

**Title:**

Puzzles as a tool for developing soft Skills of creativity and problems solving

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**SUMMARY**

As part of the article, an analysis is made of the importance of soft skills, especially creativity and problem solving, as a fundamental tool for the development and strengthening of companies and countries, especially in environments of uncertainty such as that currently created by the coronavirus pandemic. The article highlights the importance of didactic tools or conventional games such as puzzles, as a tool to promote the development of these skills from growth.

**INTRODUCTION**

The technical and technological training processes in the world allow countries and their productive sector to have the human talent required to produce products and services with high added value, which allow them to respond to the dynamics of today's world, immersed in processes of globalization of markets, technological advances and cultural integration.

This panorama, which by itself generates multiple challenges for the entities in charge of professional training processes in the world - since they have the responsibility of training workers with opportunity, quality and relevance to support production processes and increase the competitiveness of their countries. It has become even more complex as a consequence of the coronavirus pandemic, which is drastically changing the "normality" of the economy, commerce, finances, lifestyle habits and basically all activities and processes related to the generation and commercialization of products and services.

**DEVELOPING**

In the current conditions derived from the emergence of the pandemic, all the actors in the economy face great challenges whose attention requires high doses of **creativity, problem solving** and **adaptation to change**, themes that are part

of the set called soft skills, which unfortunately often are relegated to secondary places behind technical or hard skills, within professional training processes.

While it is true that it is not easy to advance in the development of soft skills within conventional training schemes or strategies, that is, in learning environments and with the support of an instructor or tutor who accompanies the process, it is very important be able to identify other strategies or methodologies that allow their effective development, so that the workforce that is delivered to the productive sector is **comprehensive**, that is, not only has excellent skills from the technical point of view, but also from the human point of view has important qualities and soft skills, to effectively contribute to the growth, development, efficiency and productivity of companies and countries.

The shortcomings in the development of these soft skills in young people is evidenced in skills competitions such as those organized by WorldSkills Americas or WorldSkills International, where it is possible to find cases of young competitors with excellent technical qualities, but who when faced with a competitive situation - such as excessive stress, work under pressure or the occurrence of an unexpected problem - they become overwhelmed or make mistakes that they would not normally make, leading to a reduction in the quality of the products or services delivered, and therefore, to a reduction in the score obtained.

That is why as part of the training, they tend to develop soft skills that allow them to correctly deal with these kinds of situations, which also include topics such as discipline, responsibility, planning and time management, self-confidence or assertive communication, topics that develop in an important and natural way with the mere fact of participating in a competitive environment, unlike what would be achieved in a conventional training environment. I believe that this is why the apprentices who have the experience of participating in Skills Competitions of any kind, have a higher level of development of soft skills than those who do not and therefore have a better level of adaptability and insertion in the working world.

This situation leads us to consider the need for professional training entities in the world to find additional strategies that allow the development of soft skills by their young apprentices, in such a way that they contribute with quality human talent and that contribute in a more significant way, to the development and productivity of companies and countries, particularly in the current pandemic environment that has resulted in many jobs lost and many companies in bankruptcy, a situation that has profoundly affected the economic and productive apparatus of all countries.

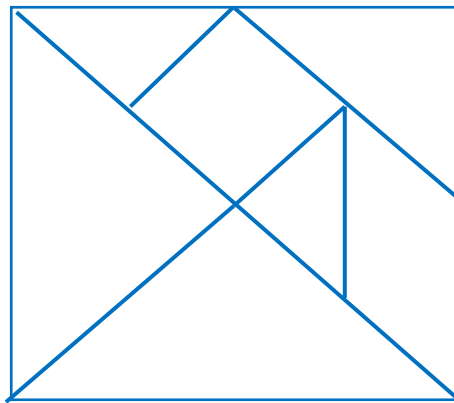
As a citizen of this globalized society and having the fortune of having known different countries and cultures, I believe that there is much that can be done to promote the development of soft skills, particularly in relationship with creativity and problem solving, from the family environment and as part of the upbringing and development of children and young people; but unfortunately, my impression is that at present, little is being done towards this goal. In the same way, I consider that adults could carry out activities on a regular basis, which allow them to

continue developing these skills, however, the general perception is that there is not much willingness in the adult population to do so.

I want to refer specifically to the usefulness of **puzzles** as a tool to develop and / or strengthen creativity and problem-solving skills. Taking something as simple as a **tangram** as an example, this can be an excellent tool for this purpose, since it is possible to manufacture it at home using paper, cardboard or wood and it has the possibility of generating challenges with different degrees of difficulty - some really demanding and complex, so, they can serve to strengthen and develop these skills in both children and youth, as well as adults.

I want to propose as part of this article a small exercise in this regard.

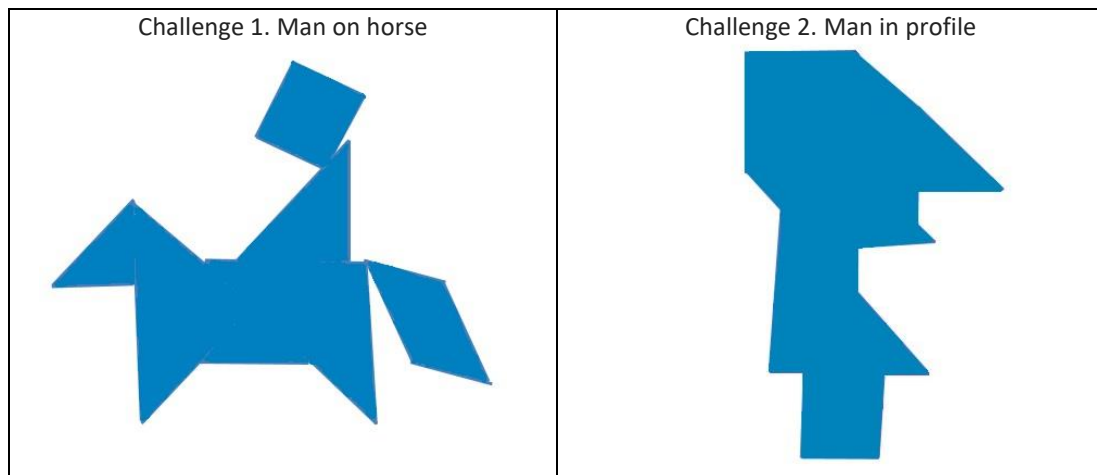
The tangram is a challenge that is made up of 7 different geometric pieces, which, when arranged in different positions and distributions, can generate different figures. Next, I present the best-known organization of the tangram to form the figure of a square.



The challenge is to be able to position all the pieces in such a way that a certain figure is generated, an activity that in some cases can be very simple, given that some objective figures almost show the position of each piece. However, in other cases the exercise can become very complex and require significant amounts of creativity and problem solving to find the answer.

As an example, I present two challenges below, with which it is possible to do this exercise to find the answer in each case. It is important to keep track of the time it takes to find each solution.

If a tangram is not available, it is possible to take the square tangram as a reference to draw the figures on a sheet of paper to cut them out.



From this activity it is very possible to conclude that the solution for challenge 1 was found in less time than that of challenge 2, it is also possible that the solution to challenge 2 took more than 5 minutes or it is even possible that has abandoned the exercise without finding the solution to challenge 2. **In these last two cases it would be evident that it is necessary to continue working and training the brain to strengthen and develop creativity and problem-solving skills.** Further on in the references, links to two videos on my channel are included where the solutions to these exercises are presented.

Now, why would this be important? Because in real life there are always unforeseen, unplanned or problematic situations for which it will be necessary to think creatively and find a solution, which is why having people who have developed these Skills represents a key strength for organizations and countries to **find more efficient ways to develop their products or services, to incorporate new features of high added value, to continuously improve their quality levels or to face adverse situations. unforeseen events** such as the emergence of the coronavirus that is impacting economies in such a significant way and in the face of which companies and countries have had to rely on creativity and problem solving as tools to reinvent themselves, to evolve and to be able to endure for the time being in a financially viable way.

My proposal then is the following, it is important to resume, encourage and spread the use of tools such as puzzles to accompany the development of children and young people, so that through didactics and games, they can strengthen the skills of creativity and problem solving. I believe that this strategy can be much more effective than waiting for young adults to enter the training processes in a technical and technological training entity, so that it tries to advance in the development of these skills in a learning environment and under conventional training models.

Now, if it is not about puzzles, there are many other tools that can support this same purpose, there are strategy games such as chess or Chinese checkers, sudoku puzzles, mazes, word searches or crosswords. Any of these tools is valid and useful, so that everyone, depending on their preferences, could choose any, the important thing is to **take up these tools and give them the space, particularly during childhood and the development of young people**, who possibly instead of these activities spend so much time on television, video games that are mostly non-strategy, social media, or online movie and television services.

I want to clarify that for this suggestion the games of chance that include dice, roulette, spinning wheel or cards do not apply, since, in my opinion, these kind of games, by the component of chance that they involve, **DO NOT** contribute significantly to the development of creativity and problem solving skills.

On the other hand, it would be ideal to return to a normality in which on special occasions children, young people or adults are given puzzles, sudoku puzzles or chess games instead of violent video games, or toy weapons or games of chance. At this point, it is interesting to wonder when was the last time a gift of this kind was given or received? What if we could do something to encourage this practice again in the future?

As a final strategy, I suggest taking advantage of the idle or available time slots, to use them to watch videos that stimulate the development of creativity. I have always been passionate about these topics and convinced of their importance to strengthen people's skills and abilities, which is why I have created a YouTube channel for this specific purpose called:

- **Let's Do Puzzles!** ([https://www.youtube.com/channel/UCp5ffPbWpLo-Z2BIZMb\\_gsw/featured](https://www.youtube.com/channel/UCp5ffPbWpLo-Z2BIZMb_gsw/featured))

which contains playlists dedicated to different categories of puzzles. It is also possible to find similar material on other YouTube channels such as:

- **Let's Do This** (<https://www.youtube.com/c/LetsDoThis123/featured>),
- **Mr Puzzle** (<https://www.youtube.com/c/MrPuzzle/featured>) and
- **Cuby** (<https://www.youtube.com/c/CubyPuzzles/featured>).

This kind of material can even be used in idle spaces in meetings, transfers or trainings - as before the start, during the closing or during active breaks - as an additional aid to stimulate creativity in attendees and their willingness to contribute.

Returning to the point of Skills Competitions, I consider it important to highlight that the use of tools such as those described within the training plans of apprentices prior to participation in continental or international Competitions, allows them to strengthen creativity and problem solving, allowing them to be better prepared to face and overcome in the best possible way the unforeseen

events that arise during the Competition, but more importantly, providing them with additional tools that allow them a better adaptation and performance in working life.

It must be borne in mind that after all, repetitive and routine tasks are easily automatable, but when it comes to qualified human talent in technical and technological training processes, the productive sector of the countries is not looking for robots, since the creativity of the human being and the ability to respond appropriately to unexpected problems or situations that arise can make a difference both in a Skill Competition and in real life work.

In this way, I invite you to return to games and challenges, change our daily activity schedule to give a little space to put together a puzzle, play a game of chess, solve a Sudoku puzzle or watch videos that stimulate the brain, strengthening creativity, removing that time from the development of innocuous activities that do not add any value. If we all adopt a healthy habit of this type and begin to promote it in children and young people, with certainty in the future we will have a more creative and relevant human talent with a greater willingness to find solutions to complex problems, contributing in a more significant way to the development of society, companies and countries.

## **CONCLUSIONS**

It is necessary for companies, countries and especially societies to become aware of the importance of soft skills - especially creativity and problem solving - as a fundamental tool to increase the competitiveness of companies and nations, as well as increasing the capacity to provide an adequate response to unexpected situations such as the coronavirus pandemic that has caused so much damage in the world economy.

To promote the strengthening of these skills, it is possible to apply strategies for their early development, during childhood and youth, where an alternative is to stimulate the use of teaching tools and conventional games such as puzzles, strategy games such as chess or Chinese checkers, mazes or sudokus, whose solution represents a challenge for the brain and an opportunity to strengthen creativity and problem solving in people.

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## **AUTHOR'S CURRICULUM**

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