



Deliverable D6.3 Summary

This report is presenting the main findings following evaluation of the benefits when employing NEWTON technologies in activities with children with Special Educational Needs (SEN). The evaluation of NEWTON efficiency was focused on four directions:

- Assessment made directly by children with SENs as main beneficiaries. This assessment was done through questionnaires, interviews and focus groups. The items included in questionnaires was developed by the NEWTON Project Pedagogical Assessment Committee and was accessible to children with SEN. The evaluation presented in this deliverable was focused on: motivation, affective state and knowledge acquisition
- Indirect Assessment conducted by teachers as educators of children with SEN. Evaluation done through interviews, questionnaires and focus groups that were based on behavioural analysis and school performance of the participating students.
- Indirect Assessment performed by the parent who is acting as non-formal educators of children with SEN. Parents as guardians and educators of children participated in interviews and focus groups.
- The assessment made by a psycho-pedagogue in respect to the impact of using the NEWTON technology on mental development of children with SEN. This type of evaluation was carried out through the following tests: Torrance Test of Creative Thinking (to test mental fluidity, flexibility, originality etc.) and WISC (Wechsler Intelligence Scale for Children).

One of the most important aspects of the analysis is the statistically significant increase in the results of the knowledge acquisition for all the groups included in the study and for all the analysed pilots. It demonstrates that using NEWTON technologies is effective in providing access to information for children with hearing impairment.

Along with increasing knowledge levels, it has also been observed an increase in students' confidence in their own capabilities, an improvement of the affective state achieved by diminishing the negative emotions during the lessons and especially a statistically significant improvement of learner satisfaction.

The efficiency following the use of NEWTON technologies have also been highlighted by teachers and parents that argued that students could be more easily motivated to participate in STEM activities and enjoyed them.

An important improvement was also observed following the application of psychological tests to assess cognitive factors of creativity and rationality, which significantly improved following the use of NEWTON technologies.