

CASE STUDY

INTERVENTION MODEL NAME

Date of Enrollement: 01-04-2021

Nº da Inscrição:

Data do Estudo de Caso: 27-12-2022

I. LEARNER’S DATA

Full Name:

Name to be treated:

Date of Birth: Age: Gender: F M

Level of Education: Diagnosis:

Address:

Zip Code: Telephone:

Nationality: Mobile phone:

Citizen Card: Valid through:

II. DADOS DO RESPONSÁVEL DO APRENDENTE

Full Name:


Parentesco/Relação:

Date of Birth: Age: Gender: F M

Address:

Zip Code: Telephone:

Nationality: Mobile phone:

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Citizen Card: Valid through:

III. GROUNDS FOR REGISTRATION IN THE PROJECT


Marta is a young woman aged 23, diagnosed with autism spectrum disorder. She is a young woman who seems to enjoy being in a group and carrying out activities with her colleagues, although sometimes there is little interaction on her own initiative. Verbally communicates subjects of interest and situations that worry her, but has a repetitive speech, with echolalias and palilalias. It responds to simple questions that are put to it, also with simple answers.

Their biggest difficulties relate to communication, self-regulation, behaviour in unexpected situations, low flexibility in changing routines and some difficulties of a motor nature.

By participating in the project, Marta would have the opportunity to improve her personal skills, as well as her interpersonal skills, becoming a more socially active and autonomous young woman in her daily life.

IV. SUMMARY OF THE DIAGNOSTIC EVALUATION

1. Communication area: the learner communicates verbally and responds to questions put to her. It presents a poor and redundant speech, as well as echolalias and palilalias.
2. Social Interaction Area: seems to enjoy being with colleagues and technicians and recognizes them. When asked, he demonstrates affective behaviours, although he does not reveal them often.
3. Cognitive Skills Area: does not know how to read or write, however, he recognizes some letters and can make copies. Write the full name. Recognizes some numbers and quantifies, however, does not add or subtract.
4. Autonomy in Activities of Daily Living: needs some verbal help in carrying out basic activities, such as dressing and undressing, bathing and taking care of personal hygiene. Ties the laces autonomously.
5. Global and Specific Motricity: does not show significant impairment. It presents some difficulties in flexibility and little tolerance for performing physical exercise over a long period of time. Some difficulties in tonic control (hypertonic) and motor coordination.

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6. Behaviour: in general, Marta knows the rules of behaviour and manages to stick to them. In moments of greater agitation or anxiety, it may reveal inappropriate behaviour, with inappropriate speech (screaming) or more aggressive behaviour.

V. GROUNDS FOR THE REGISTRATION IN THE MODEL

Through the learner's participation in the Therapy model in an Aquatic Environment, it is intended to contribute to the improvement of their global motor skills, interpersonal relationships and autonomy.

As the aquatic environment is a complete environment with particular characteristics, it can contribute significantly to the stimulation of the individual, contributing to motor, cognitive and social development, stimulating interaction with peers and technicians. In addition to stimulating the motor component, cognitive skills are also stimulated through activities and games performed, language, spatial and temporal concepts and mathematical notions are stimulated.


Marta's integration into the Aquatic Environment Therapy model is considered pertinent to improve her lack of self-esteem and self-confidence in this environment and to improve some cognitive components such as attention, concentration, memory and language; as well as motor skills.

VI. INITIAL EVALUATION AND INTERVENTION OBJECTIVES

In the initial assessment, it is intended to assess seven domains by filling in an Assessment Form, namely:

- Behaviour;
- Prohibited;
- Breathing;
- Balance;
- Displacement;
- Material Exploration;
- Exit.

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The primary objectives in this intervention model are mostly of a motor, cognitive and sensory nature, and the main ones can be listed, such as:

- Improve breathing skills in water (expiration and inspiration)
- Promote greater balance in the water in a vertical position;
- Promote greater balance in the water in the horizontal position (dorsal and ventral decubitus);
- Promote the improvement of students' motor coordination in moving around in water;
- Improve proficiency in handling materials;
- Promote an improvement in learners' autonomy.

VII. INTERVENTION

The intervention throughout the Intellectual Output referring to Therapy in an Aquatic Environment is related to the implementation of an intervention program specifically developed for learners, which is based on their own skills, potential, needs and expectations. With regard to the main areas of intervention, they are the following: Behaviour, Entering the pool, Breathing, Balance, Displacement, Exploring materials and Leaving the pool.

These areas are worked on over ten sessions, two for each of the areas, with four specific activities being carried out in each of them. In the first and tenth sessions, the Assessment Scale is completed.

The intervention of the Activity in an Aquatic Environment approach is organized along the ten sessions that compose it, with eight intervention sessions and two evaluation sessions. Sessions last 45 minutes and are held weekly, in the context of a pool.

Each session is organized into three essential moments, warm-up, fundamental part and Stretching.

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VIII. FINAL EVALUATION, CONCLUSIONS AND RECOMMENDATIONS

In general, Marta actively participated throughout the intervention sessions, carrying out the proposed activities in a motivated and committed manner, within her competences. He was pleased with the aquatic environment, considering that it was a facilitating factor for the acquisition, development and maintenance of skills.

Regarding the course of the sessions, they took place as expected, and it was not necessary to adjust the activities outlined, since the learner fulfilled them as scheduled. There was only some reluctance to use the noodle, but that was overcome throughout the intervention.

It was also verified that the learner became familiar with the different routines inherent to the activity, from the previous preparation in the changing room, to the bath at the end. In the case of prior preparation, Marta understood what equipment was needed for the activity (cap, slippers, bathing suit and towel) and it was observed that throughout the sessions she increased her autonomy in preparing the materials and placing them correctly. In some of the sessions, he presented more stereotyped behaviours, but which did not interfere with his ability to perform.

As for the bath, the learner easily accepted this moment as part of the routine of the sessions. Some help was needed to wash the hair, but with verbal instructions I was able to wash the different parts of the body and recognize and use different utensils such as shampoo, shower gel, bath sponge, moisturizing cream, hairbrush and dryer (with help).

With regard to the moments of the session, the learner also understood the separation of the sessions into three moments, namely: warm-up, fundamental part and stretching and the activities inherent to each of them.

Regarding the results obtained with the Rating Scale, the graphic analysis is presented below, with a comparison between the data from the initial and final assessment.

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Domain I – Behaviour

In the first domain, related to the learner's ability to adapt her behaviour to the swimming pool context (graph 1), a score of 3 was observed at the beginning of the intervention, requiring some verbal help for Marta to understand which behaviours she should to adopt, which were understood and adopted, ending the intervention with a score of 4.

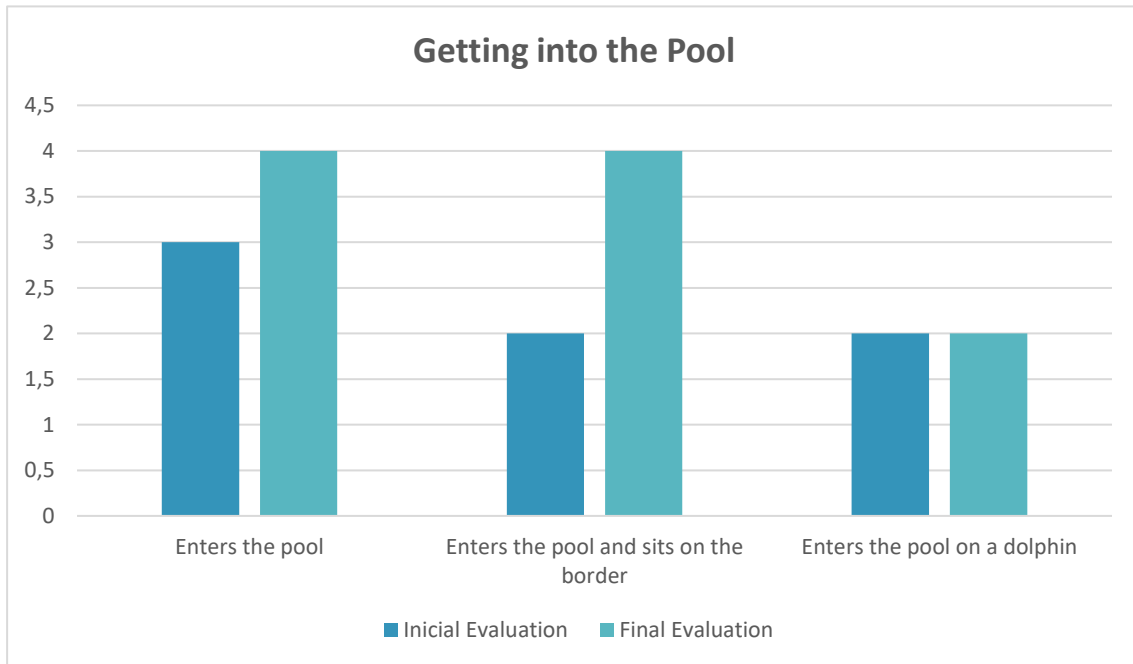


Graph 1: Comparison chart of the initial and final evaluation in the Behavior domain.

Domain II – Entrance

In the second domain of the Assessment scale, it is intended to analyze the entry into the pool, from a progressive level: simple entry, entry from the sitting position on the edge, and entry from the sitting position on the edge in dolphin. In the case of Marta, she performed the three entry levels in both evaluation moments, however, an improvement in performance was observed in the first two, as can be seen in Graph 2. The entry in Dolphin remained at a quotation of 2, physical help/demonstration, which may be related to the fact

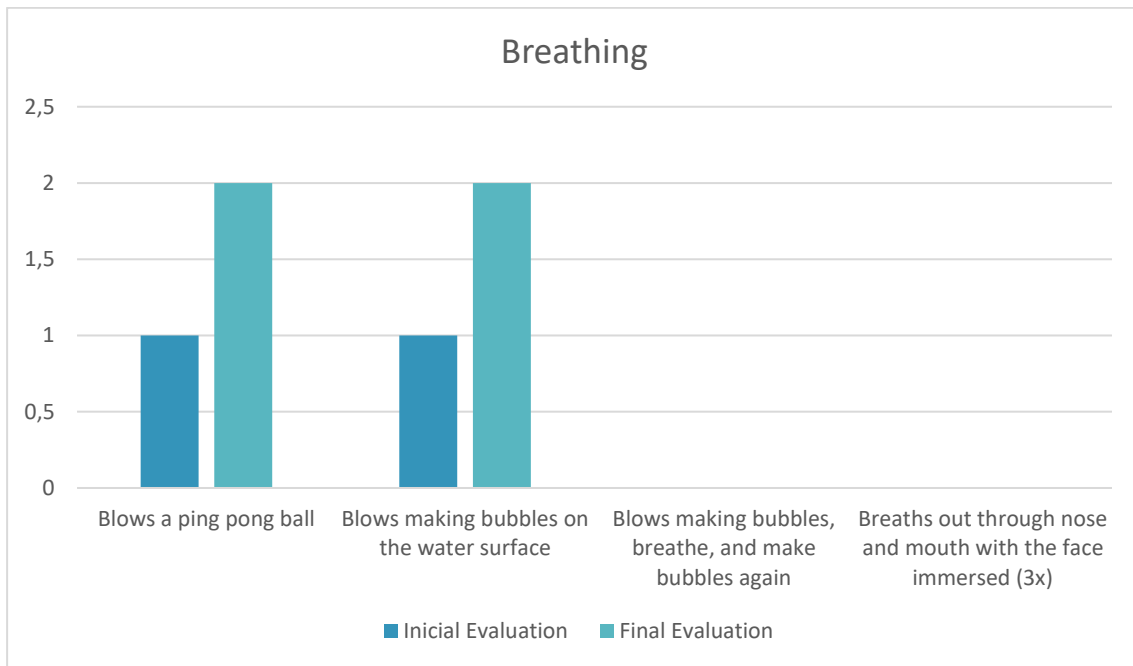
that this type of input was little worked on during the sessions.



Graph 2: Comparison chart of the initial and final evaluation in the Getting into the Pool.

Domain III – Breathing

The Breathing domain, which corresponds to the third, was the one that Marta had the most difficulties with. In the first moment of evaluation, with full help, the learner was able to blow a ping-pong ball to the surface of the water, a situation that she was able to replicate without the ball in order to make bubbles, ending up with a score of 1 in both parameters. In the final evaluation, in both situations, Marta was able to perform the tasks based only on a demonstration and a verbal indication of the technique, with an improvement of one point in the score. In turn, and due to Marta's difficulty placing her face below the water level, she did not carry out the last two evaluation parameters. Even so, it is safeguarded that the intervention only took place over eight practical sessions, considering that with the continuity of the intervention, the learner could acquire the aforementioned skills.



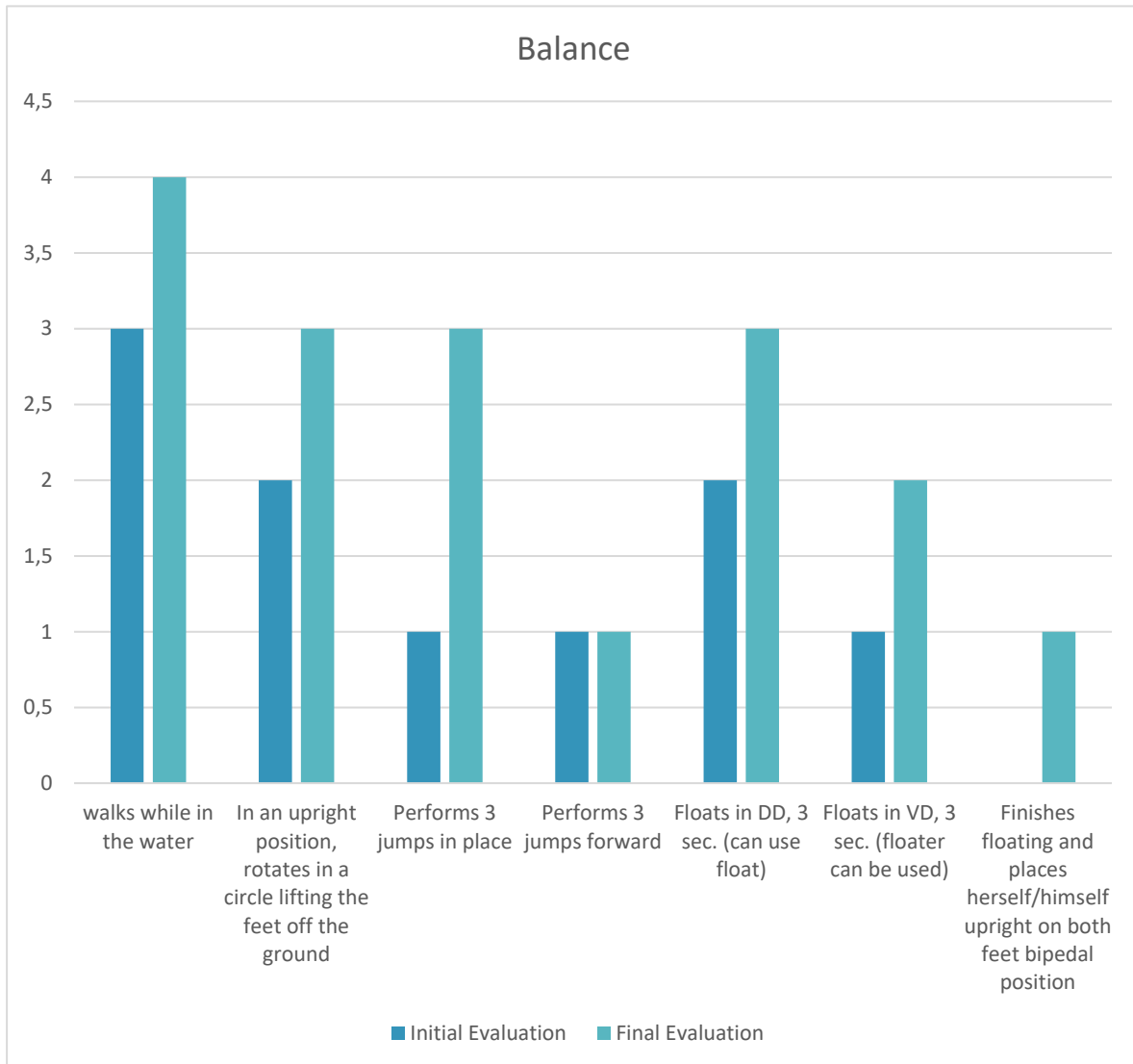
Graph 3: Comparison chart of the initial and final assessment in the Breathing domain.

Domain IV – Balance

With regard to the Mastery of Balance, seven skills related to the ability to establish and maintain gravitational safety in the pool are evaluated. As shown in graph 4, there was an improvement in the first two parameters from a score of 3 (Verbal Help) to 4 (Autonomous), having been observed that the learner was demonstrating more confidence in herself to move around in the aquatic environment. Regarding the jumps, there was an improvement in the execution of jumps in place, which was not verified in the forward jumps, which present a greater degree of difficulty. It should be noted that this is also a task that Marta performs with great difficulty on land.

In terms of fluctuation, both in the DD position and in the VD position, there was an improvement, albeit slight. A float was used and the learner only remained in the requested positions for 5 and 3 seconds, respectively. After the end of the fluctuation, in the initial assessment, the learner was unable to find the balance position for adopting the bipedal position (score 0), a competence that, with the full help of the technique, she was able to

demonstrate in the final assessment (score 1).



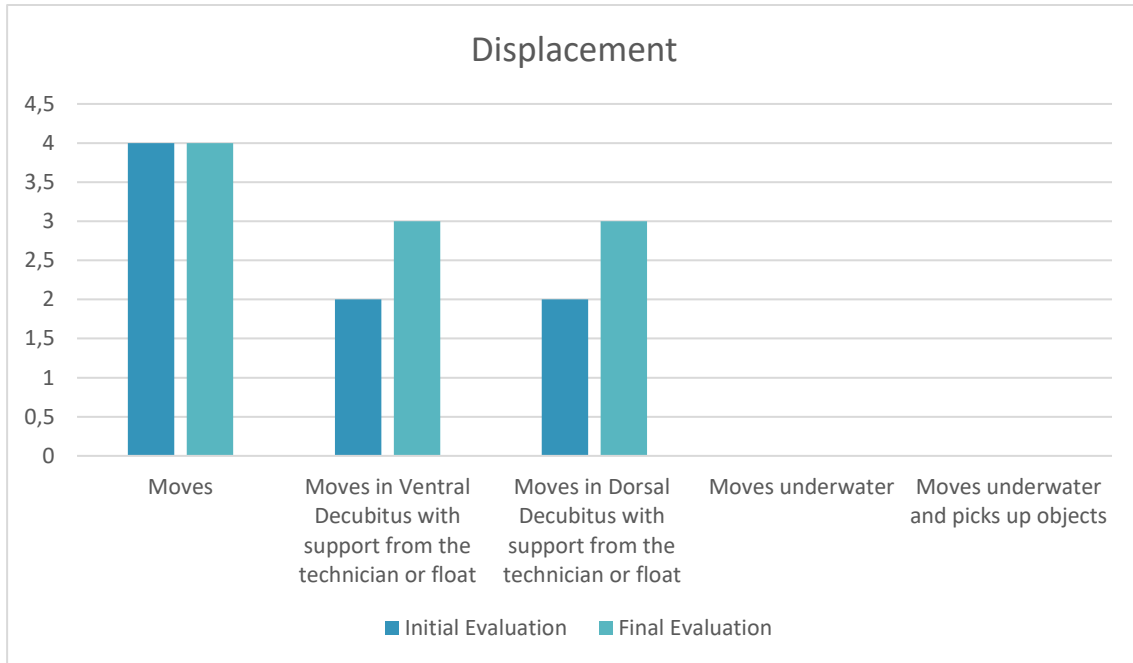
Graph 4: Comparison chart of the initial and final evaluation in the Balance domain.

Domain V – Displacement

In terms of movement in the water, Marta scored 4 (Autonomous) in the initial and final assessment of free movement.

Regarding Displacement in VD and DD, the learner showed some reluctance in the initial sessions to adopt these positions, having been verified an improvement of physical help/demonstration (quotation 2) to verbal help (quotation 3), even though the float and board.

In the last two parameters, related to movement under water, the learner did not take the tests, so it is considered important to continue the intervention at this level in order to improve both skills.

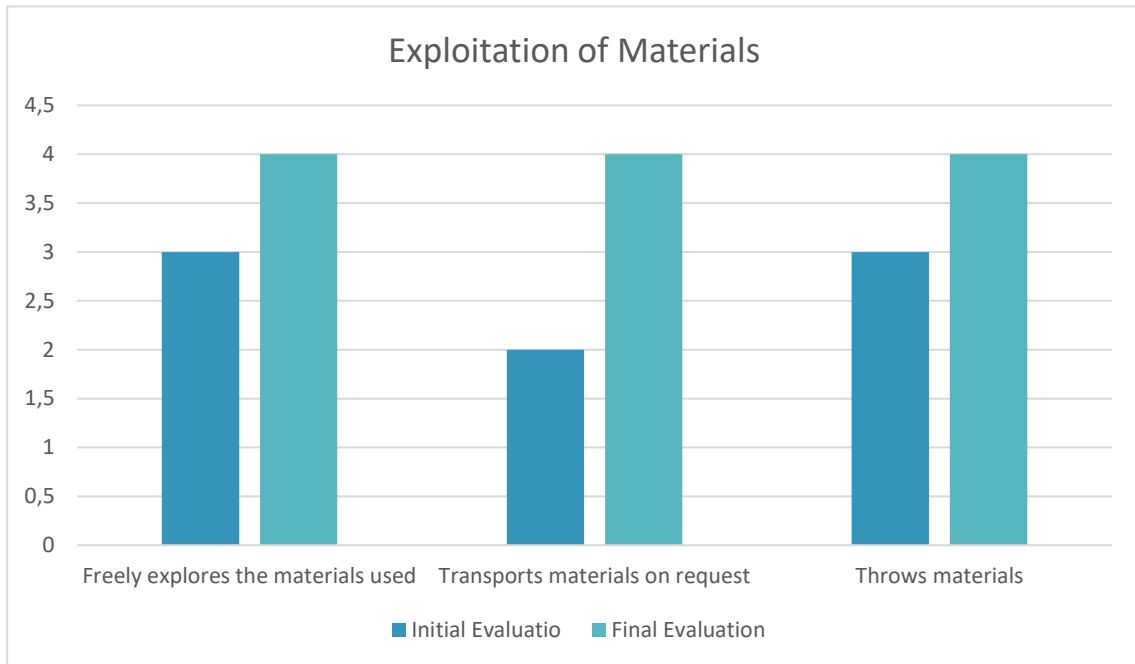


Graph 5: Comparison chart of the initial and final evaluation in the Displacement domain.

Domain VI – Exploitation of Materials

In the field of material exploration, Marta improved in all parameters, namely, from a rating of 3 to 4 in free exploration and launches, and from a rating of 2 to 4 in her transport in the

pool.

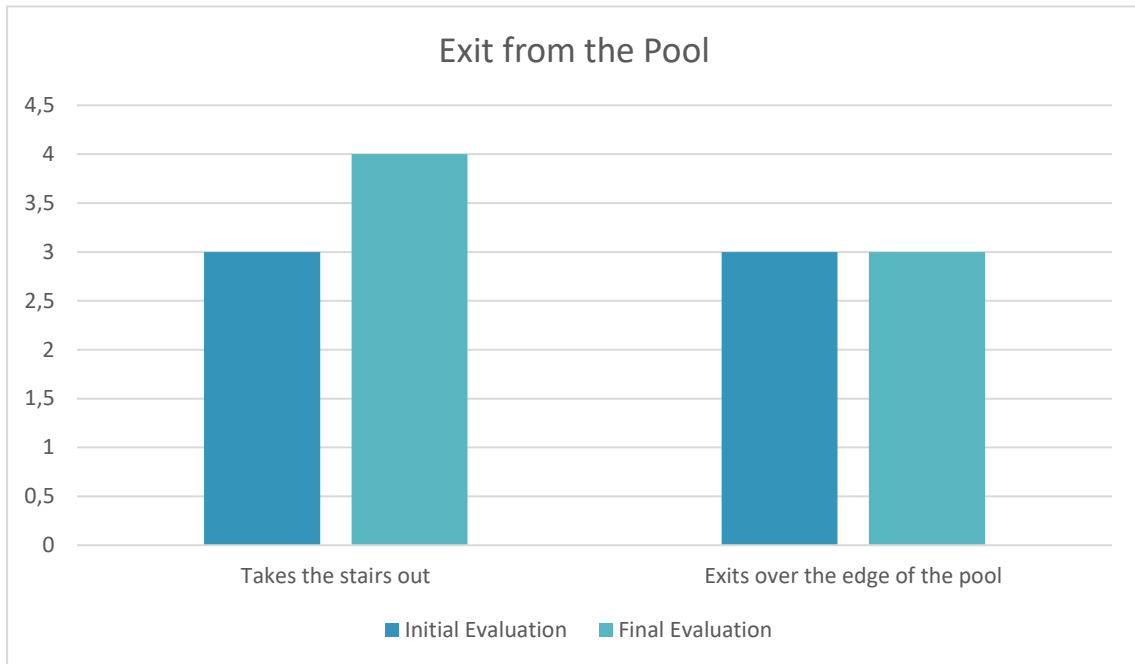


Graph 6: Comparison chart of the initial and final evaluation in the Exploitation of Materials domain.

Domain VII – Exit from the Pool

With regard to exiting the pool, Marta prefers to exit via the stairs. On this exit there was an improvement in quotation from 3 to 4, while on the edge exit the quotation was maintained

at 3, requiring help from the technician (Graph 7).



Graph 7: Comparison chart of the initial and final evaluation in the Exit from the Pool domain.