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COLLABORATIVE CO-DESIGN NETWORKS FOR CASES, EVALUATIONS AND LEARNING EXPERIENCES LOCATED AT THE BASIC LEVEL

Inglise Castillo M

PhD in Educational Sciences, Mexico

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Abstract: In basic education, which ranges from preschool to secondary school, the development of skills proposed by the World Economic Forum (2023) is essential, such as creativity, critical thinking, initiative, among others. One of the most enriching resources for this includes taking advantage of the experience of the educational community, made up of students, teachers, governing bodies, parents and staff from all educational areas. The systematized rescue of this experience is possible through collaborative networks, establishing the levels of participation in accordance with the needs raised by both the contents of the educational level and the needs of the context.

Keywords: Networks, community, skills

INTRODUCTION

In multiple aspects, the improvement of educational processes is linked to the levels of investment in aspects such as facilities, technological and non-technological resources, etc. Furthermore, the higher education curriculum for teachers, mainly for basic education in Mexico, is content-oriented, with little room for skill development.

The above hinders oriented processes of understanding in students at this educational level, as well as the promotion of skills and attitudes, especially those proposed by the Taxonomy of Education 4.0 of the World Economic Forum (2023), such as problem solving, critical thinking, collaboration, global citizenship and communication.

At the Instituto Cervantes AC, a basic level institution in Mexico, the challenges focused on:

- Determine the options to take advantage of the experience that different members of the community offered due to the variety of profiles, areas and ages.
- Development of skills and attitudes in around 1400 students and 230 staff

members.

- Maintain a low cost in the process of rescuing said experience to carry out replications in collaboration with other educational institutions.

- Include all educational levels that the institution has (preschool to secondary school).

DEVELOPMENT

Collaborative networks in the Institute then emerge as an alternative in this scenario, since their application is of minimal cost, and they can be replicated and/or adapted to various educational areas and levels.

Four basic objectives were identified for these networks:

- a. Enrich teaching practice at any level.
- b. Carry out co-design of learning experiences between teachers and other specialists in their area (institution staff, governing body, parents, other students, etc.).
- c. Design cases based on real situations and according to the context and possibilities of the students.
- d. Develop skills.

The phases established for institutional collaborative networks along with the generalities of the practice carried out by the preschool, primary and secondary levels are explained below, including an example of the progress of the process at the Institute in the period May 2023 - August 2024:

1. Determine and describe general details of the area that the teacher, educational level or institution requires and inform the community through different means to invite them to participate in the initial session.

The most relevant contents that would

be most suitable for the practice of collaborative networks were explored in the preschool, primary and secondary sections from May to July 2023. In August of the same year, various topics that could be addressed were determined, including light and heat. The mentioned content would be addressed by the three levels mentioned, in one or more of the subjects.

This practice was reported through institutional communication channels, social networks and telephone calls in August and September 2023.

2. Make a list of all community members who have expressed interest in the proposed topic or content.

Among the members interested in participating in the initial session, a civil association that works directly with minors who suffer from burn injuries stood out, thereby covering some elements of the initial topic determined by the three sections (light and heat). A visit was made to the facilities of said association and a meeting was held with its representative to explain the process of collaborative networks and agree on some dates for the process.

3. According to the list created in the previous step, determine the approximate duration of the initial session, as well as the number of areas and/or sections to participate.

To be an association dedicated to the specific topic considered by the teachers of the three basic level sections, it was determined that the initial session would be divided into 3 moments of 20 minutes each, so that teachers belonging to the same educational level could take the session together and share your doubts with the association.

4. Perform initial session

In September 2023, the representative of the association went to the Institute's facilities and was physically located in a classroom along with his support materials to explain care for burn sequelae (slide presentation), including the types of burns, sources of light and heat, as well as the attention required for their treatment. The teachers from each educational section (preschool, primary and secondary) went to the representative's classroom to have their 20-minute session, where they learned the basic burn care procedure and asked questions to improve their understanding of it. Having 3 sections in the Institute, the session was repeated 3 times, giving each level more or less information, depending on the questions that the teachers asked.

5. Taking notes during the initial session related to the determined topic and subsequent continuity session.

The teachers from each section met for the continuity session, where they compared their notes, established the objectives for the design of their learning experiences for their grade and/or area, as well as the ways in which they could create interdisciplinary projects with each other. They found that, although the initial objective was the topic of light and heat, they could relate it to more content from subjects within the same grade, such as mathematics and Spanish.

6. Based on the findings of the continuity session, determine the relevance of the variants:

- a) Direct design of the teacher or area
- b) Co-design with selected community members
- c) Expert visit

According to the continuity session, the teachers of the sections determined different directions for each level:

- Some preschool group teachers chose to combine option A and C, where they would design their sessions, and request an expert visit from the community civil association representative to delve deeper into the topic.
- One primary grade and some secondary subject teachers selected option b, which is co-design. To do this, they will meet with the representative of the civil association to design together with him a learning experience for the subjects of Spanish, Mathematics and Natural Sciences in primary school, as well as Biology and Chemistry in secondary school.

Below are some examples of the content that the teachers of the three sections related through the practice of collaborative networks:

Grade and/or area	Topic and/or related content
Preschool	<ul style="list-style-type: none"> - Sequenced narratives - Light and heat sources - Accident prevention
Primary	<ul style="list-style-type: none"> - Spanish: <ul style="list-style-type: none"> - Explanatory texts - Informative texts - Identity documents (required for medical care of patients with burn injuries in different locations) - Math <ul style="list-style-type: none"> - Percentages (via burn percentage) - Perimeter and area (through burn calculation in specific cases) - natural Sciences <ul style="list-style-type: none"> - musculoskeletal system - Thermal energy - Temporary and permanent changes - Light and heat sources - Types of mixtures
Secondary	<ul style="list-style-type: none"> - Cells and organisms - Thermal energy - Properties of matter and compounds - Chemical reactions

Table 1: Examples of topics and/or content related to light and heat for the practice of collaborative networks

The practice of collaborative networks has been carried out at the Institute on several occasions. The results of the first two occasions are shown, the second being where the example data on light and heat are taken:

As it can be seen, the number of possible learning experiences designed both by teachers and in conjunction with the educational community has increased. In addition, expert visits and the percentage of adjustments to these experiences have increased.

FINAL CONSIDERATIONS

Collaborative networks have presented various advantages in the institutional educational process:

- o Improvement of learning by area, grade and/or section.
- Design of real, stimulating and meaningful learning experiences.
- Learn more about the members of the educational community, as well as their abilities.
- Development of skills in students and teachers.
- Using situated learning in learning experiences, assessment and case design.
- Deepening of topics and content.
- Greater community participation as an expert visit.

The process of collaborative networks continues to be perfected at the three institutional levels of basic education. Starting with the first practice in May 2023, adjustments have been made to include the rest of the areas and/or subjects to a greater extent. In addition, the creation of an institutional directory of experts in different areas and topics is in process, which will serve as support for teachers to design or co-design their learning experiences and/or request expert visits from those who appear in said directory.

# PRACTICE	LEVEL	# POTATOES	# TEACHERS	INTERNAL GUESTS	EXTERNAL GUESTS	LEARNING EXPERIENCE OPTIONS	% ADJUSTMENTS MADE TO LEARNING EXPERIENCES	EXPERT VISITS
1	Preschool and Primary	8	16	2 Maintenance and Administration, 1 Accounting, 1 Human Resources, 3 Entrepreneurs	0	128	eleven%	4
2	Preschool, Primary and Secondary	12	twenty-one	0	0	185	13%	9

Table 2: Collaborative network practices from May to October 2023

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