



oMERO Project
an eu curriculum for visual disabilities RehabilitatOrs

Lesson Plan

“Early accompaniment of the Visually Impaired Child (VIC)”

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GENERAL INFORMATION - INTRODUCTION	
TITLE	Early accompaniment of the Visually Impaired Child (VIC)
ADDRESSED LOs	LO 3 F-1 Know and apply the principles of an ergonomic living environment for VIPs and collaborate with parents in preparing the environment for a VIC
IMPLEMENTED INNOVATIVE STRATEGY	<p>This lesson plan targets the early accompaniment of Visually Impaired Children (VIC) from the stage of acquisition of walking (2 years).</p> <p>It will be carried out with the help of simulated situations under low vision glasses. This will allow introspective analyses, which are essential for an empathetic understanding of the disabling consequences of each form of visual impairment.</p> <p>From these analyses and theoretical references on visual function in children, the students will collectively elaborate the different methodological and educational tracks in response to the child's needs. Perspectives will also be opened up for children with possible associated disorders or handicaps.</p> <p>The lesson plan introduces an observation approach and tools to evaluate possible ergonomic interventions in natural environments.</p> <p>Finally, the students are encouraged to investigate how to involve parents and relatives and to cooperate with them in setting up an adapted and safe environment in order to support the child's autonomies.</p>
STRUCTURE OF THE LESSON	<i>Activity 1</i> Introductory lesson
	<i>Activity 2</i> Introduction to ergonomics, environmental accessibility
	<i>Activity 3</i> Bedroom simulation and set up
	<i>Activity 4</i> General principles of low vision compensation in the family environment and adaptations for the VIC
DURATION	<p>Overall duration 4 hours.</p> <ul style="list-style-type: none"> - Activity 1: 30 minutes - Activity 2: 60 minutes (1hour) - Activity 3: 120 minutes (2 hours) per group, + 60 minutes homework - Activity 4: 90 minutes (1,5 hours)
OTHER LOs WHICH CAN BE TARGETED BY ADAPTING THIS LESSON PLAN	LO1-A-1, LO1-E-G-1 LO3-A-1, LO3-C-1, LO3-G-1 LO4-A-2, LO4-C-J-1 LO12-F-1, LO12-D-G-1

ACTIVITY 1: Introductory lesson

DETAILED DESCRIPTION OF THE ACTIVITY	<p>Activity 1 is a lecture that introduces and problematizes the content of the addressed learning outcome (LO3-F-1).</p> <p>In particular, it will focus on:</p> <ul style="list-style-type: none"> • Brief references on visual function in children (0-7 years). • Comparative elements of sensory awakening and early learning in case of visual impairment. • Impacts of visual impairment in children: main benchmarks. • Contextualization of acquired knowledge about visual functioning (Q&A) and environmental issues, in particular: visual acuity, practical distance of vision, binocular function-stereoscopy, oculomotricity, visual field, contrast and colour sensitivity, sensitivity to movements. <p>The lecture can be delivered face-to-face or, alternatively, it can be presented in an online web-conference.</p>
ROLE OF THE TEACHER	The teacher plays an active role as lecture presenter.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	The lecture will comprise the whole class. The teacher will involve students by asking them questions.
DURATION	30 minutes
NEEDED ICTs and/or DEVICES	<p>If the lecture is delivered in person: computer, video projector and audio speakers.</p> <p>If the lecture is delivered online: computer + videoconferencing system.</p>
ASSESSMENT OF THE ACTIVITY	Ability to transfer knowledge of child visual function and stages of child development, evaluated through final case analysis and simulation

ACTIVITY 2: Introduction to ergonomics and environmental accessibility

DETAILED DESCRIPTION OF THE ACTIVITY	<p>Activity 2 is a lecture that introduces ergonomics and environmental accessibility</p> <p>In particular, it will focus on:</p> <ul style="list-style-type: none"> • environment and ergonomics; • the "<i>accessibility evaluation grid</i>" which provides students with standardized criteria for observing and appropriately evaluating the living spaces of the blind or visually impaired child. <p>The teacher explains to students the concepts of accessibility in terms of placement or choice of furniture, materials, lighting, colour contrasts, pathways and tactility. Then, learners are provided with standardized criteria for appropriate intervention in the living spaces of the blind or visually impaired child.</p> <p>The teacher introduces Activity 3 and gives instruction for simulation and environment set-up.</p> <p>The lecture can be delivered face-to-face or, alternatively, it can be presented in an online web-conference.</p>
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ROLE OF THE TEACHER	The teacher plays an active role as lecture presenter.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	The lecture will comprise the whole class. The teacher will involve students by asking them questions.
DURATION	60 minutes (1 hour)
NEEDED ICTs and/or DEVICES	If the lecture is delivered in person: computer, video projector and audio speakers. If the lecture is delivered online: computer + videoconferencing system.
ASSESSMENT OF THE ACTIVITY	evaluated through final case analysis and simulation

ACTIVITY 3: Bedroom simulation and set up

DETAILED DESCRIPTION OF THE ACTIVITY	<p>Activity 3 is based on a simulation in real world environments. It can be carried out in "simulation labs" (if available in the academic utilities), but it can be also organised in a natural environment or assigning students the task of observing their home environment.</p> <p>The ENVIRONMENT (sample room) should be set up with standard equipment, as similar as possible to that frequently found in real situations:</p> <ul style="list-style-type: none"> - Bed - Bedside table - Small work surface (low coffee table) - Stool - Stuffed toys and similar - Closet <p>The room will also feature an entrance door and a window (mock in the simulation lab). The general ambient lighting could be dimmable to provide different environmental conditions with the addition of two abat-jours: one on the countertop and one next to the bed.</p> <p>The OBJECTIVE of the activity is to empathize with the end users (i.e. VIP and VIC) and to provide students with standardized criteria for observing, assessing and intervening appropriately in the specific environment of the bedroom of a VIP or VIC.</p> <p>In particular, students will experience some visual impairments through a simulator and will experiment and evaluate two different set-ups. The activity will be based on the following STEPS:</p> <p>STEP 1 - PREPARATION: The teacher sets up a sample room and students are divided into groups of 3-5 students, when it is available a living lab (simulation room) of the environment. Otherwise, the students will choose a room for case study, providing some pictures to be shared in classroom and in their final homework.</p> <p>STEP 2: Guided by a classmate (acting as VDR), each student has to explore the environment using simulation tools, such as REALTER or other visors or glasses simulating severe low vision.</p> <p>STEP 3: Each member of the group has to observe the environmental set-up with a critical approach, applying the 'accessibility evaluation grid' provided in Activity 2.</p> <p>STEP 4: The group is asked to consider possible adaptations based on guidelines given in Activity 2 and collect suggestions to improve the initial set-up of the sample room in terms of lighting and color contrasts, pathways and tactility. In relation to the</p>
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	<p>latter, four different textures are proposed to foster the sensory stimulation and thus the spatial perception of the child (VIC) and make him/her actively participate in all activities.</p> <p>STEP 5: Based on the suggestions provided in STEP 4, students arrange a more functional setting in the same room and they repeat the simulation experience. The choice of colors and paths should be made by exploiting color contrasts and thus to achieve the best possible visibility (e.g., by increasing lighting and with color-contrasting furniture). The second set-up will focus on depth and keeping objects and materials in a predetermined order, stimulating the child from a sensory point of view.</p> <p>STEP 6: The group has to produce a written report on the activity. It can be done after the simulation experience at home as homework.</p> <p>All training activities can be recorded, so that they can be used for debriefing activities and training at other times and contexts within the project.</p>
ROLE OF THE TEACHER	The teacher organizes the simulation and invites the students to reflect, evaluate and adapt the environment to the needs of the VIC on site.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	Students are involved in the simulation in groups of 3-5, depending on the possibilities of the environment.
DURATION	60 minutes (1 hour) for each group + some time at home to write the report
NEEDED ICTs and/or DEVICES	<p>A set of useful tools for ambient lighting and objects acting as obstacles to be placed in the experimental room.</p> <p>Video recording tools, if necessary, for further class discussions.</p> <p>REALTER or other devices such as simulation glasses (plastic or high-tech glasses simulating blur and visual impairments).</p>
ASSESSMENT OF THE ACTIVITY	The teacher will assess the relevance of the students' observations and their final report.

ACTIVITY 4: General principles of low vision compensation in the family environment and adaptations for the VIC	
DETAILED DESCRIPTION OF THE ACTIVITY	<p>Activity 4 is based on a collaborative elaboration of the simulation experience and on a group analysis later shared with the whole class. Students are asked to discuss and develop ideas and means specifically suited to the child's age and stimulating for him/her, starting from their introspective experience.</p> <p>STEP 1 the teacher asks to students to elaborate a possible intervention considering the VIP home environment and his/her relationships. The teacher asks the class to consider their possible approach with the family, with the VIP and how to organize it.</p> <p>STEP 2 Collectively or starting from group analysis the class is invited to discuss:</p> <ul style="list-style-type: none"> - Preparation of an intervention at home: considering the relationship of trust and partnership with parents (or other relatives), collection of expectations and needs. Ability to represent an organised framework life habits of the child, parents and relatives and their place. - Proposal of playful activities: "doing while playing", stimulating engagement and pleasant activities that can support sensorial stimulation and learning (Visual, tactile and auditory). Suggestion of language and

	<p>relational approach. Description and giving examples of supporting materials, games/toys.</p> <ul style="list-style-type: none"> - how to associate and involve parents and siblings, cooperating and collecting useful feedbacks <p>The students are supposed to already know the main principles of low vision compensation, the challenge is therefore to enable them to develop ideas and means that are specifically stimulating and adapted to the child's age, starting from their introspective experience.</p> <p>STEP3 Students' discussion will be shared in the classroom to exchange and collect their final considerations and operative suggestions on how to organize an intervention in the VIC's place. Final wrap up</p>
ROLE OF THE TEACHER	The teacher acts a moderator.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	The discussion can take place in the whole class or in smaller groups (5-10 persons), providing questions about the theme to be discussed and sharing at the end of the session
DURATION	90 minutes (1h30)
NEEDED ICTs	No
ASSESSMENT OF THE ACTIVITY	No

GENERAL INFORMATION – SUM-UP	
CONTENTS DETAIL	Visual function from 0 to 7 years / Low visions scenarios / Low vision compensation and adaptations for the child / Intervention at home / Ergonomics principles/ concept of accessibility/ Evaluation approach of environment usability (grid) / Learning pedagogies/ playful activities / Sensory stimulation and learning / Material supports, games-toys / Associating parents and siblings/ organizing an intervention on site /cooperation and feedback observation.
REFERENCE MATERIALS	<p>Accessibility grid to be applied in the evaluation of the VIC's environment (CHECKLIST)</p> <p>bibliography.</p> <p>Anomalies de la vision chez l'enfant et l'adolescent 2ème edition KOVARSKI C. Medecine Siences publications LAVOISIER (2014)</p> <p>Développement de la fonction visuelle chez l'enfant, GREGOIRE M. Medecine humaine et pathologie DUMAS cnrs 01244094 (2016)</p> <p>Toucher pour Connaître HATWELL Y., STRERI A., GENTAZ E. PUF Paris (2000)</p> <p>Aptitudes visuelles ZANLONGHI X. Rapport S.O.F. (2013)</p> <p>Manuel d'intervention en Orientation Mobilité RATELLE A., COUTURIER J.A. Presses Universitaires de Montréal (2019)</p> <p>Other authors: DUPEYRON G., VITAL-DURAND F., CORBE C., SARROCHI F., BULLINGER A., etc.</p>
TEACHER PROFILE	Specialised educator, occupational therapist, OM Autonomy in Daily Life rehabilitator... Any professional with experience in educational work with children and families, able to assume the role of trainer
ONLINE LEARNING	<p>See if Activity 1 can be organised online</p> <p>Students can write a summary of the teaching at the end, share any other research documents on a shared online platform.</p>
ICTs SUPPORTING THE LESSON	
CHARACTERISTICS OF THE FACE-TO-FACE LEARNING ENVIRONMENT	<p>Suitable premises if possible, on the training site: bedroom, kitchen, bathroom. If not, other environment with transposition required</p> <p>Living Labs (LLs) are defined as user-centred, open innovation ecosystems based on a systematic user co-creation approach, integrating research and innovation processes in real life communities and settings. (EC ENoLL, 2015)</p> <p>Inside the Living Hub, a small apartment is reproduced, in which to simulate domestic activities. The space is also equipped as a film set, with cameras, ambient microphones and lights that allow recording of activities.</p> <p>The space is designed in such a way as to allow for modifications in the set-up to recreate various situations in simulation; for example studying the interaction with prototypes and innovative artifacts, even by users with frailties. In general, this space is an experimentation and training environment for: healthcare professionals, informal caregivers, designers and architects for the design of products, services and aids aimed at improving the living conditions and safety of users in the home .</p>

NUMBER OF STUDENTS INVOLVED AND POSSIBLE GROUPS	When grouped in the simulation activity 3-5 students The overall class for lectures and discussion
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