMENT
		Visual impairment	Hearing impairment	Motor disability	
Bachelor of Psychology 2 semester	Human communication	Reserve the front rows, read documents slowly and clearly, make sure that there are texts in necessary language and resources available. Allow support resources. Make materials accessible. Anticipating materials in accessible format. If you use videos provide the script in advance.	Facilitate reading focal lip, Save the front seats in the classroom. Respect the learner's speaking rhythm by using resources with subtitles. Provide resources in advance. Assessment for students with hearing impairment provide written instructions and information allowing the use of resources and support material. Staff resources sign language interpreter	Adequate furniture, familiarization with the education system, allowing classes to leave, allocating more time for interventions. Assessment: provide accessibility, provide adequate space, grant extension to your justified cause. Digital or oral adaptation.	At the outset I would like to point out that 'reasonable adjustments' are "actions, adaptations, strategies, support, resources or necessary and appropriate modifications of the educational system and school management, based on the specific needs of each student.

		<p>Assessment of visual disability Allow technical resources, provide adequate classroom space, adapt graphics. Technical resources material disability visualpaper template for response, magnifying glass, manual magnifier.</p>	<p>Material technical resources: information panels and light signs, real-time subtitling system.</p>	<p>Personal resources: accompanying staff, transcripts for examinations, personal assistant, transport adapted to their transfer. Material technical resources: digital recorder, digital computer, tablet PC, toilet lift, touch computer,</p>	<p>In that understood these adjustments to be taken into account in the course of human communication which implies not only a change in discourse but also in the quality of education so as not to leave them out that do not feel the other students, but the students of the University. That provides the necessary space to break down barriers that have impeded their ability to develop in an inclusive and academic environment.</p>
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Proposal by the authors

Figure 2. Integration of a student with “Autism” needs



Proposal from the authors

DESCRIPTION OF A REAL EDUCATIONAL SITUATION

It is mentioned that the group consisted of 38 students: 24 women and 14 men. Among them were one student with a psychosocial disability (Autism Spectrum Disorder, Level 2), one student with a motor disability, one student with a visual impairment, and one student

with a hearing impairment. Given this situation, strategies were implemented to improve the learning process, encouraging students to reflect on what to do and how to make reasonable adjustments to the work plan and lesson design so that everyone could remain engaged within the learning environment and the classroom. As a first approach to the Human Communication learning unit, the students were required to create a presentation describing who they were, where they came from, and uploading photos of their homes. Some felt it was important to include information such as “I went to therapy” or “I am going to therapy.” One student provided this information, and another wrote that he has Level 2 autism and that it has been very difficult for him to be in school. He emphasized the importance of stating this from the beginning and expressed his appreciation for the fact that the subject could be presented in its current form. The other students also described the conditions they face, but emphasized that they haven’t stopped at any stage, thanks to the support of their families and schools. This strategy allows us to get to know the students and build a connection with them. It’s not an emergency measure, but rather the main gateway to connecting with the group you’ll have in the classroom and getting to know them.

Table 3. Strategies in the field of Human Communication: What works and what doesn’t?

Human Communication Strategies within the Culture of Disability: What Works and What Doesn’t?		
Name of the person who designs the program	Silvia Villarruel Rodríguez	
Subject	Human Communication	
Basic Psychology	Department of Communication and Psychology	Type: course-workshop
Date	August 6, 2023	

Adapted from the educational program

Teachers at the higher education level, as individuals immersed in the culture of disability, are central tools for transmitting information, expressing ideas, engaging in dialogue,

and building bridges to facilitate group connection. “You have the right to freely express everything you are allowed to say.” – (Roger Wolfe)

We are likely facing significant changes in education. Hatred, discrimination, violence, and the barriers that silence and prohibition against speaking out—this no longer has a place in our homes, workplaces, schools, or streets. Nowhere. Peace, justice, inclusion, and strong institutions are fundamental to achieving the 2030 global goals.

If we don’t talk about real problems in our classes, with real circumstances, we will never be able to develop intervention proposals with our students because what is not named does not exist; inequalities are there, sexual and gender violence; walls don’t come down just by doing something to provide us with information; they can create the circumstances that can lead to human trafficking.

PROPOSAL

Table 4. Proposed activities in the human communication program.

Thematic content by unit			
Assessment			
Units	Unit Name	Unit Topics	% assessment
I	Theoretical framework and educational policies in the culture of disability for the care of people with and without disabilities	Basic concepts of the Unit. Myths and beliefs about concepts Reality vs. Beliefs	25%

<p>II</p>	<p>The language models of communication with concepts of the culture of peace</p>	<p>The message, communication channels. Communication message about disabilities, Language. Oral and written expression in the culture of disability Communication in a culture of peace Communication messages about violence, inequality, discrimination, racism and gender</p>	<p>25%</p>
<p>III</p>	<p>Axioms of Communication</p>	<p>The 5 axioms of communication Examples of each Spread messages of acceptance and commitment to non-violence and non-discrimination.</p>	<p>25%</p>
<p>IV</p>	<p>Assertive communication</p>	<p>Sign language. The Braille system. Inclusive language. Technological programs that support the inclusion and integration of students with or without disabilities in education</p>	<p>25%</p>

Proposal from the authors

STRATEGIES OF THE PROPOSAL

1. Objective, actions pursued by the strategy.

The context in which learning takes place is often lost. Classrooms—because we all agree the classroom is not an empty space—we construct them with people (and that’s where all the complex reasons why we do or don’t do things come into play). Learning is not neutral; it has social effects. Therefore, academics must consider how history and social factors shape the classroom and the unexpected effects these can produce, and they must assume responsibility for the consequences. If we design a class for everyone without distinction because you are of this or that condition, we are not being fair, nor are we giving each person the respect and dignity they deserve. We now have technology to support us and avoid transmitting the errors that are passed down from generation to generation. But before doing so, we must consider the potential risks and real benefits. I believe that making the decision to embrace inclusion as a way of life—not just recording quotes and arguments in official documents, but a way of life of giving, receiving, and contributing to society—is essential.

- All students participating in the Human Communication Program with a Focus on Students with Autism are assigned this focus to this course. Why? Because the student I mentioned taking the course receives assistance, can choose morning or afternoon classes, take notes, take exams, and make schedule changes. The Academic Coordinator must maintain close communication with the students’ professors to ensure that any issues are addressed.
- Integration into university life is a major aspect of the program, along with preparing students for life after university. That’s why the relationship between programs and activities, even down to evaluations, is so important—that they be more constructive than destructive, and help mend the social fabric that has been so damaged by many social problems.

2. Proposal for a technological and pedagogical support tool used to include and eliminate barriers to learning and participation of students with disabilities in the educational field.

Ricardo says he struggles with group activities because he can't work well in a team. He finds it difficult to be with five classmates and get along with them, as well as to understand texts, and because of this, he's embarrassed to give his opinions. He also says he gets tired of talking, but he does the work for everyone because he enjoys it. Later, his classmates say they also wanted to work and contribute different ideas, and that he got ahead of himself because he always gets on his red bus after work and doesn't change his routine. Knowing that this often happens, I facilitated the use of Google Drive so everyone could share the file and take it home, and each person could work on their assigned point for the classroom presentation. The learning unit includes group work on Human Communication, a fundamental subject for psychologists that goes hand in hand with Theoretical and Practical Foundations of Interviewing; therefore, one reinforces the other.

- A one-unit learning course in which students develop executive functioning and social skills. The class meets weekly to discuss the impact that ASD has on them individually. Why is it so important for future psychologists to transcend their own experiences?
- Students will meet twice a week with their teacher for guidance on planning their activities to set weekly goals and create a plan on how to achieve them.
- Students also have a tutor with whom they meet weekly, or as they arrange with their schedules, to help them apply the social strategies learned in the course and apply them to real-world environments.
- Students will have a study plan, with no less than four hours of supervised study time each week,
- The program also includes monthly activities focused on implementing social strategies. These activities can range from practicing specific social situations to visiting potential workplaces. Participants will also showcase their work to the community, highlighting the importance of education within a culture of inclusion and peace.

The use of platforms such as Classroom for providing feedback on activities, YouTube for uploading videos, as well as video processors, audio digitizers, and editing software, allows for interaction with classmates to ensure everyone is included, as they will all learn to conduct interviews and disseminate messages.

So, with this particular case that this semester occupies, a change is made in the semester's didactic planning where technologies support us, and the first unit will be worked on as the construction of a message on the channel that each student chooses. The message must be clear, open, positive, and proactive in the sense of what you want the group to know about you, what you need them to do for you, and how we could all make an optimal semester in which we can help to build better academic performance. They can use poster board, YouTube videos, WhatsApp videos, PowerPoint presentations, Canvas presentations, or use the whiteboard. They will have one week to prepare their message.

3. Argumentation of the strategy.

Assistive technology has two main purposes (Lewis 1993):

- To increase the subject's possibilities so that their abilities compensate for the effects of any disability.
- To provide an alternative way of approaching a task so that disabilities are compensated for. Technology can act as a cognitive prosthesis, replacing a lost or diminished ability, or as a support, providing the necessary assistance to perform the task or activity.

We believe that both school and home should provide opportunities for students to develop their autonomy. This also depends on government support and financial resources. Society needs to reflect on solidarity and carefully analyze what is being done. It's not simply a matter of parents neglecting their children once they reach university, nor is it enough to simply say, "We gave access to millions of students, including those with disabilities." These impacts are measurable and should be made transparent. For example, if students with disabilities are to be included in public education, then the use of technologies and artificial intelligence as cognitive prostheses is essential to ensure no one is left out. Of course, this course has provided me with tools and arguments, and I have learned valuable lessons. However, I believe it is necessary to utilize technology because, despite my good intentions with my lesson plans, I don't think it alone can provide all the necessary improvements for a quality education.

XRESULTS

An educational, social, and supportive environment was provided where students felt included in the classroom, enabling the development of strategies to help students diagnosed with autism spectrum disorder reach their full potential as independent, productive, and active community members from the start of their studies. The University's mission is to serve as a state and national model of comprehensive opportunities for these individuals and their families.

Because disability culture is not just about following guidelines, but about learning from each other, living with differences to end discrimination, giving space to talk, sharing ideas, respecting agreements, and making that a central axis of communication and congruence, and from there starting to move forward, because if I come to do what I have always done, I will be more of the same, and one makes the difference, making it a way of life.

If some people don't want to use technology, there's antagonism because the school is traditional. But making the necessary adjustments is key to starting a new stage where we modify old work models that have already run their course and haven't made a difference—on the contrary, they've built walls between students, faculty, and administrators. It seems some live in different realities, while in the classroom, something else entirely happens. We are human beings, not robots, and we must avoid automating actions and transform them into human experiences. Of course, we can be better and restructure ourselves, taking the best of technology and moving towards sustainable development with dignified citizens who feel part of the educational community, not just in slogans, but in a way that doesn't marginalize them.

We identify ourselves through our connections to the past, present, and future. But what happens if we don't connect with our colleagues, our students, our environment? A disconnection occurs, and that's not written into any guideline of a culture of peace or a culture of disability. Yes, if you're not connected, you can be preparing speeches, talks, conferences, workshops, and classes, but they're meaningless if you're truly present.

That's why the study of human behavior is so evident to science, and why education, inclusion, and the promotion of the 2030 Sustainable Development Goals are so popular.

People want to better understand their past and know where they fit into the flow that is humanity. We think about leaving something of ourselves for the next generation, and as a society, we have conceived of generational changes and the models that international and national policies dictate as our very essence.

This work has led us to a conclusion that opens up a debate: having schools is tantamount to replicating our role models. What we see happening in society also happens in our classrooms. I can understand how important it can be for some institutions to have indicators, plans, and documents that guarantee they are doing something, but services and paperwork and certificates are not our essence.

Actions are tiny segments of change with instructions for creating other, more complex changes. And everything involved in being a person is far more complex than simply evaluating and documenting its existence; it must be more transformative and contribute through activities that foster a shift in consciousness away from old paradigms we've already experienced without seeing a difference. Only then will you understand whether there is improvement, whether inclusion was achieved, or not. Whether a culture of disability exists where no one is left out.

CONCLUSION

Using Ramsey's model in an educational context allowed us to approach the subjective aspects of knowledge construction with greater flexibility, incorporating students who required reasonable adjustments to the course plan, thus improving teaching and learning. This strategy involves careful planning and consideration of how educational decisions impact not only the present but also the future development of students. Attending a teaching course focused on disability inclusion and a culture of peace opens a world of possibilities where we can make a difference. If we remain stagnant, we will never achieve different results; we need to move forward and envision an inclusive school for future generations. By doing so, we can maximize both academic achievement and satisfaction with the teaching and learning process.

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