



D5.14 – Independent Report on the performance of Nesplora Aula School on Latam population



Version: 1.0
Date: 26/02/2019
Dissemination level: (PU, PP, RE, CO): PU

Project Co-Founded by European Commission within the Horizon 2020



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1. EXECUTIVE SUMMARY

VRMIND-AULA SCHOOL (Nesplora Aula School from now on) is a neuropsychological test, oriented to the educational field, for the assessment of attention in children from 6 to 16 years old. It is a Continuous Performance Test (CPT) designed to evaluate attentional processes and provide some basic psychopedagogical orientations based on the profile obtained. This test is valid to guide and facilitate the learning process of the students and also, for the early detection of learning difficulties. Nesplora Aula School offers scores about: sustained attention, divided attention (visual and auditory); impulsivity; excessive motor activity (hyperactivity); tendency to distraction, processing speed, focus on the task, attentional difference between visual and audio stimuli and between more and less stimulating tasks, sterile movement, motor activity and fatigue for tasks. Also distinguishes the tendencies to the internal or external distraction. The system provides an automatic report where this entire data are described, moreover, a description of the attentional profile is done at the end of the report and some orientations are given based on the profile.

This product was launched to the market on 2018 and Nesplora has sold 68 licenses in 13 countries. In addition, more than 100 licenses have been sold to distributors in Latin America and Turkey. From 2018 up to now both the professionals from Nesplora and also our customers are carrying out different investigations with this tool.

Even though to continue researching with Nesplora Aula School it is always useful since these studies increase the visibility of the tool and its value. This is the reason why it was planned to perform studies with Nesplora Aula School in different countries during the VRMIND Project.

This deliverable describes the one and only study that is being carried out and the main conclusions. We have only managed to have one partner in Latam and he has not shared the data with us yet. Despite being only one collaborator, the sample evaluated is much larger than the sample of other collaborators. Instead of evaluating 100 children, they are evaluating 600. They have not shared with us all the data but they will do it in a near future.

2. RELATION WITH OTHER WPS AND DELIVERABLES

This deliverable is closely related with D5.13: Independent report on the performance of Nesplora Aula School on European population; D5.15: Independent report on the performance of Nesplora Aula School on North American population; and, D3.2 Aula School field test report.

3. COLLABORATOR'S STUDIES

Since the moment we started the development of Nesplora Aula School, we started looking for European collaborators. First of all we contacted with the collaborators of Nesplora Aula and our current customers who had previously expressed interest, since they have access to children population. Most of our contacts did not want to collaborate with us mainly due to agenda constraints and difficulties to achieve the sample. So we started inviting different experts in the neuropsychological and educational field.

These unsuccessful contacts are shown in table 1.

The collaborator and study of Nesplora Aula School is described and detailed below:

3.1 Federal University of Rio de Janeiro

Collaborator's description: The Federal University of Rio de Janeiro, also known as the University of Brazil, is the largest federal university in Brazil and is located in the city of Rio de Janeiro. This University evaluates children from different schools in that city so it has easy access to the requested sample. Taking advantage of this, this collaborator will assess a large sample to be able to carry out an important study. The Collaboration Agreement of this collaborator can be found in Annex 1.

Location: Rio de Janeiro (Brazil)

Sample's commitment: 600 children between 6 and 16 years old.

Sociodemographic data: The research team of the university moves to different schools in Rio de Janeiro to evaluate the children using Nesplora Aula School. The study is being carried out at the moment and due to the wide sample, we do not have the data yet.

Measurements:



- **Nesplora Aula School:** Nesplora Aula School (Climent, 2018) is a continuous performance test that takes place in a virtual scenario, very similar to a school classroom. During 20 minutes, the child is situated in a virtual context, shown through a head-mounted display with movement sensors and earphones and a single-button switch. Perspective places the child in one of the desks, facing the blackboard, where the stimuli appear. Stimuli are presented both on a visual and auditory basis, and, at the same time, previously randomized distractors of ecological nature appear progressively. The core of Nesplora Aula School is composed by two main exercises: (a) a NO-GO paradigm-based exercise (i.e., “Press the button when you DO NOT perceive the target stimulus”) and (b) a GO paradigm-based exercise (i.e., “Press the button when you perceive the target stimulus”).
- **School Performance:** The school performance of the children will be taken into account to know the relationship between the evaluation test previously explained and the results obtained at the school level. It is sought to know if the qualifications obtained are consistent with their attentional profile.

Objectives of the study: The aim of this study is to provide a better understanding of the children’s cognitive profile, exploring Nesplora Aula School’s scores correlations with the school performance. The aim is to know the relationship between these measures and to know if the attentional profile is reflected in the scores obtained at school.

Hypotheses: Relationship between both measures would provide complementary data about the attentional profiles of the students. It is also hypothesized that the attentional profile will affect the results of the students. This affectation will not be bidirectional, the difficulties at the attention level can cause a worse school performance but, poor school performance does not indicate an attentional deficit.

Next steps: This study will collect a large amount of data from children in the Rio de Janeiro area. On the one hand, a comparison will be made between performance in the Nesplora Aula School test and performance in the school environment to see if the attentional profile influences academic performance. However, in addition to this, the data will be used to make a comparison between the people evaluated in Brazil and the people from the sample in Spain. In this way we will be able to see if there are differences between the two groups. If there are differences, we will study in which variables they

occur and, if there are no differences, we will be able to apply the scales that we already have from Spain in Brazil.

4. CONCLUSIONS

The aim of this study is to measure the validity, applicability and usefulness in the educational field of Nesplora Aula School. From the commercial point of view, this study is done in order to give value to the test in front of the market so the study can open new markets in Brazil.

Nesplora Aula School was deployed into the market in 2018 and from that moment until now some studies are being carried out by the R+D department of Nesplora but also by independent experts.

For this report we expected to make studies with a total sample of 300 subjects, and we have been able to recruit 600 subjects but with only one collaborator. In any case, we have not been able to get as many collaborators as we wanted in Latam. The ethical constraints, the deadline of the studies and the sample required have been the main reasons to not collaborate with us. However, our current collaborator continues with the evaluations and he will give us the data in the next months. The studies carried out are very important since these studies will allow us to publish new scientific articles and to get a better position of Nesplora Aula School in the market.

For instance, the study which is being carrying out in collaboration with the Federal University of Rio de Janeiro will help us to demonstrate that Nesplora Aula School is a valid and easily applicable test in the educational field. In addition to this, the data will also be used to calculate a scale of Nesplora Aula and Nesplora Aula School in Brazil. With the data provided we will be able to analyse the standard of these children for the assessed age range and we will also be able to make a comparison with the scales in Spain. In the Annex of this deliverable the Collaboration Agreement signed with this collaborator can be found. We will continue with this study even after the VRMIND project with our own resources because we are really interested in the results of this study since it will facilitate us new sales in LATAM.

Finally, as said in the deliverable D5.13, we have attended three congresses during the year to present Nesplora Aula School to different professional. All of them were in Spain but many international professionals attended the congresses. In May we went to the IX National Meeting of Counselors. (Zaragoza, Spain) where the evaluation tool was presented and its application in the schools. The present professionals were counselors of schools throughout Spain. In addition to the oral communication, we had a stand

where we made demonstrations to interested people and we offered them more information about the test and the studies. We contacted several potential clients that are currently being managed or sales have already been closed. In June we attended the IX International Congress of Psychology and Education (Logroño, Spain) in which we made another presentation on the development of attention in childhood and stability in the results of cognitive exploration. This congress gave us more visibility and helped us in the promotion of Nesplora Aula School. In November we went to the ICERI2018 congress to explain different psychometric aspects of the Nesplora Aula School test. Special emphasis was placed on the calculation of the significant differences used in the report to find favourable conditions for the child.

5. REFERENCES

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