



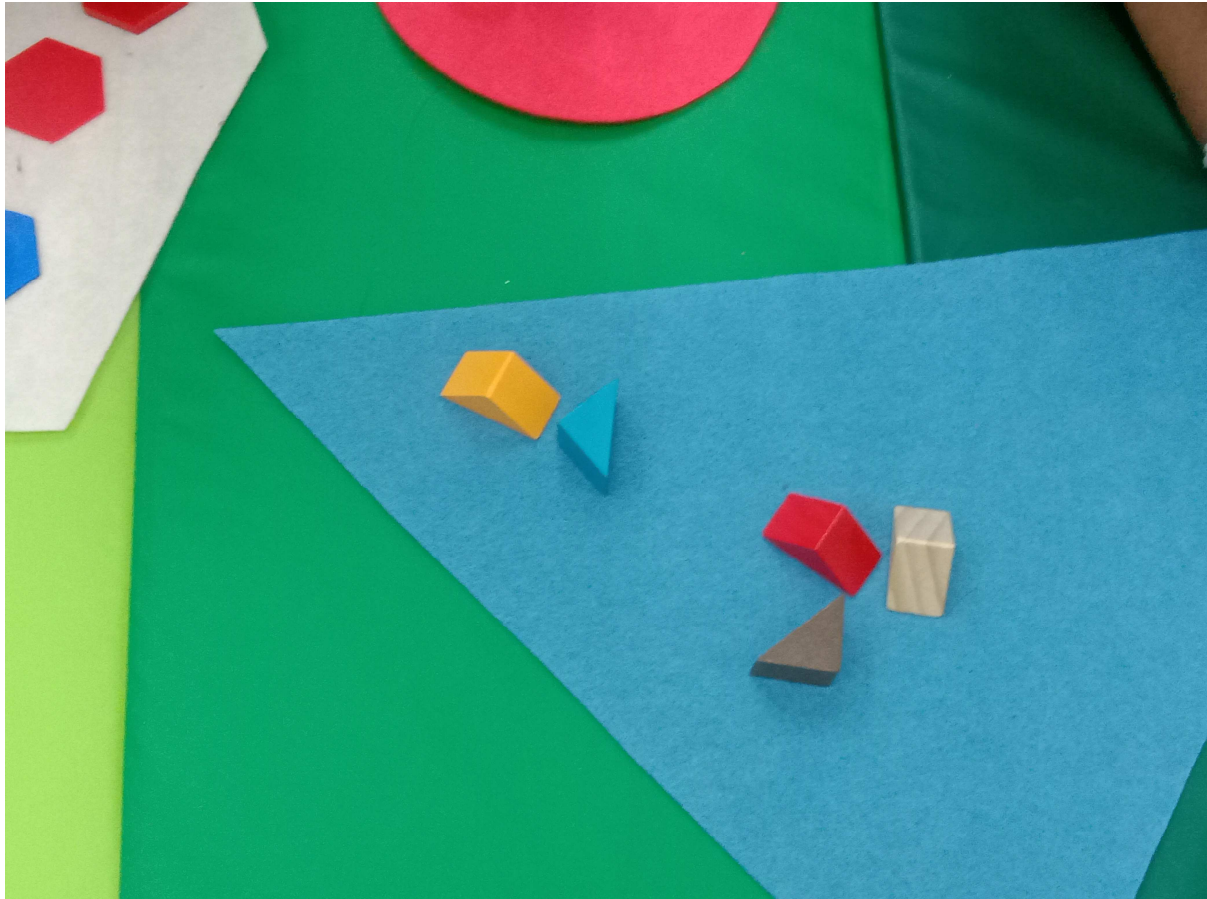
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ViduKids Case Studies

Italy

Learning the Italian language through the language of maths and geometry, using motor play and video

Francesca Ferrini and Corinna Bartoletti



Introduction

We conducted a workshop aimed at foreign children of kindergarten age who have recently arrived in Italy and have little knowledge of the Italian language.

The playful and motor approach was used to introduce the basic vocabulary of geometry and mathematics, facilitating comprehension and problem-solving with simple reasoning in Italian.

The main objective was to observe whether STEM content can facilitate language learning.

Context and approach

Several workshops aimed at small groups of foreign children aged 4-6 years together with their parents were conducted within a centre for families in difficulty in the outskirts of Perugia.

These are families who have recently arrived in Italy, have a very poor Italian vocabulary, and need to integrate into the area. The children were placed in the school setting, encountering some difficulties related to language proficiency.

Each workshop lasted about an hour and a half.

Since the participants had difficulties understanding Italian, we started with psychomotor games of movement and reasoning. Some huge geometric shapes were placed within the space that the children had to reach following the command from the conductor. This allowed them, in a short time and having fun, to be able to recognise the same geometric shapes and to be able to name them in Italian.



Later, increasingly complex games were added within which the children had to search the exact geometric figures within the space, training the skills of observation, comparison, and translation. These games resulted in natural constructions made by the children.

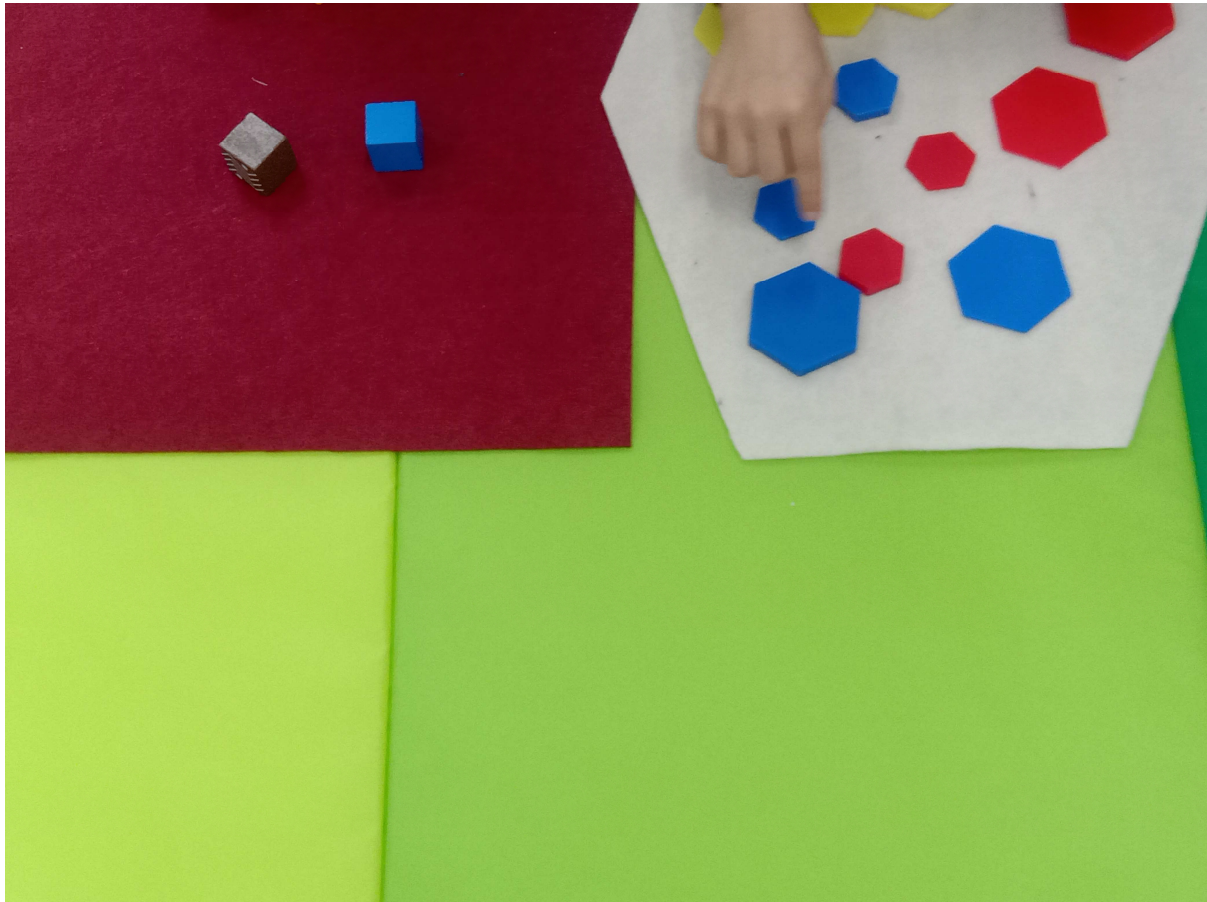


Following this, we worked on comparing, equality and forming sets with shapes; each child grouped the various objects provided by type.

We also brought attention to the differences and similarities between two-dimensional and three-dimensional shapes, stimulating new discoveries by the children.



At this point, we introduced object counting and problem-solving, “How do we make sure that in each set there is the same number of objects?” The children were particularly active in finding solutions, collaborating with each other, and searching for answers through trial and error.



The workshop ended with making a video with stop-motion. Each child observed the procedure the educator did and tried to repeat it in an individual and fun way, creating a creative and playful video.

The children and their parents were delighted with the result and wanted to review the video they made many times.

The reflection that arose, as a result, led them to want to improve the final product. An additional workshop was organised with the same children, within which we devoted ourselves almost exclusively to making a more coordinated video. The participants were asked to think about and design the idea to be realised afterwards – ideas representing the elements of mathematics acquired in the Italian language: shapes,



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magnitudes, sequences, space, and symmetry, all seasoned with creative and playful details.

The educators guided the children and cooperated in a very disciplined and calm manner.

The inference is that the children need time and, thus, more meetings to become familiar with the video and stop-motion tools so that they can fully understand the importance of planning before making it.

Challenges

In this particular workshop, the big challenge was introducing STEM elements in a language not yet known by the participants, stimulating thinking and reasoning in a language not their own, and training comprehension.

We think that STEM, movement and video are tools that facilitate playful language learning.

Results

The observed results are as follows:

- The child felt calm and serene in trying to speak a new language.
- In a very short time, the children acquired, without effort, a new STEM vocabulary.
- Children continued to make comparisons and translations by looking for forms within space and naming them in other contexts and during other encounters.



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Evaluations and reflections

As a result of this round of workshops, we concluded that:

- Children placed in an environment conducive to learning learn quickly and effortlessly.
- Visualised STEM content can promote language learning.
- Video and stop motion add extra value in engaging children and deepening the procedures and processes by which they are made.
- Engaging content and a conducive environment form the foundation for being able to learn any subject and in any language.
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Conclusions

The most important conclusion, and related to the objectives of this workshop, is that STEM content promotes language learning and vocabulary expansion.

The language of maths and geometry, when combined with play and movement, are learnt quickly and intuitively, especially in the 3-6 age group.

The child is naturally intrigued and stimulated to express himself or herself with reasoning and opinions about questions to be solved; this is done through the playful environment and the attitude of fun.

Not immediately providing the answer but trying to make the child play with the problem solving process solicits the child's own expression, even in a simple way and even in another language.

The use of video adds an extra element that intrigues and fascinates the child, who discovers the process of making a stop-motion video in a hands-on way. This process involves special coordination between participants and a particular discipline, and the result becomes a source of gratification and precise feedback on improvement areas, arousing in the child a desire to make more each time improving the technique.



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STEM content, play, video, and the use of movement can all be elements of a workshop, which is suitable for the 4-6 age group and serves the purpose of helping them learn a new language.

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