

SUMA METHODOLOGY

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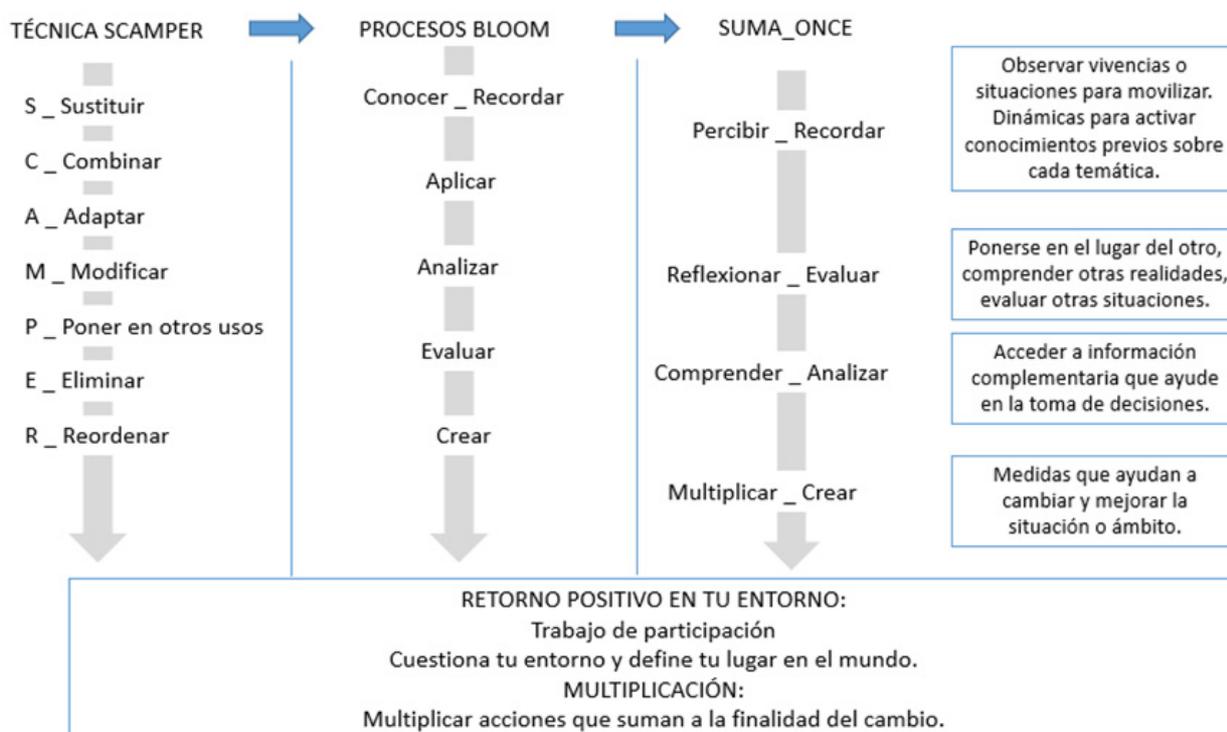
The 38th edition of the Grupo Social ONCE School Competition proposes a teaching proposal based on the SUMA methodology.

This methodology, designed by the Grupo Social ONCE, has been developed for teachers by experts in the Universal Design for Learning (DUA) teaching model, such as Antonio Márquez Ordóñez (Master in Inclusive Pedagogy) and the Chair of Social Inclusion and Non-Cognitive Skills of the University of Murcia.

It is based on a simple, experiential and, above all, participatory approach, in which students are given the role of active participants to transform the society around them.

Under the idea of SUMAR - that means "to include" or "to add" in Spanish, a series of didactic phases are proposed with the idea of achieving a final product that includes the participation of all the students in the classroom. Therefore, the SUMA methodology optimises the inclusive model in the classroom, fed by the principles of Universal Design for Learning.

This methodology has been planned based on SCAMPER proposals and Bloom cognitive processes, following a process shown in the diagram below:



The four main phases are as follows:

Perceive

At this point in time, two aspects converge:

- **The setting of an initial challenge that motivates students to transform their social reality.** It is essential that students are aware ahead of time what we expect of them: that they become agents of change to improve the society around them. Making students aware that they can transform situations to make them better, making them participants in these changes and placing them in a position of social participation, is one of the main lines of this SUMA methodology. But, in addition, following the principle of commitment of the DUA, this challenge is an open challenge, where the students must decide what to do and for what purpose. In this way, we ensure that the diverse motivations and interests have an active role as an agent for change.
- **Activation of individual experiences,** from which student come to understand the social situation to transform and which will lead them to achieve the initial challenge. These prior experiences are proposed through different perceptions that may be open to any sensory route, such as hearing, sight, touch..., thus opening the doors to participation by any student, whichever their most highly developed strength may be. However, activating existing knowledge may be difficult for schoolchildren with little experience, or who have difficulties evoking it. That is why, in this phase, the evocation must be addressed as a group, and at the same time personally, so that individual experiences support what is lacking in the group, proposing examples and solutions that encourage the students to face the challenge with the necessary existing knowledge.

With these two elements in the first phase, students will have worked on activities focused on the cognitive processes of remembering and knowing, as proposed by Benjamin Bloom in 1956. During the four phases, they will go through all Bloom's cognitive processes until they have produced their finished products.

The phases are represented by the Grupo Social ONCE colours, which is why this phase of perceiving is represented by the colour green, to represent the initial challenge of transformation.

Reflect

The second phase features a lot of work focused on the culture of thinking, where all students are invited to engage in critical thinking to put themselves in other people's shoes in order to improve their situations. Each learner must make concrete proposals for social transformation based on their own previous ideas, activated in the perceiving phase. Only by drawing on their own knowledge and experience can personalised ideas emerge. Because of this, in this phase we allow the students to experiment, try out and make suggestions without the teacher's guidance. This is what Design Thinking calls the construction of the prototype.

To do this, they will have to do social intelligence work, supported by group tasks, where the strength of the team develops creativity and self-construction of contents

Also, the reflexion proposed in this phase will cause the learners to ask new questions, to plan their own lines of research to conquer the challenges they have set. Using their own means, and based on the knowledge that the teams have already managed to activate, they will answer two questions:

- Which aspects of the surroundings would we like to improve?
- What do we need to know to be able to achieve it?

Once again, everyone's participation is assured to the extent that the different strengths of each member of the team are added to create a diversified product with fair participation.

During this phase, students will carry out tasks focused on cognitive processes of evaluation and application (Bloom). This fulfils one of the principles of Universal Design for Learning or DUA: the students' commitment.

Following the Oncelio colour sequence, this phase is represented by the colour red, which represents progress toward a more supportive and interactive society.

Understand

The unrestricted proposals, arising from collective reflection, will guide students to the need to investigate, delve deeper and process more checked information, to give meaning to and support the initial proposals. In this phase, students access and analyse knowledge and absorb it into their mental schemes, which leads to understanding. That is why, in this step, the teacher's guidance is essential to help students to make suitable and applied use of the information. Teachers can use strategies and resources such as Visual Mapping, Graphic Organisers, Time Lines, etc., to manage the information.

This will enable students to work with the competencies and to answer questions such as:

- Why do we need to learn new things?
- How can I connect and organise my initial ideas with the new information?
- What new knowledge must I generate to achieve the goal?

Cognitive flexibility takes its highest value as learners are taught to readjust to a new reality, to modify their ideas, to improve and enrich them. The Learn to Learn Competence takes a prominent role.

In this phase, universal accessibility to information and support to executive functions for the construction of understanding itself, take on special importance to ensure that everybody takes part. The cognitive process we intend to address is that of understanding, in a broad sense.

This phase is shown in blue to represent professionalism, constant work and everyone's participation.

Multiply

In this last step, students now have everything they need to make their initial proposals for social transformation a reality, but now with a solid knowledge base. The time has come to act in their surroundings; now is the time for hyper-localised learners who want to rebuild a society for all from the perspective of service learning.

We now suggest to the students that they go back to their initial prototypes to make changes that will improve and enrich them.

At this point, emotion is the essential component of the activities, a collective emotion that ensures that the proposals developed have sufficient room for action so that each person can contribute to their implementation using their particular skills.

In this phase, the variability of demands and resources to optimise the challenge will play an important role in ensuring that everyone takes part. Principle III of the DUA, the expression of learning, takes centre stage as we ensure that we enable all students to communicate their learning experiences to us. Teachers must provide a wide variety of formats for the presentation of products, alternatives for communication and action and expression by all.

At the same time, the cognitive process of creation is supported by students' self-control: decision making, expectations and own beliefs, and skills and strategies to face challenges..., are simultaneously accommodated. To this end, the SUMA methodology can be fed by strategies or techniques such as SCAMPER, lateral thinking, creative thinking, etc..

The yellow colour used to symbolise this phase is marked by the direction, the final meaning, the creation of active policies of social sustainability. The phase that gives meaning to all its predecessors, and connects them, like Oncelius' head.

Once all the phases have been analysed, the model can be perceived globally in the following scheme:



At the centre of the scheme we have the two variables that mark the four phases: cognitive flexibility and collective creativity. To achieve these two variables, we use elements such as resilience, social intelligence, social contagion and the action of a student body that we have called "prosumer: they participate in the construction of the social reality in which they live". Following this framework, the didactic sequence moves from examples related to personal experience, the self-construction of creative content based on previous experience; the identification of information and knowledge needs, and creation based on their own skills and acquired knowledge.

The different methodologies or work strategies that SUMA methodology is based on are presented around this outline: competency learning, service learning, DUA approach, Visual Mapping, Design Thinking, Bloom's taxonomy, learning to learn, SCAMPER technique, and creative and lateral thinking.

As can be seen, the SUMA methodology is appropriate for any educational stage, as it is suited to its application in a large number of subjects included in our curriculum, provided mainly from the areas of Social and/or Natural Sciences. However, the possibility of working on the areas in an integrated manner is evident.

Lastly, the connection between SUMA and DUA is fundamental for the participation of all, fostering situations in which students access information, construct it and internalise it according to their own abilities.