

## Output 2 – Ismai presents a proposal of the App SportSign Toolkit

The Sportsign Glossary is being designed to be a digital application consisting of demonstration videos of the motor skills of 6 sports (handball, basketball, football, volleyball, athletics, and gymnastic), translated into the national written and sign language of 4 countries. The search can be carried out, using the sign language, the written word or the demo video as input



## Output O1 – Conclusions of the studies

The reports can be consulted on the website <https://sportsign.eu/?lang=pt>

### Study I – Physical activity habits of deaf students

The study included 108 deaf/hearing loss students, aged between 12 and 20 years old. The analysis of the results focused on sedentary behaviors, type of transport used for school, physical activity index, and occupation of leisure time.

**Sedentary behaviors** - Students spend an average of between 6,33 hours and 8,64 hours in sedentary activities. These activities are distributed on average, between 2,12 hours and 4,5 hours per day in study activities and, 3,52 and 5,12 hours per day in screen time (use mobile phone, PC, or TV for recreation).

**Commuting to and from school** - Students from Germany (72%) use combined transport, followed by students from Slovenia (46.7%) and Italy (44.6%). Students from Spain (54.5%) travel to school on foot or by bike, Portuguese students (56.6%) move to school by car.

**Physical Activity Index** - The maximum value was 22 points. The index of physical activity obtained by each country was: Italia 15.4; Spain 13.6; Germany 10.2; Portugal 10 and Slovenia 9.6. points.

**Leisure activities** - 85,5% of the students preferred to spend their free time in sedentary activities, among them stands out: using Instagram, Facebook, Twitter, chatting with friends on social networks, or watching TV. Only 36% practice some sports activity with a coach, or teacher.

### Study II - Communication between PE teachers and deaf students

73 PE teachers participated, 77.8% were listeners; 15% were deaf and 7.2% had hearing loss. They had between 8,6 and 27,5 years of professional experience and between 2,5 and 9 years of teaching deaf students. From the results obtained we highlight:

**Training and level in national sign language** - 78% of teachers didn't have training in the Sign language of their country.

**Use of Sign Language in PE classes** - More than 50% of the teachers considered the use of sign language to be very important for the "Explanation of theoretical knowledge", for the "teacher-student communication", for the "identity building of deaf students" and for the "social relationship (peer work)".

**Difficulties in deaf students** - more than 50% of the teachers agreed that deaf students have "difficulties in understanding the information being transmitted" and difficulties in "class participation and interactivity".

**Communication strategies** - More than 50% of the teachers "always" use the exercise demonstration as a communication strategy. They rarely resort to the use of "national sign language" (27.4%) and "written information" (23.3%).

**Self-assessment of communication** with deaf students - answers ranged from "sufficient" to "good". As for the perception of the effectiveness of communication, the answers ranged from "sufficient" to "insufficient".

### Study III - Development and knowledge of Physical Education and sports vocabulary of sign language interpreters

In this study, 101 sign language interpreters participated, with a mean age of 38,7 years old. Of these interpreters, only 53.4% had interpretation experience in physical PE classes between 1 and 5 times a week. We highlight the following results:

**Preparation of the communication process** - 68.5% of the interpreters reported not having received any kind of material (lesson plans, reading material, or information about the content to be taught) that would allow them to prepare in advance, at same time, the rest estimated they received it between 1 and 3 times a week. Reported spending an average of 3 hours a week preparing for the communication process and 57.4% did not have this time in their work schedule.

**The most demanding aspect of interpreting within the PE class** - more than 50% of the interpreters found it difficult/very difficult: "to be in the visual field of the students due to the fact that they were often dispersed in space", "to feel the lack of sign vocabulary for the interpretation of certain contents" and "to have prior knowledge of the contents of the physical education subject".

**Resources for updating vocabulary** - To update or clarify doubts, interpreters make more frequent use of online dictionaries and contact with other colleagues/interpreters, and they make less and less use of printed dictionaries or books.

## Portuguese School applies Sportsign toolkit for the first time in PE classes

Deaf teacher of PE, used in the teaching of handball and football the tools produced by SportSign. The students were evaluated before and after using of a bilingual teaching methodology, using SportSign tools.

The comparison of pre-test and post-test results showed that students improved learning in L1 (first language) and L2 (second language), although in L2 the gains had no statistical significance.

