oMERO Project
an eu curriculuM for visual disabilitiEs RehabilitatOrs

Lesson Plan
"*Basics of using a computer screen reader program*"

This document is part of oMERO Project's Intellectual Output 4

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GENERAL INFORMATION - INTRODUCTION	
TITLE	**Basics of using a computer screen reader program**
ADDRESSED LOs	**LO8-C-1** Know, use and teach how to use the main computer based assistive programs and select the appropriate systems considering the needs of the VIP and the IRP
IMPLEMENTED INNOVATIVE STRATEGY	This lesson plan makes students experience what it is like to use a computer without being able to see the keyboard and the computer screen. Blindfolds will be used to try to simulate visual impairments or complete blindness. Students will learn about different screen reader programs that VIPs can use for their computer, smartphone, and the main differences between them. This lesson plan helps students learn how to operate a computer using only the keyboard and different key combinations, practise and master the hand manoeuvres that are necessary for VIP using the keyboard. Furthermore, this lesson plan provides an understanding of the problems, difficulties and challenges that a blind or visually impaired person may face when using a computer. Students will learn how to change the teaching strategy if a VIP has memory, attention, concentration, or other cognitive impairments. Students will learn a) how to act if a VIP also has motor dysfunction (e.g. decreased hand coordination, decreased hand strength, or hemiparesis due to neurological disorders) and b) what assistive devices are necessary in each case.
STRUCTURE OF THE LESSON	<table><tr><td>*Activity 1*</td><td>Introductory lesson</td></tr><tr><td>*Activity 2*</td><td>Learning basic computer key commands</td></tr><tr><td>*Activity 3*</td><td>How to create a *Word* document</td></tr><tr><td>*Activity 4*</td><td>Wrap-up discussion</td></tr></table>
DURATION	Overall duration 4 hours. - Introductory lesson (30 min) - Activity 1 (2 hours) - Activity 2 (2 hours) - Wrap-up discussion (1 hour)
OTHER LOs WHICH CAN BE TARGETED BY ADAPTING THIS LESSON PLAN	LO8-B-1 Teach VIPs about computer basics, operating systems, e-mail and communicating programs, web and office suite, according to personal needs and goals LO6-A-1 Define, monitor and assess educational needs within the MDT, considering settings and tools according to level and type of visual impairment and personal circumstances LO12-A-1 Describe and apply basic methods and techniques for individuals and groups training in special education for VIPs and vision rehabilitation LO3-A-1 Evaluate the developmental stage and related individual capabilities of the visually impaired child (VIC), through observation and referrals in collaboration with the MDT

	LO3-B-1
	Define a visual, multisensory rehabilitation program (IRP) for VIC suitable for their developmental age taking associated comorbidities into account
	LO3-C-1
	Know and contextualize the impact of vision impairment on the developmental stages of the normo-typical child, as well as their cognitive development, including spatial cognition and visual-motor coordination
	LO12-C-1
	Communicate and cooperate effectively with educators and teachers and generally with professionals from relevant discipline
	LO12-A-1
	Describe and apply basic methods and techniques for individuals and groups training in special education for VIPs and vision rehabilitation

ACTIVITY 1: INTRODUCTORY LESSON	
DETAILED DESCRIPTION OF THE ACTIVITY	Activity 1 is a lecture that introduces the main topic to the whole class.
	The teacher gives the class a slide presentation on 'The basics of using a computer screen reading programme'.
	A webcam connected to a computer and installed above the teacher's keyboard will allow students to see the key combinations performed by the teacher.
	The lecture can be delivered face-to-face or, alternatively, it can be presented in an online web-conference.
ROLE OF THE TEACHER	The teacher presents a slide presentation in a traditional face-to-face lesson.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	The whole class is involved (suggested number of students: 10-12 people).
DURATION	30 min
NEEDED ICTs and/or DEVICES	A computer with a screen reader and a web camera installed above the teacher's keyboard.
	If the lecture is delivered in person: video projector + audio speakers.
	If the lecture is delivered online: computer + videoconferencing system.
ASSESSMENT OF THE ACTIVITY	Not assessed

ACTIVITY 2: LEARNING BASIC COMPUTER KEY COMMANDS	
DETAILED DESCRIPTION OF THE ACTIVITY	Activity 2 can be performed individually or in pairs.
	If the activity is performed INDIVIDUALLY, each student works on his/her own computer following the teacher's instructions. It is based on techniques and "how to teach" computer basics.
	The main steps of the activity are described below:

	STEP 1: The teacher provides students with the printed version of the document "Basic computer key commands" (one for each student). Students are expected to use the document to practise the key commands described in it at home.
	STEP 2: Students wear blindfolds and headphones and listen to the teacher's instructions. The teacher says one by one the key combinations that students need to find on the keyboard. While listening to the teacher's instructions (and to the computer's response through headphones), students try to find and enter the necessary key combinations on the keyboard.
	If the activity is performed IN PAIRS, a student plays the role of the VDR and the other one plays the role of the VIP. The student who plays the VIP role wears a blindfold and a headset, while the one playing the VDR role only wears the headset and helps his/her colleague find the necessary keys. Then, they swap roles.
ROLE OF THE TEACHER	The teacher is a moderator and an observer.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	Students can work individually or in pairs.
DURATION	120 minutes (2 hours)
NEEDED ICTs and/or DEVICES	Computers (one for each student or pair) with a screen reading program and a single ear headset for each student. Blindfolds.
ASSESSMENT OF THE ACTIVITY	Not assessed

ACTIVITY 3: HOW TO CREATE A WORD DOCUMENT	
DETAILED DESCRIPTION OF THE ACTIVITY	Activity 3 can be performed individually or in pairs.
	If the activity is performed INDIVIDUALLY, each student works on his/her own computer following the teacher's instructions.
	Students with blindfolds and headphones listen to the teacher's instructions. The teacher provides step-by-step instructions on:
	- how to find and open a new Word document;
	- how to write the text dictated by the teacher in a Word document.
	- how to save the created Word document.
	If the activity is performed IN PAIRS, a student plays the role of the VDR and the other one plays the role of the VIP. The student who plays the VIP role wears a blindfold and a headset, while the one playing the VDR role only wears the headset and helps his/her colleague carry out the activity. Then, they swap roles.
ROLE OF THE TEACHER	The teacher is a moderator and an observer.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	Students can work individually or in pairs.
DURATION	120 minutes (2 hours)
NEEDED ICTs	Computers (one for each student or pair) with a screen reading program and a single ear headset for each student. Blindfolds.

ASSESSMENT OF THE ACTIVITY	Self-assessment

ACTIVITY 4: WRAP-UP DISCUSSION	
DETAILED DESCRIPTION OF THE ACTIVITY	In this activity, students ask questions to the teacher and clarify what they failed to do or had difficulty doing. They also share the individual experiences they had during the activities. The teacher puts forward some triggering questions to stimulate discussion, such as: - *How will the instructions given by the VDR differ if the person not only has a visual impairment, but also a different cognitive impairment?* - *How will performance and training differ if a person not only has a visual impairment, but also a hand dysfunction (impaired coordination, decreased hand strenght or hemiparesis due to neurological impairments). What assistive devices would be needed? Is it still possible to use the keyboard in this case?*
ROLE OF THE TEACHER	The teacher acts as a moderator in the classroom, putting forward "triggering" questions and moderating interactions among students.
STUDENTS INVOLVEMENT AND POSSIBLE GROUPS	The whole class is involved (10-12 students). Students share the individual experiences they had during the activities.
DURATION	60 minutes (1 hour)
NEEDED ICTs	Computers with a screen reading program and a single ear headset for each student.
ASSESSMENT OF THE ACTIVITY	Not evaluated

GENERAL INFORMATION – SUM-UP	
CONTENTS DETAIL	• Basic computer key commands using a screen reader program • How to create a Word document
REFERENCE MATERIALS	• PowerPoint presentation ""The basics of using a computer screen reader program" • Word document about "Basic computer key commands" • Self-assessment tool about VDR and VIP simulations
TEACHER PROFILE	Preferably, the teacher should be an Occupational Therapist or a VDR. He/she may be a Visually Impaired Teacher.
ONLINE LEARNING	Activity 1 can be conducted via webinar.
ICTs SUPPORTING THE LESSON	• PC with a screen reading program installed and a video projector (for the teacher) • Web camera installed above the teacher's keyboard • A PC with a screen reading program installed for each student • A single ear headset for each PC

CHARACTERISTICS OF THE FACE-TO-FACE LEARNING ENVIRONMENT	A classroom equipped with a PC (at least one for each student or pair) and ICTs for projecting slides.
NUMBER OF STUDENTS INVOLVED AND POSSIBLE GROUPS	The lesson can involve a minimum of 6 and a maximum of 12 students. During Activity 2 and Activity 3, it is possible for students to work in pairs.