

InSIDE: Including Students with Impairments in Distance Education

Deliverable Report on the training of the accessibility advisors

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Project Partners



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<u>Blida 2 University</u> Algeria

Greece

National and Kapodistrian University of Athens



<u>Mouloud Mammeri University</u> of Tizi-Ouzou Algeria



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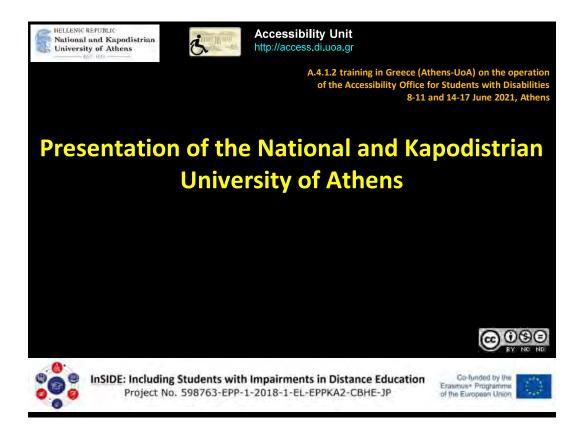
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Introduction

This report includes the training material prepared for the training of the accessibility advisors on the operation of accessibility offices.

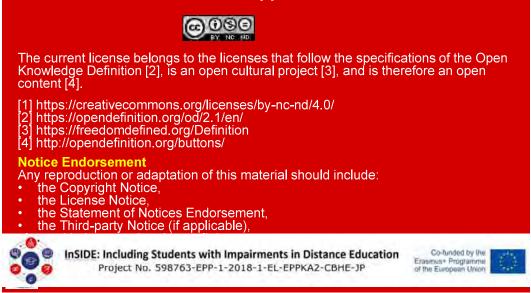
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National and Kapodistrian University of Athens (NKUA)

- Officially founded: April 14th, 1837
- The first university in Greece, Balkan peninsula and Eastern Mediterranean region
- The largest Greek state institution in Higher Education
- Self-governed legal entity under public law
- Provision of free undergraduate & PhD education



Historical Background (1/3)

- 1837: "Othonian University"
- 1837: 4 schools, 33 professors, 52 students, 75 non-matriculated "auditors"
- 1862: "National University"



Historical Background (2/3)

- 1911: founding "The Kapodistrian University"
- 1932: merge into the "National and Kapodistrian University of Athens"



flag of NKUA

Historical Background (3/3)

Prominent students:

- George Papanikolaou (test PAP)
- Constantin Carathéodory
- Odysseas Elytis (Nobel prize)
- George Seferis (Nobel prize)
- Nikos Kazantzakis
- Hélène Glykatzi-Ahrweiler
- * Kostis Palamas (Secretary of NKUA)





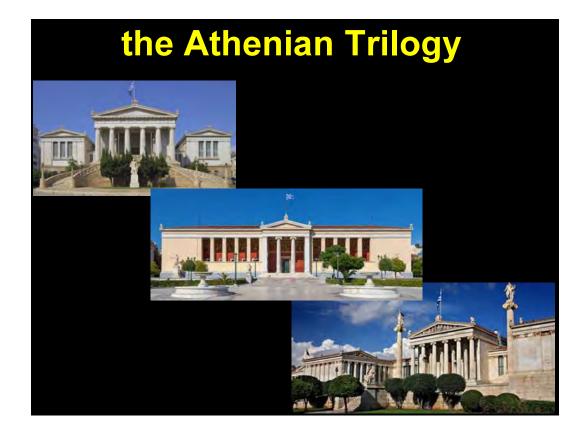
Propylaea of NKUA

1839: founding as a part of the Athenian Trilogy

1841: NKUA at the neoclassical Central Building

One of the most iconic places of remembrance of Athens





the Athenian Trilogy

Vision

- High quality education and research
- Constant engagement to innovation and creativity
- Active in scientific, social and cultural events
- Worldwide promotion of historical and contemporary Greek culture



Policies of NKUA

for:

- Language
- Publications
- Academic ethics and bioethics
- · Persons with disabilities
- Environment
- Gender equality
- Benefits and assistance for disadvantaged social student groups



"....to actively realize coequal access to academic studies, through built environmental modifications, advanced Assistive Technologies and access services.

The main entity to achieve the targets of this policy is the Accessibility Unit for Students with Disabilities."



Research

European, international and national funds
5.000 to 8.000 full-time or part-time researchers
More than 3.200 active projects



International relations

- 78 active Agreements with Universities/Institutions from 34 countries worldwide
- Additional agreements with 18 of the partner Universities for students' mobility or agreements between spesific Schools/Departments
- ERASMUS+ Program



Rankings			
Ranking table	World rank	National rank	
Webometrics "Top Universities by Top Google Scholar Citations"	86	1	
SCImago Institutions Rankings (SIR) – Societal Rank	137 (44 in EU)	1	
Webometrics Ranking Web of Universities (January, 2021)	180	1	
«Performance Ranking of Scientific Papers for World Universities», National Taiwan University (2020)	206	1	
CWUR (Center for World University Rankings) (2020-2021)	267	1	
Hard			

University profile (1/2)

Studies and Services:

- Undergraduate programs: 43
- Postgraduate programs: 205
- e-learning programs: 415
- University Research Institutes: 5
- University Hospitals: 3
- University Laboratories: 243
- Libraries: 11 (9 School libraries and 2 libraries belonging to the Students' Union)
- Museums: History Museum of NKUA, Historical Archive of NKUA and 13 thematic museums

University profile (2/2)

- Faculty and Staff
 - Professors (all ranks): 1.653
 - Research associates and other teaching, laboratory and technical staff: 483
 - Administrative staff: 1.078
- Students
 - 45.104 undergraduates
 - 15.473 graduate students at Master level
 - 8.679 Ph.D. candidates
- International Students
 - 7.014 Undergraduates
 - 381 Graduate Students at Master level
 - 202 Ph.D.candidates
- Erasmus+ Student Mobility (2018-2019)
 - 354 Incoming Students
 - 755 Outgoing Students

Academic Schools of NKUA

- School of Agricultural Development, Nutrition and Sustainability
- School of Economics and Political Sciences
- School of Education
- Scholl of Health Sciences
- School of Law
- School of Philosophy
- School of Physical Education and Sport Science
- School of Science
- School of Theology

Academic Departments (1/6)

School of Economics and Political Sciences

- Department of Economics
- Department of Turkish Studies and Modern Asian Studies
- Department of Political Science and Public Administration
- Department of Communication and Media Studies
- Department of Sociology
- Department of Business Administration
- Department of Ports Management
- Department of Digital Art and Cinema

Academic Departments (2/6)		
 School of Health Sciences 		
 Department of Dentistry Department of Pharmacy Department of Nursing Department of Medicine School of Physical Education and Sport Science Department of Physical Education and Sport Science 		

Academic Departments (3/6)

School of Philosophy

- Department of Philosophy, Pedagogy and Psychology
- Department of Philology
- Department of History and Archaeology
- Department of Philosophy
- Department of Psychology
- Department of Educational Studies
- Department of German Language and Literature
- Department of Spanish Language and Literature
- Department of Russian Language and Literature and Slavic Studies
- Department of Italian Language and Literature
- Department of French Language and Literature
- Department of English Language and Literature
- Department of Music Studies

Department of Theatre Studies

Academic Departments (4/6)

School of Science

- Department of Biology
- Department of History and Philosophy of Science
- Department of Mathematics
- Department of Geology and Geoenvironment
- Department of Informatics and Telecommunications
- Department of Physics
- Department of Chemistry
- Department of Aerospace Science and Technology
- Department of Digital Industry Technologies

Academic Departments (5/6)

- School of Law
 - Department of Law

School of Theology

- Department of Theology
- Faculty of Social Theology and the Study of Religion

Academic Departments (6/6)

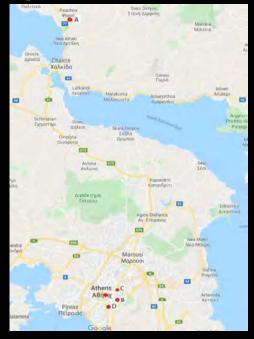
School of Education

- Department of Early Childhood Education
- Department of Primary Education
- School of Agricultural Development, Nutrition and Sustainability
 - Department of Agricultural Development, Agrofood and Management of Natural Resources



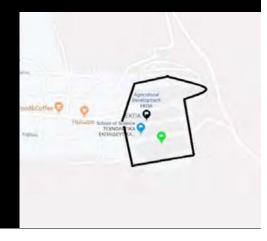
NKUA campuses

- A: Psachna, Evia
- B: Zografou, Athens
- C: Goudi, Athens
- D: Dafni, Athens
- E: Centre of Athens



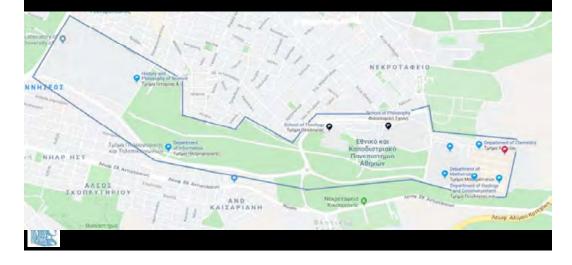
NKUA at Psachna, Evia island

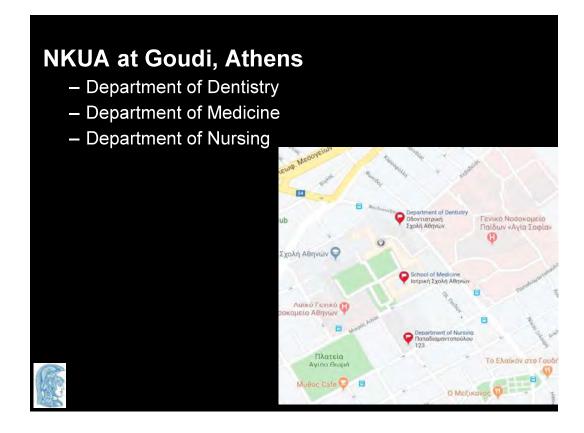
- Departments of School of Science
- School of Agricultural Development, Nutrition and Sustainability
- Departments of School of Economics and Political Sciences

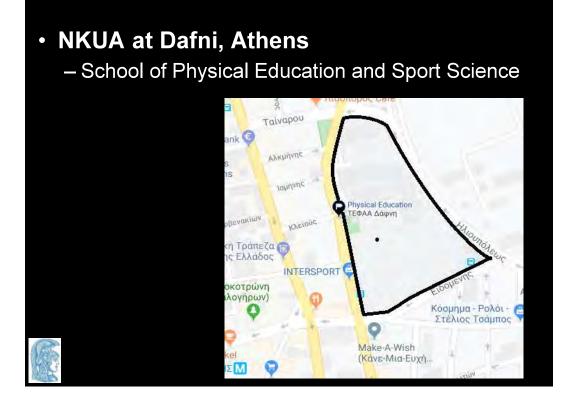


NKUA main campus at Zografou, Athens

- School of Theology
- School of Philosophy
- Departments of School of Science
- Department of Pharmacy



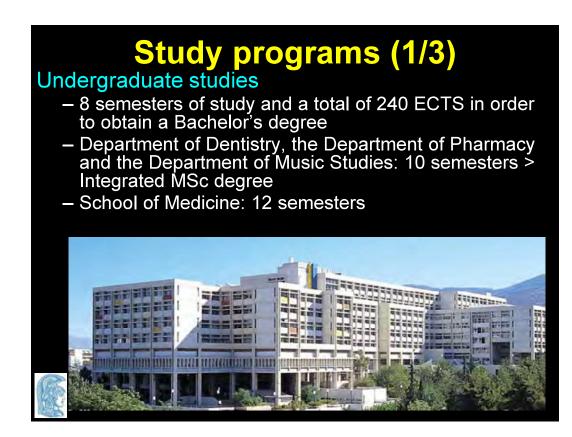






Stakes of academic structure

- 2019-2020: were founded 10 new departments
- Significant changes in size and spatial distribution of NKUA
- Difficulties in organizing the support of students with disabilities
- Poor ratio between academic staff and students in many Departments
- Difficulties in involving the academic staff in the support of the students with disabilities



Study programs (2/3)

Postgraduate Studies

- Leading to a Master's degree
 - 154 departmental programs
 - 15 interdepartmental programs
 - 25 inter-institutional programs
 - 6 interstate programs
 - 2 programs in the framework of Erasmus Mundus Joint Master Degree
 - 2 European programs
 - Duration: 2-6 semesters each 30 ECTS
- Leading to a doctoral degree
 - Minimum duration: 3 years

Postdoctoral studies and research



- Distance learning
- How to modify laboratory and clinical courses
- How to continue research activities
- Access to Libraries and their collections
- Student and staff's psychology



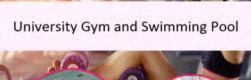
Facilities and Services (1/17)

Counselling Services	Support services	Studying and Leisure facilities
Student Ombudsman	Accessibility Unit for Students with Disabilities	9 School Libraries and 2 Libraries at the Students' Union
Psychosocial Intervention Unit	Student Support Fund	Students' Union
Advisory Office - School of Theology	Students' Hall of residence	Computer and Multimedia Center
Advisory Office - Department of Primary Education	Student Food services	Foreign Languages Teaching Center
Community Mental Health Center	Medical care	Modern Greek Language Teaching Center
Coeval Counselling Center	Scholarships - Awards	University Gym and Sports Center
10306 - Hotline for Covid-19 psychological support	Job-seeking assistance	Student Cultural Society

Facilities and Services (2/17)

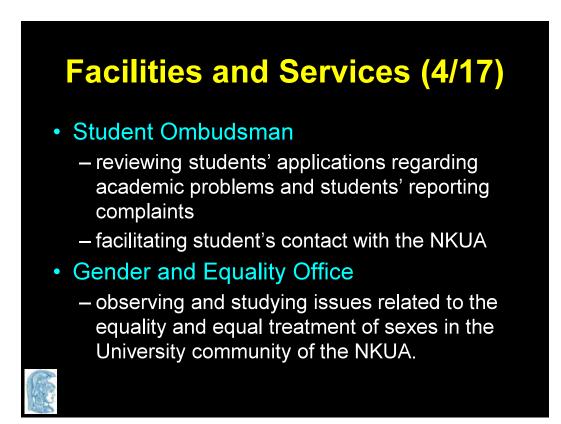
University Club

- Food supply
- Health care
- Gym
- Students' Relief Fund
- Cultural society









Facilities and Services (5/17)

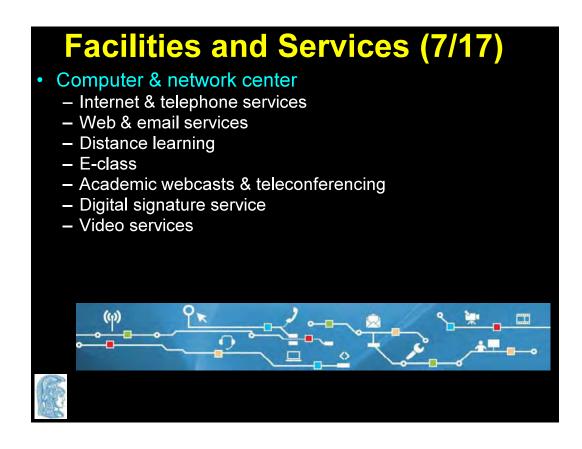
Library and Information Center

- 9 central libraries, one for each School
- More than 1.000.000 items (books, periodicals, maps, cd-roms, etc.)
- In cooperation with Libraries, such as the British Library Document Supply Center and SUBITO
- Study rooms for Students with Disabilities
- PERGAMOS digital inventory











Facilities and Services (9/17)

Foreign Languages Teaching Center

- Established in 1931 as part of the Students' Union
- 1994: fully independent academic unit
- 2019-20: 2.525 students, 24 languages





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Facilities and Services (12/17)

• University Hospitals

- ARETAIEIO, AIGINITEIO, EYGENIDIO
- Specialized health services
- Medical education and clinical research

University Laboratories

- 243 in relevant Schools and Departments
- educational and research
 purposes





Facilities and Services (13/17)

Energy Policy and Development Center

- Environmental issues
- Housed in the only bioclimatic building of the NKUA
- Forecast and Prognostic Center
 - Cosmic Rays Measurement Station
 - Seismicity of the Greek area
 - Wave Forecast
 - Weather Forecast





"Maraslean" Teaching Center of Primary Education







Facilities and Services (17/17)

Kapnikarea

- Byzantine Church of the «Presentation of Virgin Mary» and Saint Barbara
- 1932: granted to the NKUA, directly linked to the School of Theology



Museums (1/14)

Museum of Anatomy -Collection of George Papanikolaou





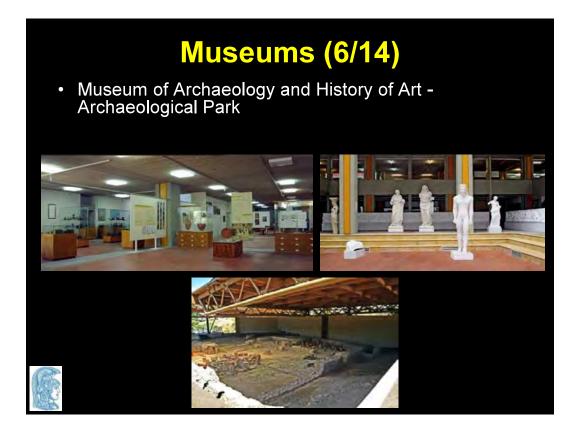


Museums (4/14)

Museum of Pharmacology









Museums (8/14)

• Museum of Biblical and Christian Archaeology



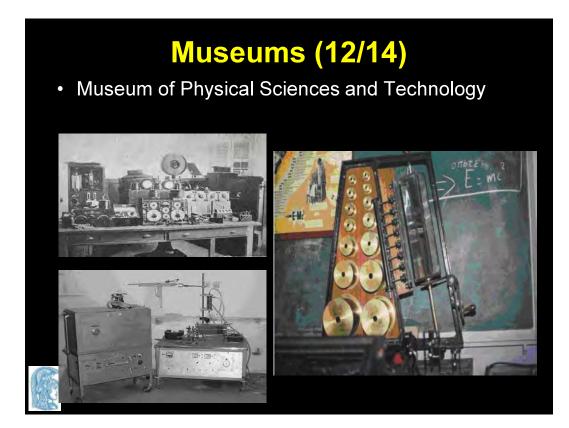
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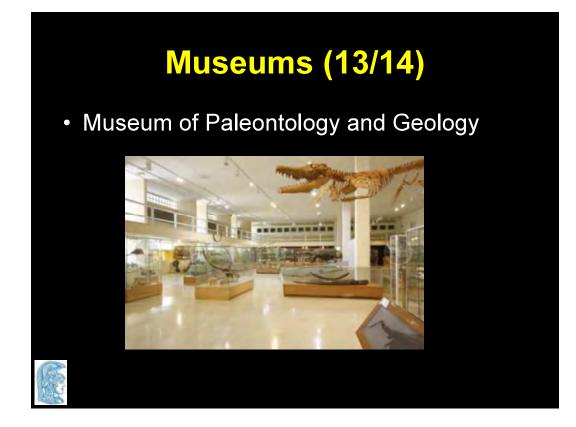


Museums (11/14)

Museum of Mineralogy and Petrology







Museums (14/14)

• History Museum of NKUA



More in the booklets of NKUA

in 15 languages:

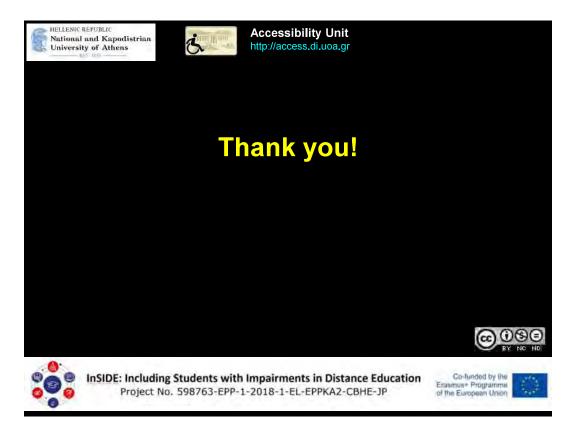
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HELLENIC REPUBLI National and Kapodistrian University of Athens



Accessibility Unit http://access.di.uoa.gr

A.4.1.2 training in Greece on the operation of the Accessibility Office for Students with Disabilities 8-11 and 14-17 June 2021, Athens

Legislation for Students with Disabilities in Greek Higher Education Institutions

Georgios Kouroupetroglou koupe@di.uoa.gr



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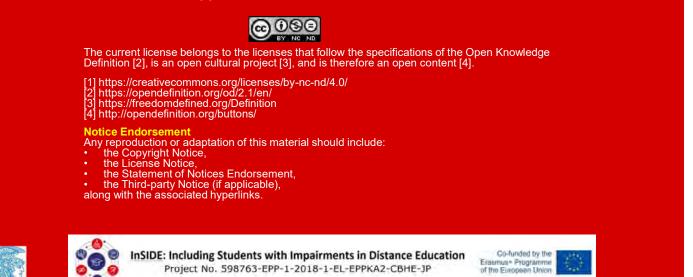


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Legislation for Students with Disabilities in Greek Higher Education Institutions (HEI)

- SwD entry in HEI
- SwD Transfers
- HEI obligation for SwD
- Codification
- Miscellaneous relevant provisions

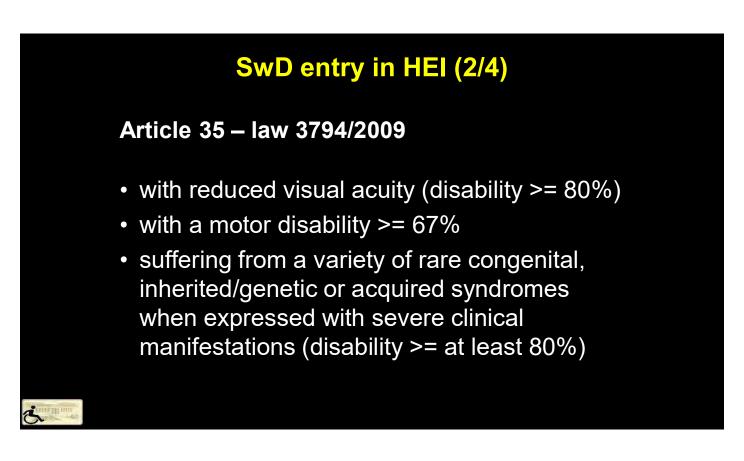
SwD entry in HEI (1/4)

Article 35 - law 3794/2009

Up to 5% of the number of admissions* to each HEI Department are admitted without examinations by students suffering from the following categories of serious illnesses, based on the Certificates of Disease Assessment issued by the Special Seven-member Hospital Committees:

* yearly after national exams

i



SwD entry in HEI (3/4)

Article 35 - law 3794/2009

这

- patients with congenital haemolytic anemia undergoing transfusions or having severe clinical manifestations conferring a disability of 67% or more (Mediterranean anemia, Sickle cell anemia, Microleukemic anemia, Multiple transfusion anemia)
- patients with severe inherited/genetic angioedema with laboratory confirmed disability >= 67%

SwD entry in HEI (4/4)

Article 35 - law 3794/2009

- patients with benign brain bridge volume with a disability >= 67%
- suffering from aneurysm rupture with hemorrhage and hydrocephalus with a disability >= 67%

SwD Transfers

Law 4332/2015

i

The right to relocate to the county where the city belongs, which the parent or guardian declares as a permanent home, or to the city that is likely to receive medical care, according to a public hospital certificate, is granted to all students who:

- have a disability (physical or mental) >= 67%
- suffer from serious illnesses (as defined in the law on non-examinations admission to HEIs)
- have donated an organ or bone marrow

History of HEIs Obligations for SwD

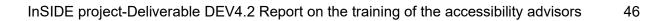
- Law 3549/2007-Article 12: In each Academic Department is provided by the Internal Regulations of operation of the relevant HEI the establishment and operation of a student support service in order to provide counselling services to them for the smooth transition from secondary to tertiary education, support for students with disabilities or students who face difficulties for the successful completion of their studies.
- Law 4009/2011-Article 52: The Organization of each HEI provides for the establishment and operation of a single or independent student support service per faculty, in order to provide counselling services to them for their smooth integration into higher education, information on the overall operation of the institution and support for students with disabilities or students who have difficulty completing their studies successfully.

Law 4047/2012: United Nations Convention on the Rights of Persons with Disabilities (2008)

• Article 24: Education

3

Par. 24.5: "States Parties shall ensure that persons with disabilities are able to access general higher education, vocational training, adult education and lifelong learning, without discrimination and on an equal basis with others. For this reason, States Parties shall ensure that persons with disabilities are provided with reasonable accommodation. "



HEIs Obligations for SwD (1/3)

Provisions of Law 4485/2017 (Government Gazette A '114) for SwD

Article 7 Organism

The organization of a HEI regulates the setting up and regulation of issues related to the supervision, administration, structure and operation of the Support and Accessibility Ensuring Service for students and staff with disabilities.

Article 8 Rules of Procedure

The Rules of Procedure shall regulate the internal functioning of the relevant HEI and in particular following:

The procedures for granting social benefits to students, the rules of operation of the relevant services of the HEI, such as healthcare, housing and nutrition services, as well as issues related to the support of students with disabilities and / or special educational needs and staff with disabilities.



HEIs Obligations for SwD (2/3)

Provisions of Law 4485/2017 (Government Gazette A '114) for SwD

Article 13 Senate

The Senate shall ensure that measures are taken to ensure access to the facilities of the Foundation for Persons with Disabilities, as well as the accessibility of students with disabilities and / or special educational needs in teaching and the proposed textbooks of the three studies cycles.

• Article 34 Selection, rights and obligations of postgraduate students

HEIs are required to provide postgraduate students with disabilities and / or special educational needs access to the proposed textbooks and teaching.

HEIs Obligations for SwD (3/3)

Provisions of Law 4485/2017 (Government Gazette A '114) for SwD

Article 48 Training and Lifelong Learning Center

Higher Education Training and Lifelong Learning Centers can organize lifelong learning programs with distance learning methods, taking into account the needs of persons with disabilities and / or special educational needs and ensuring the online accessibility of the programs to these people as well.



CODE	
11	SUFFERERS FROM MALIGNANT NEOPLASTIC DISEASES (LEUKEMIA, LYMPHOMAS, SOLID TUMOURS WITH PERSONALIZED DECISION OF THE EXAMINATION COMMITTEE)
12	SUFFERERS FROM BUDD-CHIARI SYNDROME
13	SUFFERERS FROM FABRY DISEASE
14	SUFFERERS FROM CYSTIC FIBROSIS (IN PANCREAS, LUNGS)
15	SUFFERERS FROM MULTIPLE SCLEROSIS
16	SUFFERERS FROM MYASTHENIA GRAVIS THERAPEUTICALLY TREATED WITH MEDICATION
17	SUFFERERS FROM CHRONIC KIDNEY DISEASES SUBMITTED TO HEMODIALYSIS OR PERITONEAL DIALYSIS
18	SUFFERERS FROM BLEEDING DISORDER – HEMOPHILIA AND TREATED WITH COAGULATION FACTORS
19	PATIENTS WHO HAVE BEEN SUBMITED IN BONE MARROW TRANSPLANTATION
20	PATIENTS WHO HAVE BEEN SUBMITED IN CORNEA TRANSPLANTATION

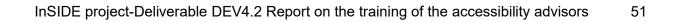
CODE		
21	PATIENTS WHO HAVE BEEN SUBMITED IN HEART TRANSPLANTATION	
22	PATIENTS WHO HAVE BEEN SUBMITED IN LIVER TRANSPLANTATION	
23	PATIENTS WHO HAVE BEEN SUBMITED IN LUNGS TRANSPLANTATION	
24	PATIENTS WHO HAVE BEEN SUBMITED IN KIDNEY TRANSPLANTATION	
25	PATIENTS WHO HAVE BEEN SUBMITED IN PNCREAS TRANSPLANTATION	
26	PATIENTS WHO HAVE BEEN SUBMITED IN SMALL INTESTINE TRANSPLANTATION	
27	SUFFERERS FROM TYPE 1 DIABETES (INSULIN-DEPENDENT / JUVENILE DIABETES)	
28	SUFFERERS FROM EVANS SYNDROME	
29	MULTI-TRANSFUSION SUFFERERS FROM THALASSEMIA	
30	DISABLED PEOPLE WITH A DISABILITY PERCENTAGE OF AT LEAST 67%	

CODE	
31	SUFFERERS FROM PHENYLKETONURIA
32	SUFFERERS FROM ASSOCIATED THROMBOPHILIA SUBMITED IN LIFELONG ANTICOAGULATION TREATMENT
33	SUFFERERS FROM ARRHYTHMOGENIC RIGTH VENTRICULAR CARDIOMYOPATHY WITH IMPLANTED CARDIOVERTER-DEFIBRILLATOR
34	SUFFERERS FROM GAUCHER DISEASE
35	SUFFERERS FROM COMPLEX ASSOCIATED HEART DISEASES THAT HAVE BEEN SURGICALLY OPERATED OR NOT WITH PULMONARY HYPERTENSION HIGHER THAN 50mmHg
36	SUFFERERS FROM SINGLE VENTRICLE
37	SUFFERERS FROM TRUNCUS ARTERIOSUS
38	SUFFERERS FROM ANY TYPE OF MYOCARDIAL DISEASE WHICH CAUSE PERMANENT HEART FAILURE (EJECTION FRACTION < 35%), DOCUMENTED BY SPECIALIZED HOSPITAL ECHOCARDIOLOGY UNITS AND CONFIRMED IN OPTICAL MAGNETIC INDUCTION TOMOGRAPHY OF THE HEART
39	SUFFERERS FROM HYPERTROPHIC CARDIOMYOPATHY
40	SUFFERERS FROM PULMONARY ARTERIAL HYPERTENSION

CODE	
41	SUFFERERS FROM SEVERE PULMONARY FIBROSIS OF ANY JUSTIFICATION
42	SUFFERERS FROM BRUGADA SYNDROME
43	SUFFERERS FROM IDIOPATHIC VENTRICULAR TACHYCARDIA WITH IMPLANTATION OF CARDIOVERTER- DEFIBRILLATOR
44	SUFFERERS FROM GLYKOGONIASIS
45	SUFFERERS FROM LIVER CIRRHOSIS
46	SUFFERERS FROM PORTAL HYPERTENSION DUE TO PORTAL VEIN HYPOPLASIA
47	SUFFERERS FROM CROHN DISEASE
48	SUFFERERS FROM WILSON DISEASE
49	SUFFERERS FROM MULTIPLE NEUROFIBROMATOSIS (VON RECKLINGHAUSEN'S DISEASE)
50	SUFFERERS FROM MULTIPLE MYELOMA

CODES51SUFFERERS FROM SARCOIDOSIS UNDER MAJOR IMMUNOSUPPRESSIVE THERAPY DUE TO LUNG OR/AND CENTRAL NERVOUS SYSTEM ATTACK52SUFFERERS FROM AUTOIMMUNE HEPATITIS54PATIENTS WHO HAVE BEEN SUBMITED IN TOTAL LARYNGECTOMY55SUFFERERS FROM BRAIN CRANIOPHARYNGIOMA56SUFFERERS FROM SYSTEMIC LUPUS ERYTHEMATOSUS UNDER MAJOR IMMUNOSUPPRESSIVE THERAPY DUE TO LUNG OR/AND CENTRAL NERVOUS SYSTEM OR/AND SEROUS MEMBRANE OR/AND BLOOD ATTACK57SUFFERERS FROM SYSTEMIC SCLERODERMA WITH DIFFUSE CUTANEOUS INFECTION59SUFFERERS FROM ULCERATIVE COLITIS WHO RECEIVE IMMUNOSUPPRESSIVE THERAPY, OR THEY HAVE RECEIVED MAJOR IMMUNOSUPPRESSIVE THERAPY IN THE PAST AND NOW THEY CONTINUE RECEIVING A DIFFERENT MEDICATION
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59 SUFFERERS FROM ULCERATIVE COLITIS WHO RECEIVE IMMUNOSUPPRESSIVE THERAPY, OR THEY HAVE RECEIVED MAJOR IMMUNOSUPPRESSIVE THERAPY IN THE PAST AND NOW THEY CONTINUE RECEIVING
RECEIVED MAJOR IMMUNOSUPPRESSIVE THERAPY IN THE PAST AND NOW THEY CONTINUE RECEIVING

CODES 60 PATIENTS WITH ULCERATIVE COLITIS WHO HAVE BEEN SUBMITTED TO A TOTAL PROCTOCOLECTOMY AND PERMANENT ILEOSTOMY OR SUBTOTAL COLECTOMY WITH A DIRECT ILEOCOLIC ANASTOMOSIS OR BY CREATING ILEOANAL POUCH 61 SUFFERERS FROM THROMBOCYTOPENIA 67 SUFFERERS FROM AUTOIMMUNE HEMOLYTIC ANEMIA UNDER MAJOR IMMUNOSUPPRESSIVE THERAPY 62 SUFFERERS FROM KLIPPEL-FEIL SYNDROME 63 SUFFERERS FROM JUVENILE IDIOPATHIC ARTHRITIS WITH CONTINUOUS ACTIVITY AFTER THE AGE OF 14 YEARS OLD DESPITE THE BIOLOGICAL TREATMENT 64 SUFFERERS FROM ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) UNDER ANTIRETROVIRAL THERAPY 65 SUFFERERS FROM PAROXYSMAL NOCTURNAL HEMOGLOBINURIA WITH CRONICAL NEED OF REGULAR TRANSFUSIONS 66 SUFFERERS FROM IDIOPATHIC THROMBOCYTOPENIC PURPURA UNDER MAJOR IMMUNOSUPPRESSIVE THERAPY
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66 SUFFERERS FROM IDIOPATHIC THROMBOCYTOPENIC PURPURA UNDER MAJOR IMMUNOSUPPRESSIVE



CODE	
68	SUFFERERS FROM VARIOUS RARE CONGENITAL OR ACQUIRED SYNDROMES – DISEASES, WHEN EXPRESSED WITH SEVERE CLINICAL MANIFESTATIONS ATTRIBUTING A DISABILITY RATE OF AT LEAST 80%, EXAMINED ON A CASE-PER-CASE BASIS
69	SUFFERERS FROM KLIPPEL-TRENAUNAY-WEBER SYNDROME
70	SUFFERERS FROM MUCOPOLYSACCHARIDOSIS TYPE 6
71	SUFFERERS FROM DERMATOMYOSITIS UNDER MAJOR IMMUNOSUPPRESSIVE THERAPY
72	SUFFERERS FROM MUCKLE-WELLS SYNDROME (SYMPTOMATIC DISEASE WITH CONVENTIONAL CLINICAL PICTURE WITH DIAGNOSIS CONFIRMED BY A PEDIATRICIAN WITH SPECIAL EXPERIENCE IN RHEUMATIC DISEASES, GENETIC CONFIRMATION OF MUTATION IN CRYOPYRIN (NALP3) IS DESIRED, NOT NECESSARY, THEY DO NOT EXIST IN EVERY PATIENT, TREATMENT WITH BIOLOGICAL FACTORS E.G. INTERLEUKIN INHIBITORS IL-1)
73	SUFFERERS FROM SEVERE HEREDITARY ANGIOEDEMA LABORATORY CONFIRMED WITH A MINIMUM DESABILITY PERCENTAGE OF 67%
74	SUFFERERS FROM BENIGN BRAIN TUMOUR WITH A MINIMUM DESABILITY PERCENTAGE OF 67%

CODE		
75	SUFFERERS FROM ANEURYSM RUPTURE WITH HEMORRHAGE AND HYDROCEPHALUS WITH A MINIMUM DESABILITY PERCENTAGE OF 67%	
CODE		
001	Learning Difficulties	
002	Attention Deficit Hyperactivity Disorder	
003	Different Neurodevelopmental Disorders	
004	Mental Disorders	

Electronic Accessibility

Constitution of Greece, article 5^A(2):

"Everyone has the right to participate in the Information Society. It is the responsibility of the State to facilitate access to information transmitted electronically and to its production, exchange and dissemination".

Law 4488/2017

Article 64 Access to the physical, structured and electronic environment

2. Governments and authorities within their competence shall ensure that persons with disabilities have equal access to the electronic environment, in particular electronic communications, information and services, including the media and internet services.



Law 4488/2017

Article 67 Non-discrimination in the media and audiovisual activities

2. Media and communication service providers, including the internet, are required to utilize new technologies, such as web pages, subtitling, audio description, sign language interpretation, to ensure that people with disabilities have access to them.

Law 4591/2019 and Low 4727/2020

Adoption into the Hellenic legislation of Directive (EU) 2016/2102 of the European Parliament and of the Council on the accessibility of websites and mobile applications of public sector bodies

Conformance with the European Standard EN 301 549 V2.1.2 (2018-08): Accessibility requirements for ICT products and services

Equivalent to conformance with WCAG 2.1 at level AA

Ministerial Decision 98546/2007

Publishers are required to submit to the HEI electronically the records of the works requested to be reproduced in accessible formats, such as braille or Moon writing, DAISY, talking books, etc.

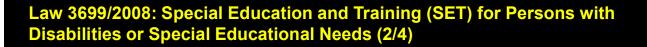
Law 4672/2020

Adoption of Directive (EU) 2017/1564 of the European Parliament and of the Council of 13 September 2017 on certain permitted uses of certain works and other subject matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print-disabled and amending Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society.

Law 3699/2008: Special Education and Training (SET) for Persons with Disabilities or Special Educational Needs (1/4)

Article 2 Organization and objectives of the SET

 The application of the "Design for All" principles to ensure accessibility for persons with disabilities is mandatory both in the design of training programs and educational materials and in the selection of all types of equipment (conventional and electronic), building infrastructures and developing all Special Education and Training School Units (SETSU) and Centers for Diagnosis and Support of Special Educational Needs (CDSSEN) policies and procedures.



Article 2 Organization and objectives of the SET

6. The above objectives are achieved by:

d) the implementation of specific training and rehabilitation programs, the adaptation of educational and teaching materials, the use of special equipment including electronic equipment and software, and the provision of all sorts of facilities and ergonomic arrangements by the SETSUs and the CDSSENs.



Law 3699/2008: Special Education and Training (SET) for Persons with Disabilities or Special Educational Needs (2/4)

Article 2 Organization and objectives of the SET

7. By decision of the Minister of National Education and Religions, two advisory committees are established at the Ministry of National Education, one for monitoring the **physical accessibility** of persons with disabilities in the educational and administrative structures of the Ministry of National Education and one for monitoring **accessibility of educational materials and websites**. These committees include - among others - representatives of the National Confederation of Persons with Disabilities. The same decision determines their operating rules.



Law 3699/2008: Special Education and Training (SET) for Persons with Disabilities or Special Educational Needs (4/4)

Article 4 Diagnostic, Evaluative and Supporting Bodies (CDSSEN)

CDSSEN has the following responsibilities:

e) Determining the type of educational aids and technical instruments which facilitate access to the place and learning process that the child needs at school or at home and which do not require medical advice and prescription.

Law 4780/2021: National Accessibility Authority

Article 2:

The Authority has the following responsibilities, in particular:

(a) Monitor the implementation of international, national and national framework for accessibility

March 2021: Strategic Plan for Equal Access to Education for Persons with Disabilities in Higher Education

Ministry of Education

- a) the gradual improvement of universal accessibility in all Universities (physical accessibility, electronic accessibility, accessibility of educational and supervisory material and teaching methods, making reasonable adjustments, creating accessible websites, creating accessible administrative services, public service).
- b) the necessary institutional guarantees of equal treatment of students , faculty members and staff of all categories with disabilities with the main goal of their smooth academic and professional development;

March 2021: Strategic Plan for Equal Access to Education for Persons with Disabilities in Higher Education

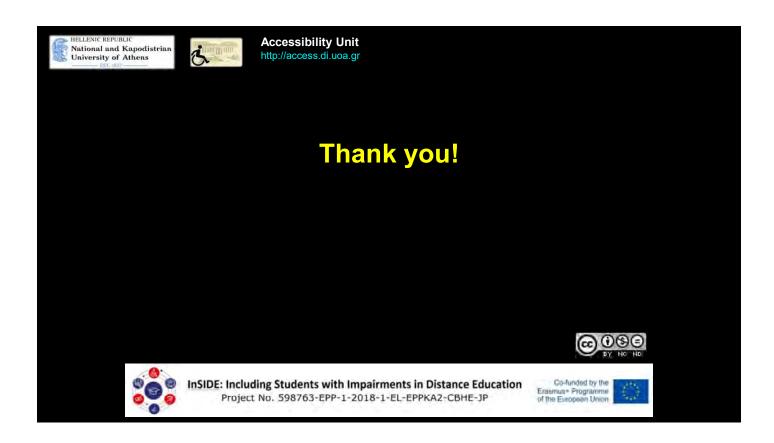
Ministry of Education

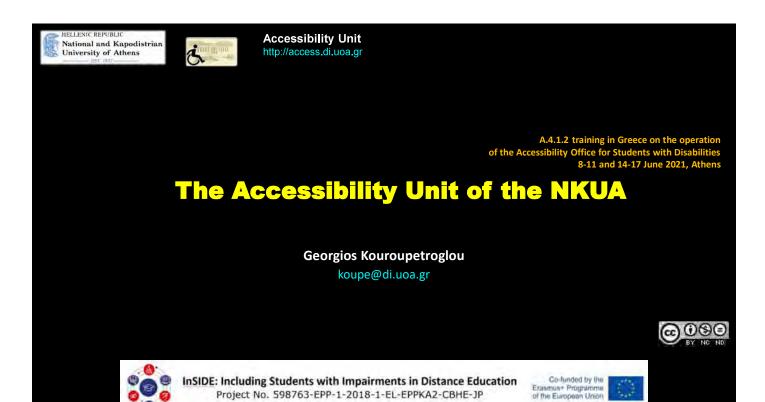
c) the establishment of an "Accessibility Committee & Support for Persons with Disabilities" in each HEI. The committee will be supported by a corresponding administrative unit within each HEI (relevant office or department) and will be responsible for proposing an integrated framework of general support for people with disabilities of the relevant Institution

d) the necessary actions for the future integration of students with disabilities into active life and the labor market;

e) the introduction of "VOLUNTEERING" in the context of supporting students and staff with disabilities within HEIs, as well as general awareness actions of the entire university community.



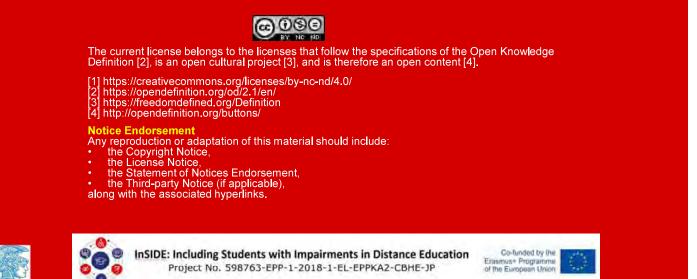




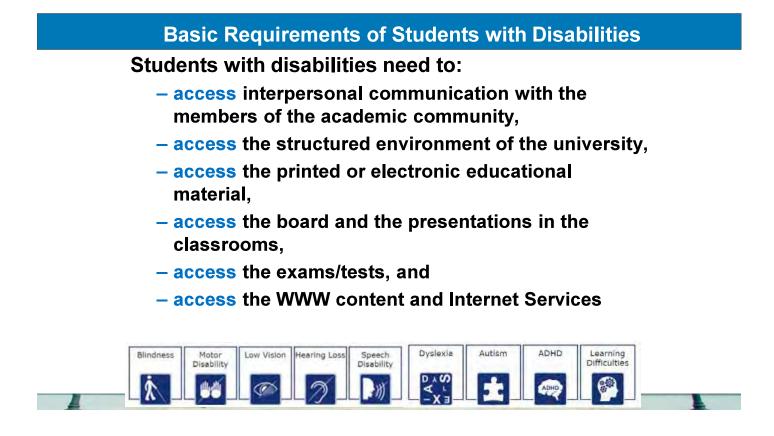
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Accessibility Services Provision

Dimensions:

- Legal / Legislative
- Economic: cost & benefits
- Social / Ethical
- Services and Support Technologies



The Model of Services of the Accessibility Unit for Students with Disabilities, NKUA

Aims to fulfill the basic requirements of students with disabilities

Based on the principles of:

- Universal Design / Design-for-All
- Inclusive Education
- Universal Design for Learning (UDL)



Mission of the Accessibility Unit for Students with Disabilities, NKUA

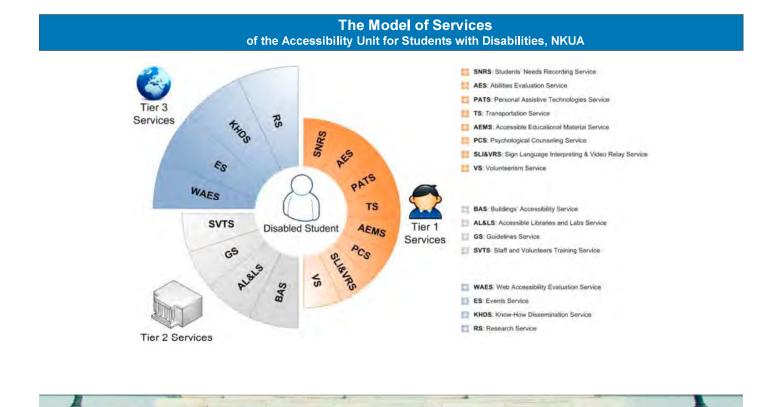
"to actively realize

coequal access to academic studies for students with different abilities and needs, through:

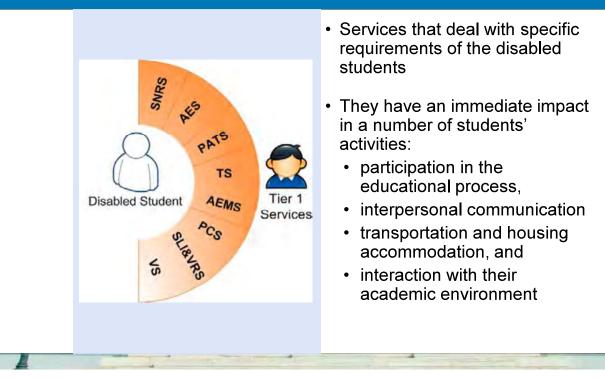
> built environmental modifications, Assistive Technologies and Access Services"

* adopted by the senate of NKUA





TIER 1: Accessibility Services Addressing Directly the Student



TIER 1: Accessibility Services Addressing Directly the Student

SNRS: Students' Needs Recording Service

- Provides a systematic and detailed registration of the disabled students' needs and the main obstacles that might arise during their studies
- available during all the years of studies and can be revisited when students' needs change
- e-connection with the general student records system **MyStudies**



TIER 1: Accessibility Services Addressing Directly the Student

AES: Abilities Evaluation Service

- Individual diagnostic assessments are conducted in order to determine main obstacles through the educational process, such as:
 - reading printed books,
 - accessing libraries,
 - navigating to university campus,
 - test taking, etc.
- The ultimate goal of the AES is to assign the services each individual student with disabilities needs

ICCESSS

TIER 1: Accessibility Services Addressing Directly the Student

PATS: Personal Assistive Technologies Service

- Offers the infrastructure and the appropriate tools needed for testing and assessing a wide variety of computer-based Assistive Technologies (AT)
- Provides one-to-one training, technical support and consulting on advanced AT



https://access.uoa.gr/ATHENA

https://access.uoa.gr/mATHENA



TIER 1: Accessibility Services Addressing Directly the Student

TS: Transportation Service

 Arranges everyday transportation to the University for those who use a wheelchair, or those with severe mobility impairments



TIER 1: Accessibility Services Addressing Directly the Student

AEMS: Accessible Educational Material Service

- Provides conversion of academic texts-books & educational material into accessible format for the print disabled students
- Production of 10 accessible formats (e.g. DAISY and ePUB)
- Supports full mathematical formulas and music notation
- Supported by a web-based integrated system
- · Connected with the EVDOXUS national text-book system



TIER 1: Accessibility Services Addressing Directly the Student

PCS: Psychological Counseling Service

- Provides individual and group psychological counseling to students with disabilities
- Disabled students may request advice on any of the following basic difficulties:
 - (i) interpersonal and social relationships (difficulties in relationships with family, the other sex, and friends),
 - (ii) academic difficulties and stress through study and test-taking period, (iii) low self-esteem,
 - (iv) anxiety and phobias,
 - (v) mood and eating disorders

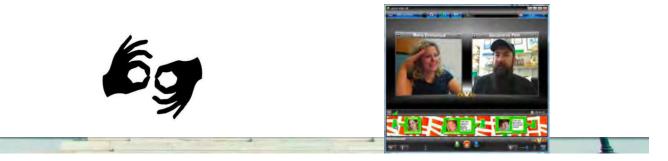


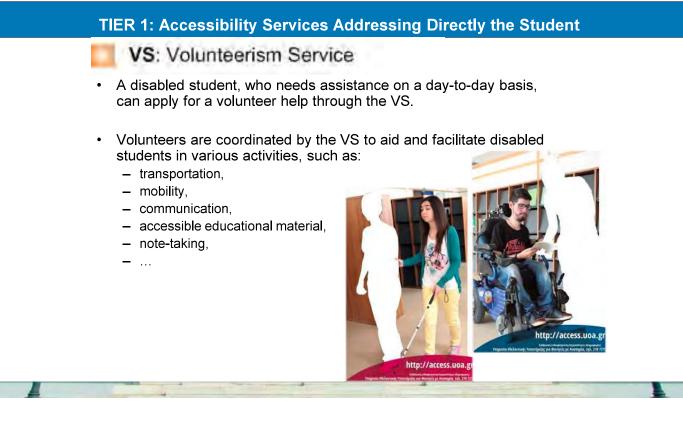


TIER 1: Accessibility Services Addressing Directly to the Student

SLI&VRS: Sign Language Interpreting & Video Relay Service

- Provides immediate remote interpersonal communication with fellow students, professors and administrative staff of the university
- Deaf students can ask for remote sign language interpreter
- The VRS service addresses students:
 - with total or partial loss of hearing,
 - dysarthria and severe speech disorders, and
 - generally those who cannot use the phone for interpersonal communication.



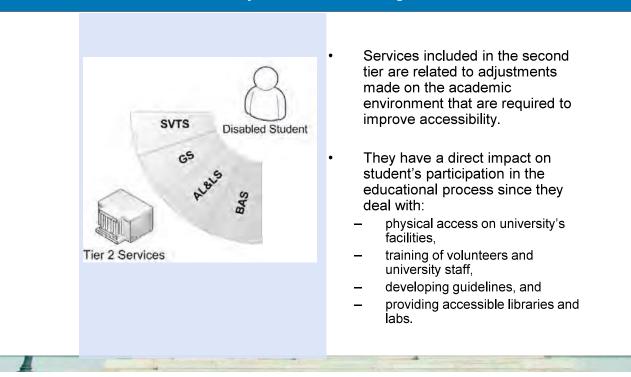


TIER 1: Accessibility Services Addressing Directly the Student

Sports for SwD

- In collaboration with the University Sports Unit
- · For students with sensory or mobility impairment
- Adapted / Tailored Sports
 - Exercise and improving fitness
 - Hellenic traditional dancing
 - Trekking (with volunteer companions)
 -





TIER 2: Accessibility Services Addressing the Student's Environment



TIER 2: Accessibility Services Addressing the Student's Environment

AL&LS: Accessible Libraries and Labs Service

 provides the specifications, installation and technical support of public workstations in university libraries and labs with AT hardware and software for students with various disabilities.

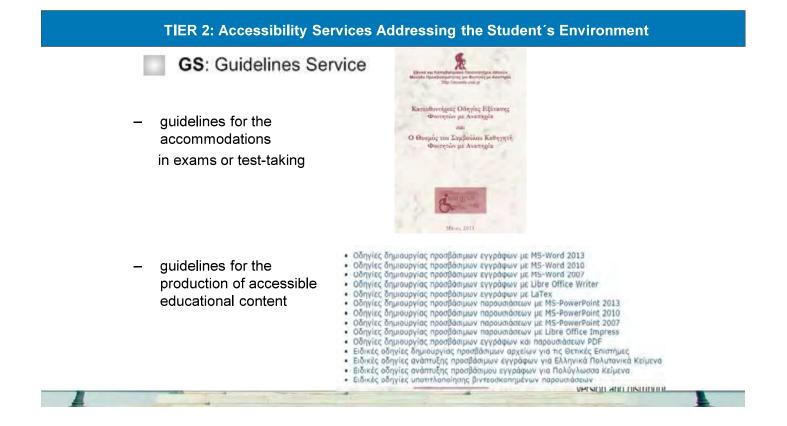


TIER 2: Accessibility Services Addressing the Student's Environment

GS: Guidelines Service

- provides guidelines and standardization on procedures and services applied on students with disabilities during their studies
- The activities of the GS include the development of:
 - guidelines for the accommodations in exams or test-taking
 - guidelines for the production of accessible educational content, and
 - standards for the services and procedures of the Accessibility Unit.





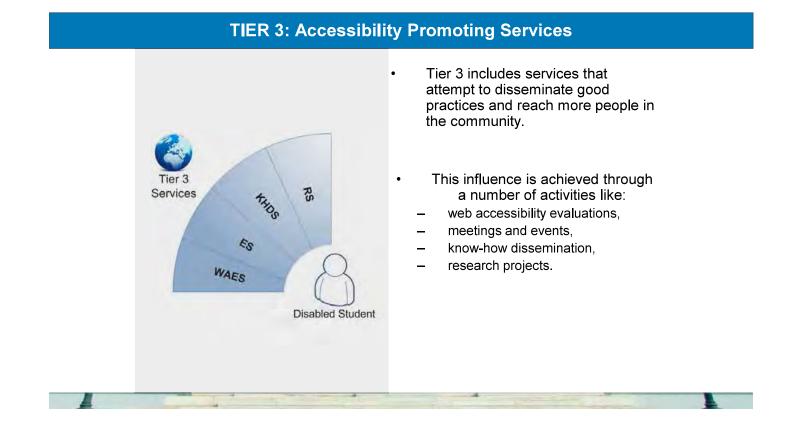
TIER 2: Accessibility Services Addressing the Student's Environment

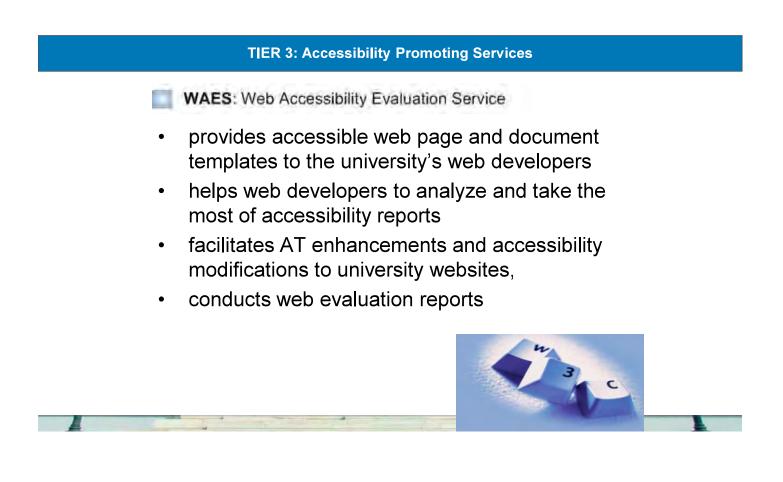
SVTS: Staff and Volunteers Training Service



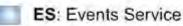
raises general staff's and professors' awareness on disability issues.







TIER 3: Accessibility Promoting Services



 Organizes social and informal events like meetings, press conferences, training camps, etc., promoting the Accessibility Services Provision Model, the Accessibility Unit and the University itself.





TIER 3: Accessibility Promoting Services



TIER 3: Accessibility Promoting Services

KHDS: Know-How Dissemination Service

- is responsible for organizing or participating in workshops, seminars, and scientific conferences in the domain of accessibility, Information and Computer Technologies, Assistive Technologies and inclusive education,
- issues leaflets, posters, and other dissemination material, useful to other institutions and organizations or similar Accessibility Units, and
- develops and maintains the Accessibility Unit's website presenting its services, the provision model, and the information on the available AT.





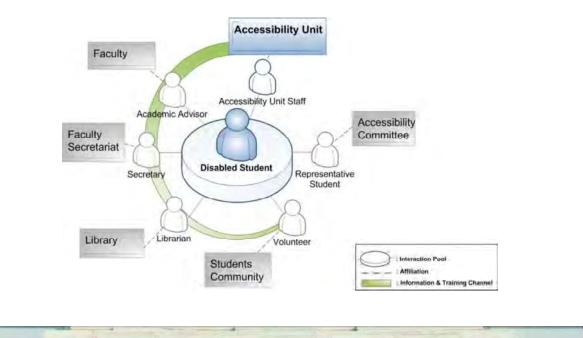


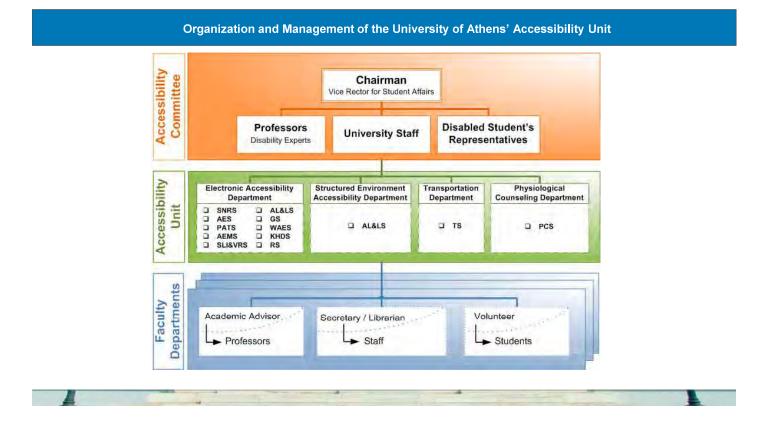
RS: Research Service

leading or participating in national or international • research projects related to facilitating equity of access to learning and teaching for students with disabilities

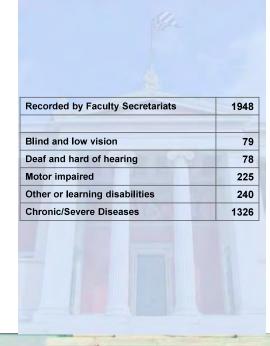


Accessibility stakeholders' interactions





Students with Disabilities, Learning difficulties and Chronic/severe Diseases NKUA



NKUA

- 43 academic departments
- 44.658 undergraduate students
- 13.257 MSc students
- 8.015 PhD students
- 1.703 professors
- 1.095 staff members

Accessibility Unit

- Head: vice rector
- Director: Executive vice president
- 9 staff members (full time)
- 3 staff members (part time)
- 4 drivers
- 580 volunteers (students)

	Department / Faculty	Total	Blidness/Low vision	Blidness/L		Deafness/Hard of Hearings	Motor	Motor Disability	Other Disability	1		Chronic / Severe diseases		Learnig Dificulties	Pervasive neurodevelopmental disordersJaufism Asperger	Pervasive neurodevelopmental disorders/autism-Asperger	Severe psychosocial da	Severe psychosocial problems
	M=mMale, F=Female		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	English Language and Literature	73	-	2		1	3	7		1	14	46			-	1		1
	Biology	75		1	1		3	1			.44	26				1000		
	French Language and Literature	13	1	1	-	1					2	8			1	-		
	German Language and Literature	12	1.1			1.00	1.00	1		1.5	6	5		1.1			-	
	Geology and Geoenvironment	12			1		2		1		4	-4			1			
	Early Childhood Education	55		6	1	5	-	5		2		35	-	1		-	Lang L	
	Communication and Modes Studios	47	1	3	1		7	3			16	16						
Students with Disabilities, Learning	Physical Education and Sport Science	89	2	1	8	5	2	1	1		48	18			1	1	- t	1
	Theatre Studies	44		1	1	1	1	4			9	27			1			
difficulties and Chronic/ Severe	Theology	45	2		3	1	1	3		2	24	9			1	0		
unneulles and enfonce severe	Medicine	150	2	2	1	1	6	8		100		69	2					
D' NUZUA	History and Archeology	84	3	2	1	2	10	7	1		27	29			+			1
Diseases NKUA	Spanish Language and Literature	6		1				2	1	1	1	3	1		1	-		
	Italian Language and Literature	8	1	-		1		-	1		3	3			0	-		
	Social Theology and the Study of Religions	30	4		1		3	3	2	1	9	7			1	1		
	Mathematics	31	1	1		1	1	1			14	6	1		1) - T	2	2
	History and Philosophy of Sciences	23		1				1	2	3	7	9			1	-		
	Music Studies	27	2	4			1	1			13	6			-			
	Law	333	16	11	2	11	9	20	40	52	51	117			2	-		2
	Nursing	42		1		1	1	1			10	28						
	Dentistry	31		-	1	1	-1	1.1			17	17			-	· · · · · ·		
	Economics	39		1	1		3	4	4	1	18	7	-			1		
	Primary Education	75	2	2	1	3	4	6	2		15	39				-	1	
	Informatics and Telecommunications	129	4		3		18	3	2		56	7	20	5	8		3	
	Political Science and Public Administration	98	6	3	1		8	3	3	3	27	42	1	1		-		
	Turkish Studies and Modern Asian Studies	13	100		1		1		1	1	2	6					1	
	Psychology	85	3	5		3	3	13			10	45	1	1	-		-	1
	Pharmacy	29			2	1	-	4			9	13	-					-
	Philology	66		2	1	2	4	5			19	30		1	1			1
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	Chemistry	28	2	1		1 1	1	2	1	1	6	10		1	2	1	1	
	Russian Languange and Literature and Slavic Studies	9	-	-				3		-	2	4			-			
	Aeospace Science and Technology	4		-				1			2		2			-		
	Ports Management	8		-	1			-			1	1		1		10.00		
	Digital Industry Technologies	3								-	2		1			-		
	Digital Art and Cinema	7				1		1				1		2	-			
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	Sociology	9			1	1		1			4					-		
	Educational Studies	12				-	-	1		1		7			1	-		
				-			-	-	-	-	-	-	-			-		-
															18	2	9	9



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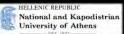
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The Accessibility Unit – of the national and Kapodistrian University of Athens









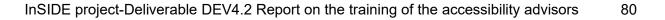


Accessibility Unit http://access.di.uoa.gr

Thank you!



InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP Co-funded by the Erawnus+ Programme of the European Union 0000



HELLENIC REPUBLIC National and Kapodistrian University of Athens



Accessibility Unit http://access.di.uoa.gr

> A.4.1.2 training in Greece on the operation of the Accessibility Office for Students with Disabilities 8-11 and 14-17 June 2021, Athens

Design for All and Universal Design for Learning

Georgios Kouroupetroglou koupe@di.uoa.gr



InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP



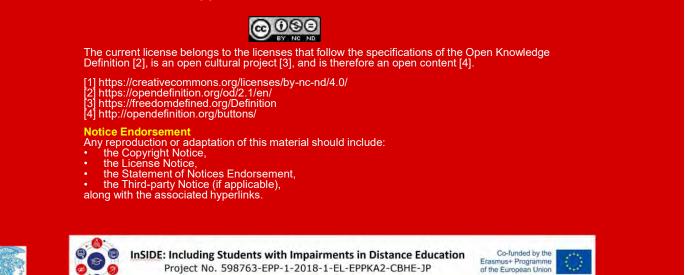
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Equal Access: Student Services - basic requirements of students with disabilities





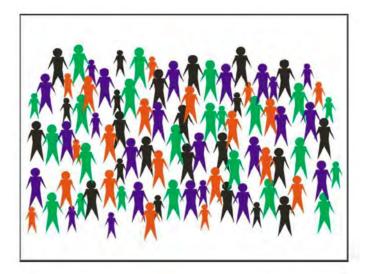
Aims to fulfill the basic requirements of students with disabilities

Based on the principles of:

- Universal Design / Design-for-All
- -Inclusive Education
- -Universal Design for Learning (UDL)

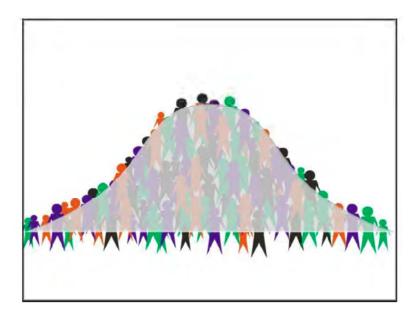


All constitute a continuum



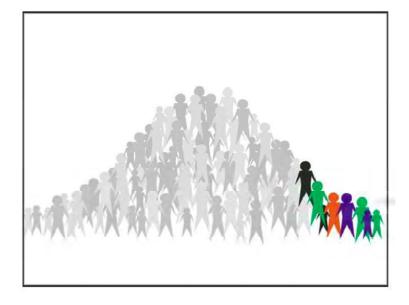


Users of a product (e.g. book, PC) form a usability curve



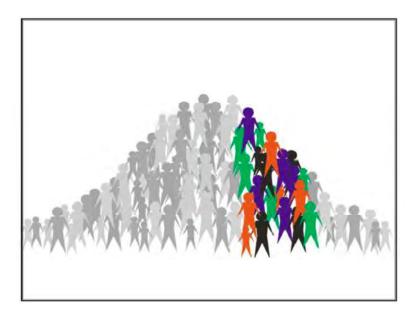


Users who have no problem using any part of the product



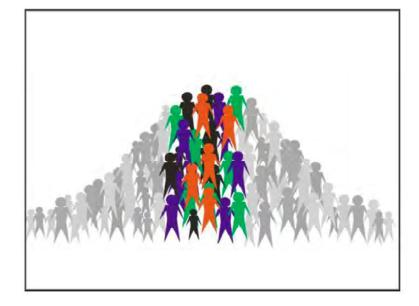


Users who only have a little difficulty using the product



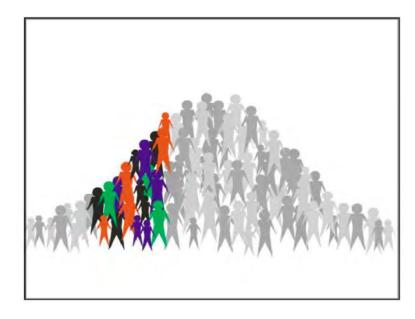


Users who have difficulty with some properties of the product but generally use it well



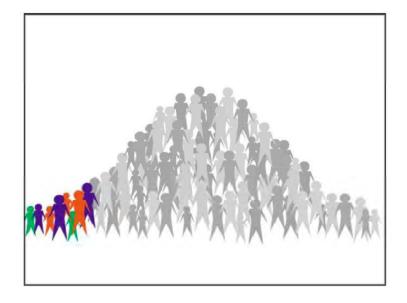


Users who find it difficult to use the product or parts of it



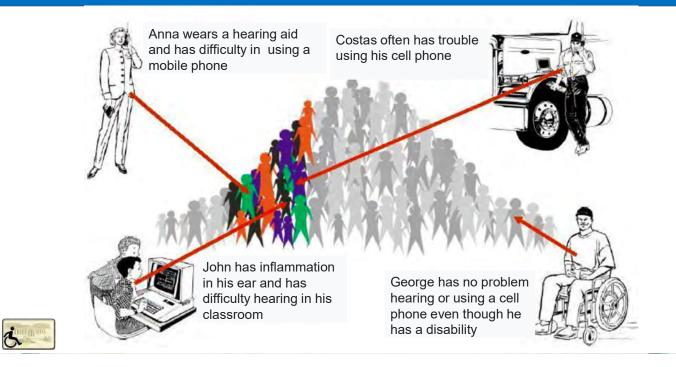


Users who can not use the product





Different causes of usability problems

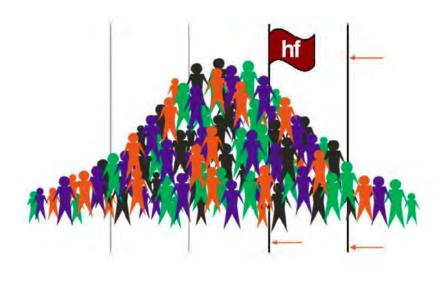


User fragmentation



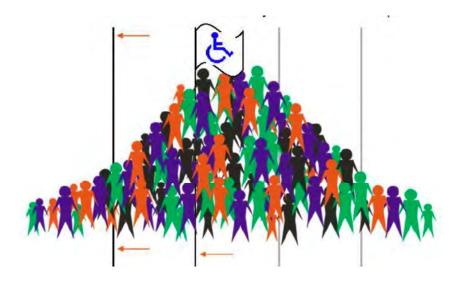


Traditionally, the science of Human Factors (HF) tries to maximize the number of people who have little or no problem using the product





Accessibility professionals try to minimize the number of users who have difficulty or can not use the product



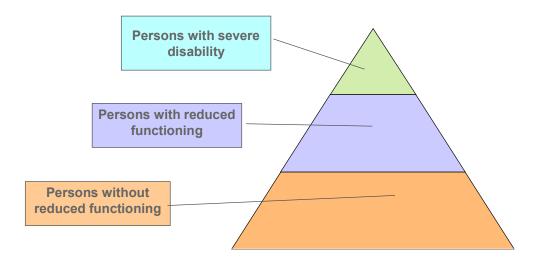


In fact users are a continuum and lines tend to unite with the best (or worst) product design



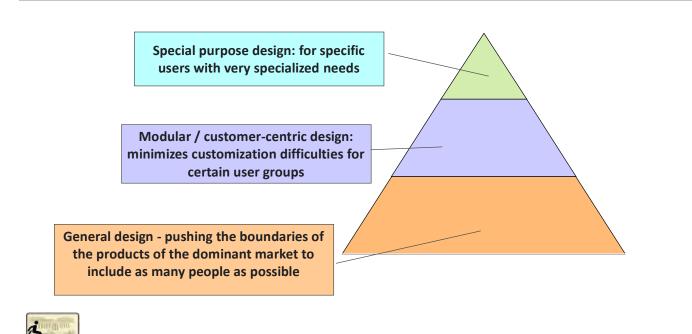


User pyramid





Design Approaches in User pyramid

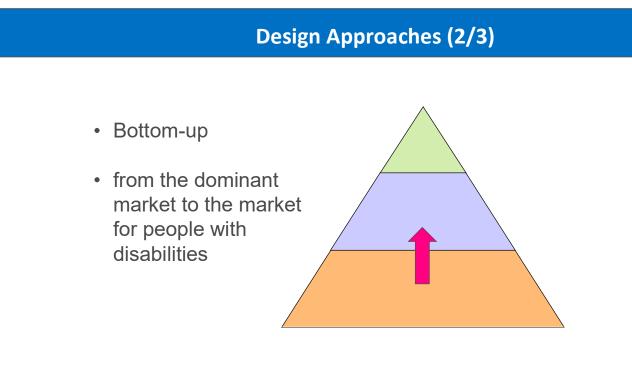


Design Approaches (1/3)

ex post: try to adapt existing technologies / products to the specifics of the disabled, the elderly, and generally those with disabilities

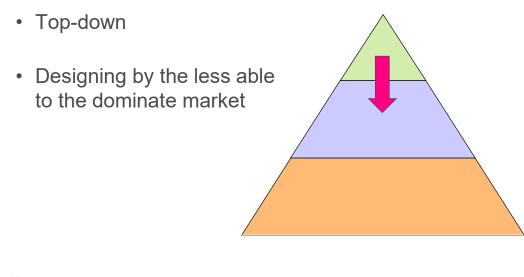
ex ante / proactively: the product design process takes into account that part of the buying public is disabled, elderly or disable







Design Approaches (3/3)





Usability

 the efficiency, effectiveness and satisfaction with which a certain set of users can accomplish a defined set of activities in a given environment (ISO9241, 1998)

It does not referred to all users



Accessibility

The ability of the user to interact in a natural way with the product or service

e.g. to reach it, to have enough power to move it, etc.



Universal Design / Design-for-All

"the conscious and systematic effort to **proactively** apply principles, methods and tools, in order to develop products and services which are **accessible and usable** by all citizens, thus avoiding the need for **a posteriori** adaptations or specialised design"

"a framework for the design of living and working spaces and products benefiting the widest possible range of people in the widest range of situations without special or separate design"



Universal Design / Design-for-All

Moving from Reactive to Pro-active

Pro-active strategies:

- Determining essential requirements;
- Following principles Universal Design;
- Communication regarding essential requirements and course design.



Universal Design / Design-for-All

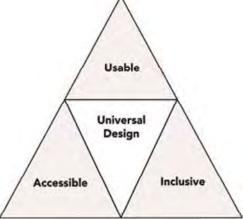
The Disability Act 2005 (USA) defines Universal Design, or UD, as:

- 1. The design and composition of an environment so that it may be accessed, understood and used
 - i. To the greatest possible extent
 - ii. In the most independent and natural manner possible
 - iii. In the widest possible range of situations
 - iv. Without the need for adaptation, modification, assistive devices or specialised solutions, by any persons of any age or size or having any particular physical, sensory, mental health or intellectual ability or disability, and
- 2. Means, in relation to electronic systems, any electronics-based process of creating products, services or systems so that they may be used by any person.



Universal Design / Design-for-All

.....is the design of products and environments that deliver student services that support teaching and learning to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design"





Universal Design / Design-for-All

- People who benefit from Universal Design / Design-for-All include those with a broad range of abilities, disabilities, ages, reading levels, learning styles, native languages, cultures, and other characteristics.
- Keep in mind that students may have learning disabilities or visual, speech, hearing, and mobility impairments. Applying Universal Design / Design-for-All minimizes the need for special accommodations for those who use your services and for future students as well.



- 1. Equitable use: the design is usable and operable to people with diverse abilities.
- **2.** Flexibility in use: the design accommodates a wide range of individual preferences and abilities.
- **3. Simple and intuitive:** use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
- 4. **Perceptible information:** the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
- 5. Tolerance for error: the design minimizes hazards and the adverse consequences of accidental or unintended actions
- 6. Low physical effort: the design can be used efficiently and comfortably, and with a minimum of fatigue.
- 7. Size and space for approach and use: the design provides appropriate size and space for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.



Principles of Universal Design / Design-for-All

1 Equitable use

The design is useful and ready to be used to people with diverse abilities.

- It provides the same means of use for all users: identical whenever possible; equivalent when not.
- It avoids segregating or stigmatizing any users.
- Provisions for privacy, security, and safety are equally available to all users.
- The design is appealing to all users.

- Provide the same means of use for all users: identical whenever possible; equivalent when not.
- Avoid segregating or stigmatizing any users.
- Provisions for privacy, security, and safety should be equally available to all users.
- Make the design appealing to all users.



Principle 1: Equitable Use

The design is useful and marketable to people with diverse abilities.







Principles of Universal Design / Design-for-All

2 Flexibility in use

The design accommodates a wide range of individual preferences and abilities.

- It provides choice in methods of use.
- It accommodates right or left handed access and use.
- It facilitates the user's accuracy and precision.
- It provides adaptability to the user's pace.

- Provide choice in methods of use.
- Accommodate right- or left-handed access and use.
- Facilitate the user's accuracy and precision.
- · Provide adaptability to the user's pace.



Principle 2: Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.



A user at a computer table. The table height can be easily adjusted to suit different user needs.



Right & left-handed scissors



Principles of Universal Design / Design-for-All

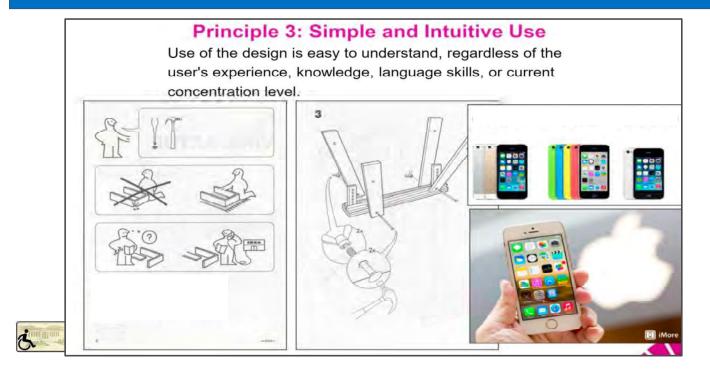
3 Simple and intuitive

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

- It eliminates unnecessary complexity.
- It is consistent with user expectations and intuition.
- It accommodates a wide range of literacy and language skills.
- It arranges information consistent with its importance.
- It provides effective prompting and feedback during and after task completion.

- Eliminate unnecessary complexity.
- · Be consistent with user expectations and intuition.
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- Arrange information consistent with its importance.
- Provide effective prompting and feedback during and after task completion.





Principles of Universal Design / Design-for-All

4 Perceptible information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

- It uses different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- It provides adequate contrast between essential information and its surroundings.
- It maximizes "legibility" of essential information.
- It differentiates elements in ways that can be described (i.e., make it easy to give instructions or directions).
- It provides compatibility with a variety of techniques or devices used by people with sensory limitations.

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Principle 4: Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.



Nanakuma Line, Japan. Each station is color coded and is identified in English, Japanese, and by its accompanying unique symbol. Symbols generally relate to the station's surroundings.



Looking down the length of the symmetrical platform, lighting accentuates train doorways and the adjoining gates that prevent riders from falling onto the tracks. Nanakuma Line, Japan



5 Tolerance for error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

- It arranges elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded
- It provides warnings of hazards and errors.
- It provides fail safe features.
- It discourages unconscious action in tasks that require vigilance.

- Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
- Provide warnings of hazards and errors.
- Provide fail safe features.
- Discourage unconscious action in tasks that require vigilance.



Principle 5: Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.







Principles of Universal Design / Design-for-All

6 Low physical effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

- It allows user to maintain a neutral body position
- It uses reasonable operating forces.
- It minimizes repetitive actions.
- It minimizes sustained physical effort.

- Allow user to maintain a neutral body position.
- Use reasonable operating forces.
- Minimize repetitive actions.
- · Minimize sustained physical effort.



Principle 6: Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.









Principles of Universal Design / Design-for-All

7 Size and space for approach and use

Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of user's body size, posture, or mobility.

- It provides a clear line of sight to important elements for any seated or standing user.
- It makes reaching to all components comfortable for any seated or standing user.
- It accommodates variations in hand and grip size.
- It provides adequate space for the use of assistive devices or personal assistance.

- Provide a clear line of sight to important elements for any seated or standing user.
- Make reach to all components comfortable for any seated or standing user.
- Accommodate variations in hand and grip size.
- Provide adequate space for the use of assistive devices or personal assistance.



Principle 7: Size and Space for Approach and Use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.



Fare gates accommodate a wide variety of users. Note that the gate assembly is long enough so that exiting passengers do not have to slow or stop walking in order for the gate to open. The gate has multiple smart card targets to speed fare collection. Nanakuma line, Japan



The interior of the 100% ultra low floor Alstom Citadis tram has both wide open areas as well as 2X2 seating. LUAS light rail, Dublin, Ireland





Universal Design Principles for Information / Technology

P.O.U.R.

- ✓ Perceivable: so that individuals with sensory impairments can understand the information being conveyed
- ✓ **Operable:** navigate to information via multiple methods (not only the mouse)
- ✓ **Understandable:** enough so that all different learning styles can engage
- Robust: technology should be compatible with a user's desired devices, applications or system preferences



Universal Design Principles for Information / Technology

Examples of Best Practices

Alternate Text	Structure	Color	User Interface	Navigation/Links
Images	Headings, lists, etc.	Color contrast	Keyboard Accessibility	Link Requirements
		Meaning without color		
Perceivable	Operable	Understandable	Robus	st



Alternate text: Images and Videos

- Where possible, add a caption to an image Captions are universal.
- Otherwise, add alternative text.
- Videos posted online or used for instruction must be captioned.
 - Videos online need both a title and an alternative such as a link to the content.



Tiny turtle eating a ripe strawberry.



Structure: headings and lists

Use these:

B / U AR4 臣吾君言汪汪律律 ⑦ ◎ ◎ ◎ Ů 💆 h2

注·注·行·信相 剑 ¶ 三三百三 箔· 丞·囲・	AaBbCcDc II Normal				<i>AaBbCcD</i> e Subtle Em		
Paragraph 5				Sty	/les		



Color Contrast





Meaning without Color

Fill Out the form below to register now
All field in red are required information
Contact Information
First Name:
Last Name:
City:
Submit Query



User Interface

- Users should be able to get to content without using a mouse
 - Keyboard
 - Hearing
 - Touch
- Users should be able to access content on different screens (phone, tablet, etc.).



Navigation and Links

- Fix broken links.
- Use descriptive link text, not URLs. (*Always* on the web; *usually* in documents.)
 - Link text should clearly identify the target of each link. Good link text should not be overly general.
 - Do not use different link text to refer to the same resource.
 - Do not to use the same <u>link text</u> to refer to <u>different</u> resources.
- Web pages with links to files that require a special reader or plug-in should contain a link to obtain the reader or plug-in.



The goals of Desing4All - Universal Design

- · Body fit accommodating a wide a range of body sizes and abilities
- Comfort keeping demands within desirable limits of body function and perception
- Awareness insuring that critical information for use is easily perceived
- **Understanding** making methods of operation and use intuitive, clear and unambiguous
- Social integration treating all groups with dignity and respect
- **Personalization** incorporating opportunities for choice and the expression of individual preferences
- **Appropriateness** respecting and reinforcing cultural values and the social and environmental context of any design project.



Desing4All - Universal Design of Student Services

- The Desing4All Universal Design of all student services is a long-term goal.
- Deliberate, small steps can make that goal attainable for your service department.
- By the next slides you will find a series of steps to lead you through the re-design of an existing service or the creation of a new one.
- As you travel through the phases of implementing Universal Design, remember to plan ahead and keep the diverse needs of students at the forefront.



Desing4All - Universal Design (UD) of Student Services

1.Identify the service and best practices in the field. Select a campus service (e.g., a library) to which you wish to apply UD. Identify best practices for the delivery of this type of service (e.g., for the design of campus libraries).

2.Consider the diverse characteristics of potential users. Describe the population and then consider the diverse characteristics of those who might potentially use the service—e.g., with respect to gender; age; ethnicity; race; native language; learning preferences; size; abilities to see, hear, walk, manipulate objects, read, speak—and the challenges they might encounter in using the service.

3.Integrate UD with best practices in service design. Integrate best practices within the field of service delivery (e.g., for the design of libraries) with UD practices (e.g. WCAG principles) to maximize benefits of the service to individuals with a wide variety of characteristics.

4.Plan for accommodations. Develop processes to address accommodation requests (e.g., arrangements for a sign language interpreter) from individuals for whom the design of the service does not automatically provide access. Promote the process through the service's website, publications, and signage.

5.Evaluate. After implementing the service, collect feedback from individuals with diverse characteristics who use the service (e.g., through online surveys, focus groups). Make modifications based on the results. Return to step 3 if evidence from your evaluation suggests improvements for your design.



Desing4All - Universal Design (UD) of Student Services: Guidelines and Examples

The following questions can guide you in making your campus service unit universally accessible.

This content does not provide legal advice.

To clarify issues, consult your campus legal counsel, or call the regional Office for Civil Rights (OCR).



Desing4All - Universal Design (UD) of Student Services: Guidelines and Examples

Planning, Policies, and Evaluation

Consider diversity issues as you plan and evaluate services.

- Are people with disabilities, racial and ethnic minorities, students with diverse gender identities and sexual orientations, young and old students, and other groups represented on your staff in numbers proportional to those of the whole campus or community?
- Do you have policies and procedures that ensure access to facilities, printed materials, computers, and electronic resources for people with disabilities?
- · Is accessibility considered in the procurement process?
- Do you have a procedure to ensure a timely response to requests for disability-related accommodations?
- · Are disability-related access issues addressed in your evaluation practices?



Physical Environments and Products

Ensure physical access, comfort, and safety within an environment that is inclusive of students with a variety of abilities, racial and ethnic backgrounds, gender identities, and ages.

- Are there parking areas, pathways, and entrances to the building that are wheelchair-accessible and clearly identified?
- · Are all levels of the facility connected via an accessible route of travel?
- Are there ample high-contrast, large-print directional signs to and throughout the office and to elevators and wheelchair-accessible restrooms? Do elevators have auditory, visual, and tactile signals and are elevator controls accessible from a seated position?
- · Is at least part of a service counter at a height accessible from a seated position?
- Are aisles kept wide and clear of obstructions for the safety of users who have disabilities related to mobility or sight?
- Are there quiet work or meeting areas where noise and other distractions are minimized or facility rules, such as no phone use, in place to minimize noise?

· Is adequate light available?





Desing4All - Universal Design (UD) of Student Services: Guidelines and Examples

Staff

Make sure staff are prepared to work with all students.

- Do staff members know how to respond to requests for disability-related accommodations, such as arranging for a sign language interpreter or providing a document in an alternative format?
- Are all staff members aware of issues related to communicating on-site and online with members of a diverse student body, including those with disabilities?



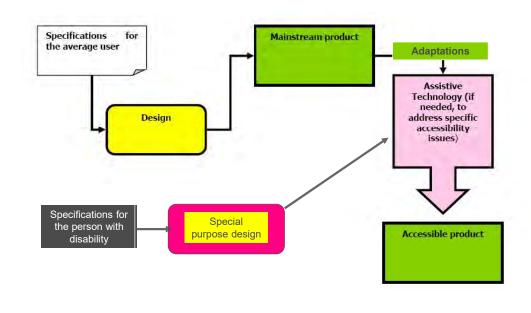
Desing4All - Universal Design (UD) of Student Services: Guidelines and Examples

Information Resources and Technology

Ensure that computers on-site as well as digital resources are designed to be accessible to students with disabilities and that systems are in place for providing accommodations.

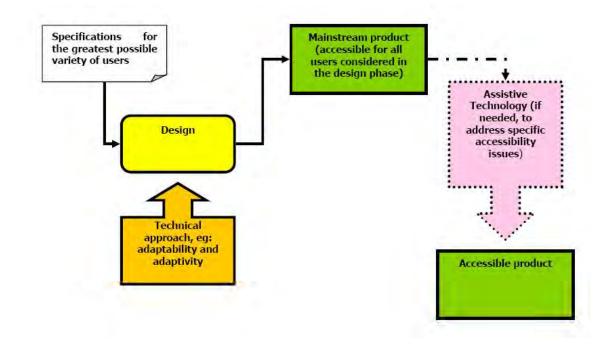
- Do pictures in your publications and on your website include people with diverse characteristics with respect to race, gender, age, and disability?
- In key publications and on your website, do you include a statement about your commitment to universal design as well as procedures for requesting disability-related accommodations?
- Is an adjustable-height table available for each type of workstation provided in your center to assist students who use wheelchairs or are small or large in stature?
- Do you provide adequate work space for both left- and right-handed users?
- Are staff members aware of accessibility options (e.g., enlarged text feature) included in computer operating systems and of assistive technology available in the facility or by special request?
- Are printed materials within easy reach from standing and sitting positions in an uncluttered area within the facility?
- Do web pages, adhere to accessibility guidelines or standards adopted by your institution (e.g., the World Wide Web Consortium's Web Content Accessibility Guidelines)?
- Are documents available in an accessible electronic format?
- Are videos used by your service captioned?
- Are procedures in place for a timely response to requests for assistive technology and remediation of inaccessible documents?
- Do web pages, adhere to accessibility guidelines or standards adopted by your institution (e.g., the World Wide Web Consortium's Web Content Accessibility Guidelines)?

Special purpose design





Design for All approach





3

Assistive Technology (AT) or Design for All (DfA): which is better?

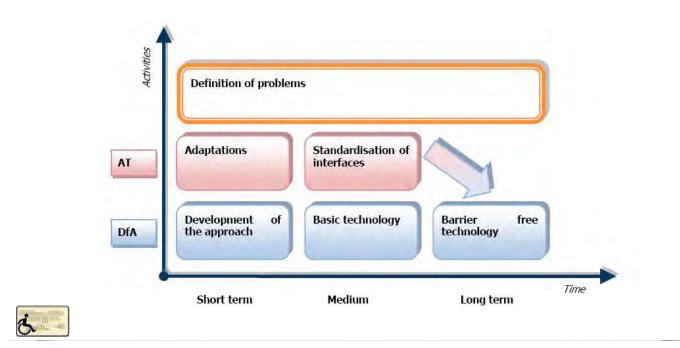
- None all together
- DfA
 - · Lower cost for the user
 - It is always available as a solution for the disabled, the elderly, or to those with a temporarily or developmental disability
 - · No stigma for the user
- Public AT
 - · They can provide greater efficiency
 - · They do not work with very severe or multiple disabilities
- Personal AT
 - They can provide greater efficiency
 - · They work with very severe or multiple disabilities

Ideal World

- Everything is designed through the Design for All (DfA) approach
- Special purpose designed Assistive Technologies (AT) are available
 - When the DfA does not work and the Personal AT are not available
 - There is a subsidy for their supply
- Everyone who needs Personal AT has them and they are compatible with the usual products
 - There is a subsidy for their supply



Convergence between Assistive Technology (AT) and Design for All (DfA)

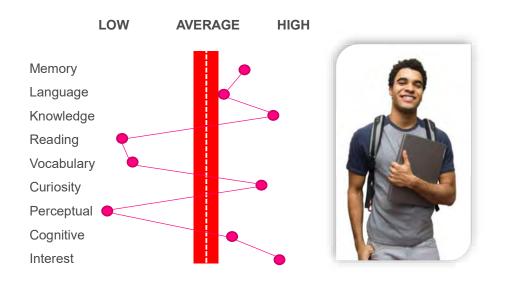


Do you have students in your class who...

- □ have a variety of academic *abilities*?
- □ have different educational *experiences*?
- □ have different *backgrounds*?
- □ have different *learning styles*?
- □ have different *preferences*?
- □ are used to instruction at *different paces*?
- □ have a *disability*?



The avarage student is a myth





Universal Design for Learning (UDL)

- an educational framework to guide development of flexible learning environments to accommodate individual learning differences
- UDL seeks to **increase access to learning** by reducing physical, cognitive, intellectual and organizational barriers



The two aspects of UDL

- a conceptual model from which a set of principles and practices are derived
- a set of specific practices and **guidelines** by which universal design is actually accomplished



UDL Principles and Guidelines

Principle I. Multiple Means of Representation

- Guideline 1: Provide options for perception
- Guideline 2: Provide options for language, mathematical expressions, and symbols
- Guideline 3: Provide options for comprehension



CAST: Center for Applied Special Technology, 2011

UDL Principles and Guidelines

Principle II. Multiple Means of Action and Expression

- Guideline 4: Provide options for physical action
- Guideline 5: Provide options for expression and communication
- Guideline 6: Provide options for executive functions



CAST: Center for Applied Special Technology, 2011

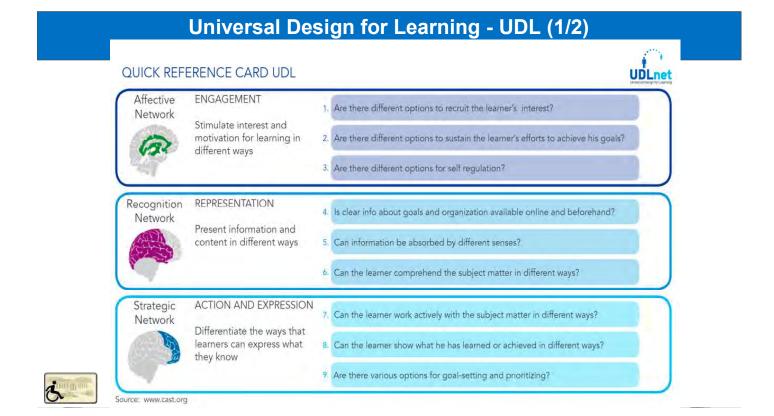
UDL Principles and Guidelines

Principle III: Multiple Means of Engagement

- Guideline 7: Provide options for recruiting interest
- Guideline 8: Provide options for sustaining effort and persistence
- Guideline 9: Provide options for self-regulation



CAST: Center for Applied Special Technology, 2011



Universal Design for Learning – UDL (2/2)

UDLnet SUGGESTIONS 3. Choices in challenge, reward and context Helpdesk with generous opening hours - Intake assessments Personal development plan Peer tutoring Progress tracking - Authentic tasks Communities of practice (learners and - Tailor-made formative assessments experts) Clearly readable/audible texts Mindmapping - Online assessment criteria (e.g. rubric) - Audiovisual, textual and kinesthetic Visualization techniques - Link to official knowledge bases learning materials (illustrations, graphics, timelines) - Description of when and where of module Online and face-to-face session - Voice-overs and text-to-speech organization (blended learning) programmes Differentiated group work Formative and summative testing - Tailor-made mentoring and tutoring Timely and specific feedback Gamification and serious games Formal presentations and simulations, Interactive and responsive software games or drama Scaffolding (Socrative, Kahoot etc.) Article writing, group presentations

Powered by: NHL University of Applied Sciences

Myths and Misconceptions about UDL (1/2)

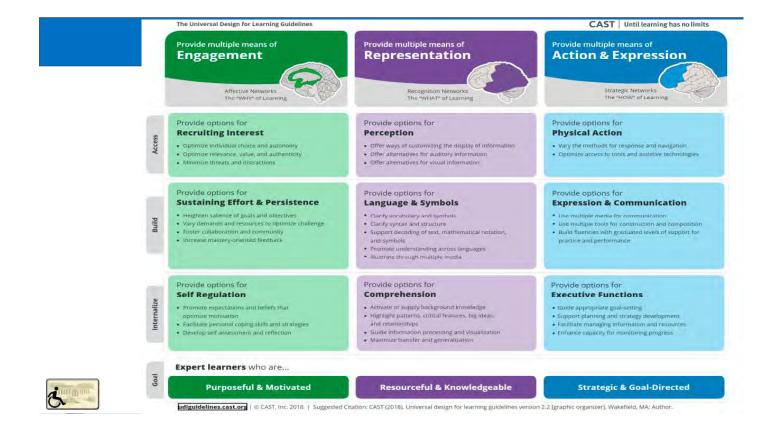
- **UDL comes in a box** If we accepted this idea of UDL came in a box, then opening and unpacking UDL would lead to effective UDL implementation every time. However, UDL is a framework and implementation is dependent on the teacher and the class and conditions. Not all situations are the same, so implementation may be different for each situation. UDL is not like something you can unpack and it starts working. UDL is a framework and requires practice and planning to implement successfully.
- **UDL is just good teaching** While the practice of UDL is good teaching, it requires an awareness that UDL is for all the individuals in the class and it is about helping to make the curriculum amenable and accessible to all the students, rather than the student becoming amenable to the curriculum.
- UDL is only for Special Education or students with disabilities UDL is for children and students with special needs and it is for children and students who are not diagnosed with a special need. It is about motivation of all students in the class and allowing them to interpret information in the most appropriate way express themselves in a manner that gives them the grates flexibility.
- UDL cannot be done without computers Technology can play a significant role in helping make the curriculum more amenable and accessible to students. However, technology is not necessary to implement UDL. UDL is only limited by the imagination of the educator.



Myths and Misconceptions about UDL (2/2)

- **UDL cannot be done in every lesson** UDL principles can be applied in all lessons. Just like all teaching some lessons can be more successful than others and implementing UDL requires practice and patience to implement successfully.
- UDL versus Assistive Technologies (AT) Assistive Technologies and UDL can be implemented together very effectively but one does not replace the other. For example, UDL strategies that benefit one student may benefit other students as well. While AT is specifically selected, implemented and evaluated for an individual student often based on the Individualized Education Program (IEP) to allow that student to access the general education curriculum with greater independence. Even in a well-designed classroom, some students may still require the use and implementation of AT to further enhance and demonstrate their learning. However, UDL strives to adjust the curriculum to make it accessible to all students: UDL makes the general education curriculum available to students with varying needs, while AT is specifically targeted at an individual student.
 - UDL is used by all students with diverse learning needs, but AT use is for specific students to help meet the expectations of the general education curriculum.
 - **UDL** is implemented by general and specific education teachers, while **AT** is selected and monitored by special educators and also is used by general education teachers.





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G. Kouroupetroglou: "Universal Access in Public Terminals: Information Kiosks and ATMs", chapter in the book: <u>The</u> <u>Universal Access Handbook</u>, C. Stephanidis (Ed.), chapter 48 (pp. 48.1-48.19), 2009, CRC Press, Florida, USA, ISBN: 9780805862805



UDL at a glance





Accommodation, Universal Design & Constructivism

Accommodation vs Universal Design		
Accommodation	Universal Design	
Annihible to open fir students registered with SDS who have a decommond disability	Acuitable to all students in the characterions	
Meeting a legal standard of access for a specific student by multiping course content	Creating additional ways of account the course content and making it accounties to everyone	
Reaming specific students can participate by providing a support or modification for an ansignment.	The goal is to croate a variety of ways of interacting with the content and seconding the classic knowledge.	



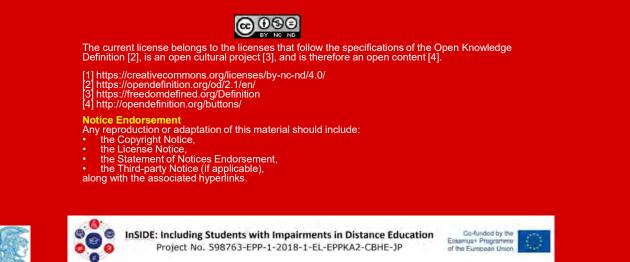




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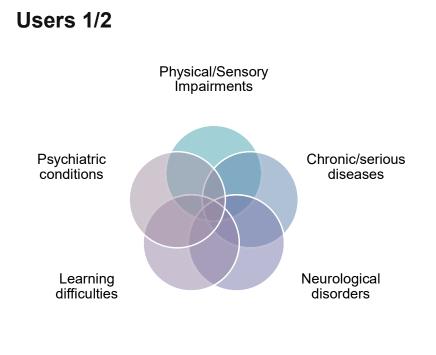
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Vocabulary use and mindset

- International Classification of Functioning, Disability and Health, known more commonly as ICF: correlation with environment's accessibility.
- Impairment not equal to problem: mental health condition not mental health problem.
- Disability may be a personal success story.
- Person first.
- Decisions made in collaboration with the concerned.
- · Individual approach.
- No distinction with the rest of the population: everyone has rights, and needs (not special needs, nor exceptional abilities).
- Avoid acts resulting on pity.
- · Equality aimed with objective measures.

Important: service provision is based on the above mindset



5

Users 2/2

- Temporary/Not Temporary,
- Acquisition date of disability.

Additional:

- Learning difficulties: will to study, cognitive impairments such as memory loss, ADHD, specific learning disabilities, etc.,
- · Disabilities or health impairments,
- Psychosocial disabilities.
- Numerous Students >25 year old



- Special school (rarely) → for example people with hearing loss.
- Inclusion in a traditional (mainstream) schools
 - · Special education tutors in the class,
 - Special education classes,
 - Interventions after school, often covered by the social welfare.
 - · Personal assistants.
 - Accessible educational material.
- Less students in the class → attentive teachers.
- Accessibility matters resolved easily (class changing floor in case of a student with disability).



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Admission of SwD at the University

- 5%
 - System of compensation. Pupils' median of all grades of High School. Type of exam according to pupils' preferences and abilities and school's/teacher dispositions.
 - Sometimes with reduced educational material to read: may be different than the one acquired from students passing the Panhellenic Exam.
 - Late inscriptions at the University.
 - Panhellenic exams (orally or written).
 - Transfer.
 - Late diagnosis (learning difficulties, asperger's syndrome, mental health issues, etc).
- Acquired disability as students.



6

Use of Assistive Technology: cases

- Some SwD don't know:
 - how Assistive Technology might be useful to them,
 - how to acquire it,
 - how to use it.
- Assistive Technology might have been provided during school years (students with sight loss).
- The technology might be old or insufficient for universities new tasks.
- · Some SwD didn't learn to use a computer at school.

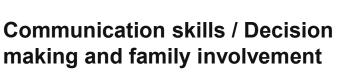




Independent living, autonomous living technics and use of technical aids

- Financial support often insufficient.
- Rare existing free possibilities, especially in towns other than Athens/Thessaloniki.
- · Waiting lists.
- · New disability.
- New environment.
- Medical/Psychological/etc. reasons not to use technical aid which could grant autonomy.
- \rightarrow use of caregivers, usually family





- · Young student with disabilities, most cases:
 - · Parents' protectivity.
 - Unconditional caretaking.
 - · Decisions having direct impact to the family.
 - People used to talk with the parent and not to the teenager with an impairment.
- Students with mental health issues/ Autism Spectrum: difficulty to develop relationships.
- Students >25 : difficulties to mix with the rest of the student community.





Financial support

State providence funds

- State Scholarships Foundation (IKY): scholarship for vulnerable populations (disability=criteria).
- Organisation of Welfare Benefits and Social Solidarity (OPEKA) : financial support (not correlated with studies).
- New plan: personal assistant.

Municipalities

Assistance at home (mostly for ederly and based on income).

Collectivities

- Sign language users: X hours of free interpreter.
- Free autonomous living technics for the people with sight loss.

International funding

Erasmus + : extra financial supports for mobility

University

For all students

- Relieve funds,
- Free meals,
- Dorm rooms,
- + Assistive Technology: the University may buy and lend expensive equipment

Accessible University: restrictions

Students supported by the Accessibility Unit usually face limitations and restrictions, which can be overcome through our intervention, such as:

- access to interpersonal communication with members of the academic community,
- access to the University premises,
- access to the educational material (printed or electronic),
- · access to the blackboard and the presentations in the classroom,
- access in keeping notes, submitting assignments and taking part in written examinations,
- access to information, Internet content and software applications.
- \rightarrow disability unit services

Registration process

- Communication of the disability isn't compulsory in the NKUA
- 5%: Students' disability is known to the departments' secretaries and the Disability Unit

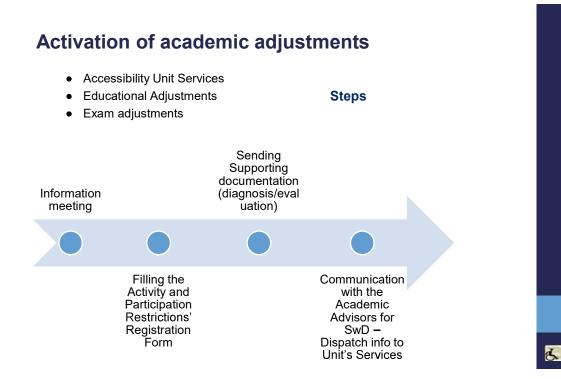
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- Syllabus
- Departments' and NKUA's websites
- Mouth to mouth
- Personal research
- Academic secretaries

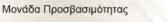
 \rightarrow Useful: Information before the start of the registration process (ministry of education)



Good practice : Inclusion meeting (ideally face to face)

- Creation of a communication channel.
- Observation/Assessment of SwDs' autonomy, communication skills, transitional issues (accommodations at school, ...).
- Information about Accessibility Unit Services and proposed accommodations.
- Facilitation of the registration process (Filling the activity and participation Restrictions' Registration Form).
- Examination of the documentation provided.
- Notification about the transmission of personal information in the academic departments.
- Description of procedures concerning services and accommodations (beneficial for the student).

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ReF: "Activity and Participation Restrictions' Registration Form for Students with Disabilities, Disorders, Learning Difficulties or Chronic Diseases"

Protocol number (To be filled out by Accessibility Unit's staff).	
Date (To be filled out by Accessibility Unit's staff).	
Has the student completed his/her studies? (To be filled out by Accessibility Unit's staff).	O Yes O No

The purpose of the Activity and Participation Restrictions' Registration Form for Students is to enable the Accessibility Unit to stay in contact with and provide batter services to students with disabilities, disorders, learning difficulties or chronic diseases (GwO). Each No^Os personal data entered in the Registration Form are safeguarded by the ERMCHCLOS system and can be accessed only by the Accessibility Unit's staff and the Counseling Professor of each student's department/faculty. Personal data are not disclosed to any third party. The collected data may be used for statistical purposes, i.e. to draw up anonymized statistical reports used for the University's or Statistic information about the students studying at the NIXLA.

Fields marked with an asterisk (*) or within red border are required.

Part A. General Information	
Name*	
Surname*	
Father's Name*	
Date of Birth*	

Activity and participation Restrictions' Registration Form

- General Information
- Contact info
- Information about disabilities, disorders, learning difficulties and chronic diseases
 - o diagnosis/evaluation
 - State of autonomous living technics
 - Functions
 - Assistive devices
- Activity limitation and participation restrictions (detailed)
- Circulation in urban environment
- Circulation in university premises
- Academic participation (labs, study, socialization, exams)
- Use of Computers
- Assistive Technologies
- Academic Textbooks
- Notice concerning personal data collection and processing

Supporting documentation (diagnosis/evaluation)

- Issued by a public health institution (Law: private or public health institution).
- Preferably recent.
- As analytical as possible.

Why: understand the obstacles faced and activity limitations \rightarrow to conceptualize appropriate individual accommodation.

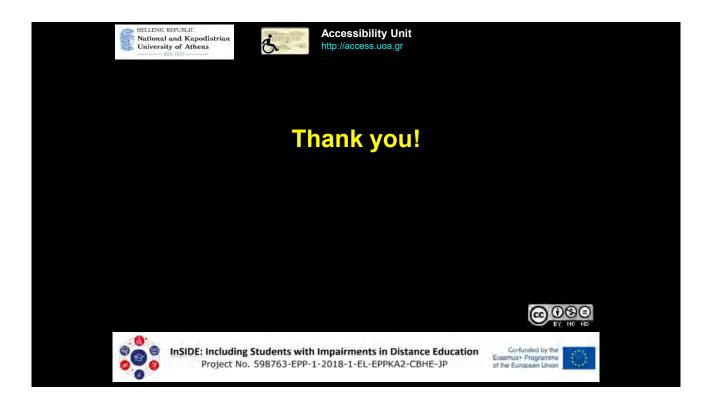
 \rightarrow Ideally: Participation of a medical expert, attached to the university, to comprehend (if needed) medical aspects ot SwD's limitations.

Notification of the Academic Advisor

- Participation Restrictions' Registration Form
- Support documentation
- Individual accessibility plan

 \rightarrow at the disposition of the Academic Advisor + collaboration

5



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Accessibility Unit http://access.uoa.gr

> A.4.1.2 training in Greece on the operation of the Accessibility Office for Students with Disabilities 8-11 and 14-17 June 2021, Athens

Built environment accessibility Service



InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP



Co-funded by the Erasmus+ Programme

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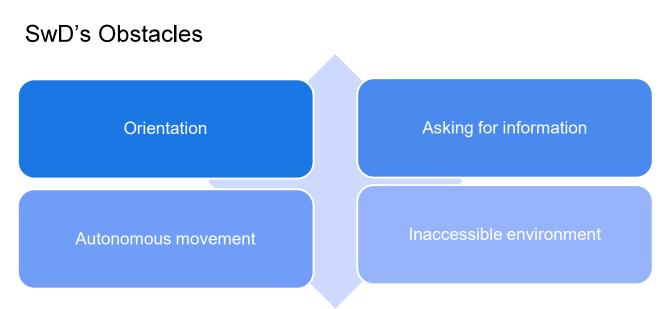
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Accessibility and Universal Design

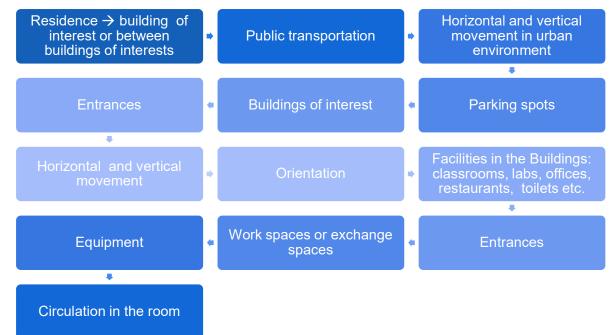
Aim	• Autonomous circulation and use off equipment in all aspects of everyday activities by everyone.
Based on	• Universal Design
Sight on	Safety for all usersDignity





Environments': design, accessibility insufficiencies, mistakes or temporary obstacles

Concerned environment



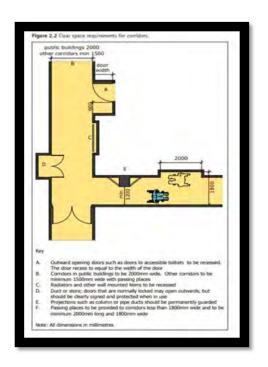
New Buildings

Existence of laws which grants accessibility

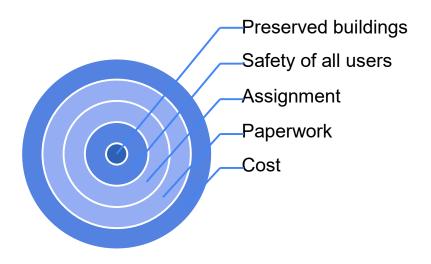
Though:

Architectural studies:

- No courses on accessibility and universal design
- Professors tend to ignore accessibility rules



Existing built environment



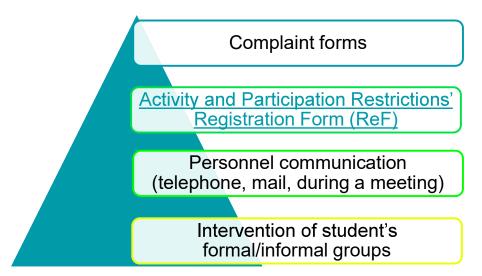
Temporary obstacles



Existing mindset



Ways to gather accessibility complaints/informations



Accessibility Service: Complaint gathering and processing

Complaints gathering \rightarrow

Official notification of:

- Rector
- Department's President or/and Faculty's Dean
- Technical service: 2 members (formal responsibility) + director (dispatch to other employees)

 \rightarrow autopsy + intervention proposal + paperwork in collaboration with rector o president of the department or the dean of the faulty) + actions

Solutions 1/2

- Information (before admission and during studies) \rightarrow Internet application,
- Disability unit vans,
- Video Relay Service,
- Mind maps for students with sight loss,
- Volunteer escort/guides (or notetakers etc.),
- Alternative trajects,
- Personnel Involvement (access to elevators, WC, alternative entrances).



Solutions 2/2

- Delos/Distance learning and exams
- Maintenance: exceptional use of elevators
- Provision of special equipment
- Change of classrooms
- Mobile Ramps
- Information campaigns (volunteers' training)
- Accessibility guidebooks
- Distance learning

Note: Most solutions may also apply for people which cannot attend university because they live too far, need to be hospitalized or to be in a germ free environment.

Service's Challenges

- Who will be the responsible of the intervention: the department? The uni? A program?
- I prefer to help them and to provide compensation than to make actual radical changes in the environment.
- I don't see the importance of involving an actual expert for the intervention.
- I have money for an accessibility intervention but I'll use wrong materials/technics.







Accessibility Unit http://access.uoa.gr

> A.4.1.2 training in Greece on the operation of the Accessibility Office for Students with Disabilities 8-11 and 14-17 June 2021, Athens

Support Service for the Academic Departments' Secretariat Employees appointed for Students with **Disabilities**



InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP



Erasmus+ Programme of the European Union

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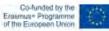
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Regulatory framework (1/2)

Article 12 - Iaw 3549 / 2007 "Support services – Study consultants":

• "Each Department must have its own student support service in order to provide counseling services to the students for the smooth transition from secondary to higher education, the support of students with disabilities and the successful completion of their studies, as it is mentioned in the Internal Regulation of each University."



Regulatory framework (2/2)

Article 88 – "Internal Regulation of the University of Athens":

 "Students with disabilities are supported by an employee of the Secretariat and his/her deputy, who are appointed for this purpose in each Academic Department. In their work, they are cooperating with the Accessibility Unit for Students with Disabilities."



Role

- Support and assistance to Students with Disabilities (SwD) for issues concerning the administrative services of NKUA
- Provide Service by priority of SwD



Responsibilities

- Enrollment in the Academic Department of the University
- Support in administrative procedures, e.g. completing applications, enrollment in courses, etc.
- Support in communication between SwD and academic staff
- Providing information about the Accessibility Unit
- Informing Accessibility Unit about issues of SwD
- Cooperation with Accessibility Advisor Professors
- Support in implementation of the provided accommodations for SwD



Interrelation with Accessibility Unit (1/2)

Obligations of Secretariat Employees appointed for SwD towards Accessibility Unit

- Briefing at the beginning of every academic year about SwD who have been admitted to NKUA using special law provisions
- Support to Accessibility Support Voluntary Service
- Sharing announcements from the Accessibility Unit to students and staff
- Notification if the Secretariat Employee appointed for SwD or his deputy change
- Notification if the Accessibility Advisor Professor or his deputy change

Interrelation with Accessibility Unit (2/2)

Obligations of Accessibility Unit towards Secretariat Employees appointed for SwD

- Staff training
- ►Informative material
- Information on how to communicate with SwD depending on their disabilities
- >Lending equipment, e.g. ramp, special desk, etc.
- Overall support to Secretariat Employees and SwD on administrative issues



Interrelation with Accessibility Advisor Professor

- Support in organizing the examination of SwD, e.g. finding an accessible examination room
- Support in Accessibility Advisor Professors' communication with the other teaching staff (*in some departments only*)



Guidelines / Templates

- Brochures for Accessibility Unit
- "Student's Activity and Participation Restrictions' Registration Form" (ReF)
- Excel file to be completed by the secretariats with the data of SwD who have been admitted to NKUA using special law provisions
- "Interpersonal communication with SwD"
- "Support for students with Pervasive Developmental Disorders (Asperger's syndrome)"
- "Guidelines regarding suitable ways of testing students with disability"



Challenges

- Finding the best way of communicating with each SwD
- Inconsistency from SwD
- Due to Covid-19, remote provision of their services
- Ignorance or indifference from Secretariat Employees
 appointed for SwD



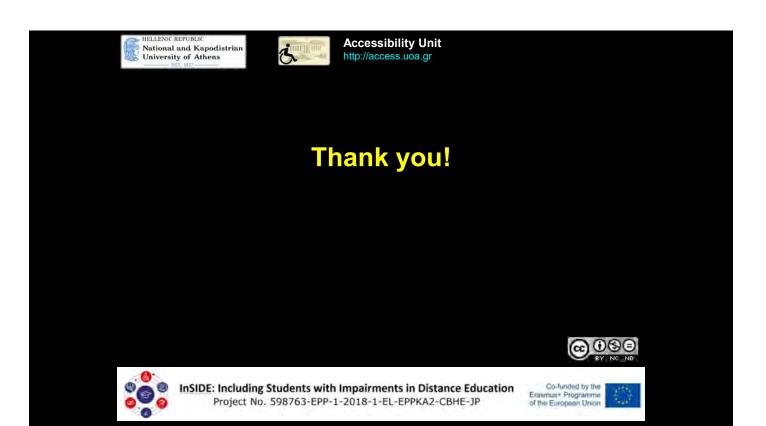
Concluding...

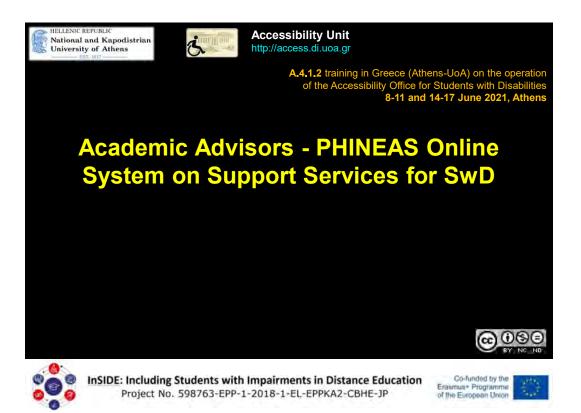
Important role because:

- Reference point for SwD
- Immediate support
- Psychological security









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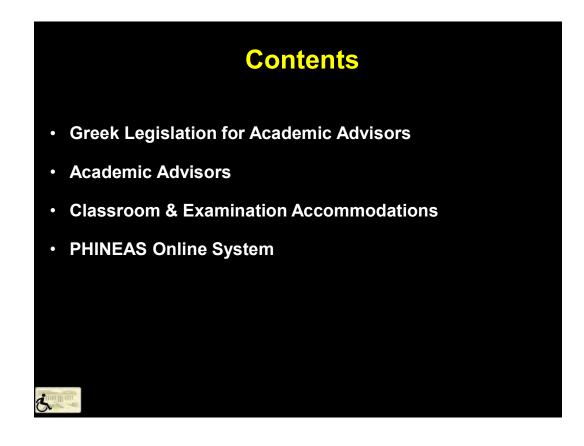
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Greek Legislation for Academic Advisors (1/2)

Article 12 – Iaw 3549/2007 "Support services – Academic Advisors"

"Each Department must have its own student support service in order to provide support services to the students for the smooth transition from secondary to higher education, the support of students with disabilities and the successful completion of their studies, as it is mentioned in the Internal Regulation of each University".



Greek Legislation for Academic Advisors (2/2)

Article 90 – Par. 5 "Internal Regulation of the University of Athens"

"In each School or Department, an **Academic Advisor** for SwD **with his/her deputy** are appointed. In their work, they are supported by the Accessibility Unit".

Academic Advisor (1/8)

The lack of Academic Advisors (AAs) during the previous years and the University Professors' lack of information as far as the existence of the Accessibility Unit is concerned, resulted in their inability to deal with emerging difficulties, e.g.: examination of SwDs. From now on, in similar cases, University Professors can turn to AA, who know the particularities of studying in the specific Department/School, he/she can guide them appropriately.

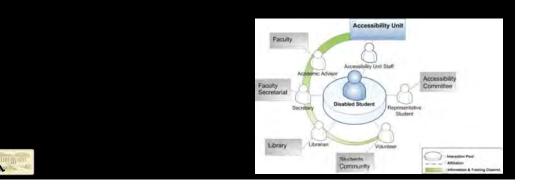


Academic Advisor (2/8)

An AA is assigned to each Academic Department

An AA constitutes the link between:

- Students with Disabilities of the Department
- Professors of the Department
- Accessibility Unit



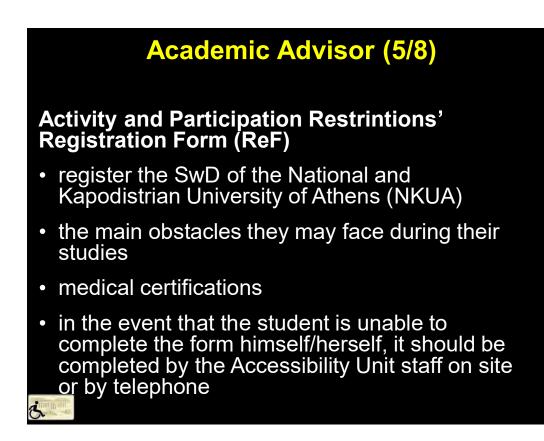
Academic Advisor (3/8)

- Faculty Member
- Address and advise on studies issues
- Enshrined in the relevant laws and regulations of the NKUA
- Appointed by the Head of each Department

Academic Advisor (4/8)

1st Meeting with SwD

- takes place after Activity and Participation Restrictions' Registration Form (ReF) is completed
- discussion about the obstacles the student faces in his/her studies
- accommodations to ensure the student's seamless participation in course attendance and examinations
- agreement on what other professors will be informed about the difficulties of the SwD and how to deal with them



Academic Advisor (6/8)

- He/she is the link between the SwD and the professors of the Academic Department
- shortly before the start of each examination period, the AA informs the professors of the courses in which the SwD has chosen to be examined
- professors can contact the AA for any questions or problems that may arise on the participation of a SwD

Academic Advisor (7/8)

- The SwD may meet again with the AA at any time during his studies for:
 - lessons/examination arrangements
 - courses attendance/examination accommodations
 - other reasons
- The role of AA is of great importance as far as the effectiveness of SwD's service is concerned, as the SwD does not have to contact each and every professor of his/her department regarding his/her needs, facilitating his/her participation and studies during each semester.

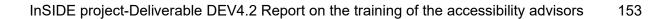
· The Accessibility Unit provides know-how to AA

Academic Advisor (8/8)

Contact details of AAs and Deputy AA are published on the Accessibility Unit website <u>http://access.uoa.gr</u>

During COVID-19

- The communication of the SwD with the AAs is conducted remotely, through e-mails.
- Of course, this procedure has been organized and standardized in the best way by the Accessibility Unit and as a result of this, even before the pandemic it was usually conducted remotely.



Challenges

- The AA has the duties of a typical Professor. As a result, sometimes he/she delays in the executing of his/her duties as an AA and a malfunction arises in the communication between the parties involved (SwDs, Professors & the Accessibility Unit)
- the AA of all Departments are typical with their duties

Example of Classroom Accommodations (1/2)

Attention Deficit Hyperactivity Disorder (ADHD)

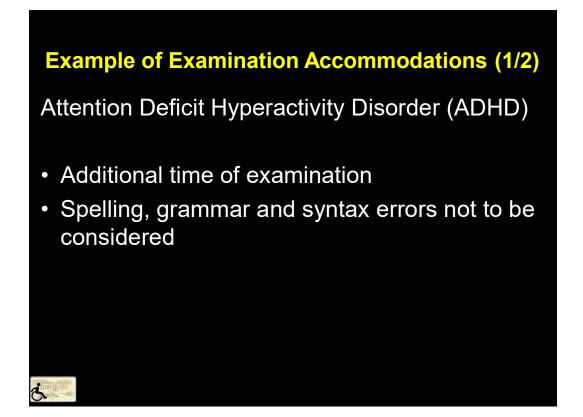
- Short and specific instructions/questions
- Eye contact
- Announcement of the tasks and examination timetable from the beginning of the course
- · Extension of deadlines for tasks deposit
- Additional time for the completion of writing tasks / midterm examinations
- Spelling, grammar and syntax errors not to be considered
- Frequent feedback
- Overlooking the inappropriate behavior
- Reinforcement of positive behaviors



Example of Classroom Accommodations (2/2)

Blindness

- Verbal formation of visual information
- Determining of who is speaking
- Calling the student using always his/her name
- Speaking with the face turned to the student
- Verbal description of the visual information of the course
- Reading the notes written on the board or projected on it
- Accessible notes, course material, academic textbooks



Example of Examination Accommodations (2/2)

Blindness

- Additional time of examination
- Use of Assistive Technology
- Examination questions in accessible formats
- Composition of the examination writing text in braille

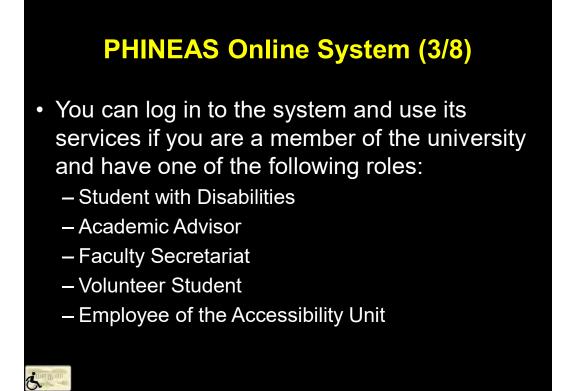
PHINEAS* Online System (1/8)

- Web-based system for supporting the services of the Accessibility Unit
- Current online services:
 - Registration / Recording the Needs of SwD
 - Supporting the role of AAs

* Phineas lived in Salmidessos, on the coast of the European Thracian coast of the Black Sea, and he was king of Thrace. He had divine abilities given to him by the god Apollo and was blind. Phineas showed the way to the Argonauts and told them how to cross the Symplegades (Clashing Rocks).

PHINEAS Online System (2/8) an online web-based application to access it you need:

- a personal computer or laptop or tablet or smartphone
- Internet connection
- a Web Browser



PHINEAS Online System (4/8)

supports the following student requests:

- Request First Meeting with AA
- Request for Examination Accommodations
- Request for Lesson Accommodations
- Announcement of Courses to Attend
- Announcement for Courses Examination
- Request for Other Reasons

Add New Request

Request for Examination Arrangements

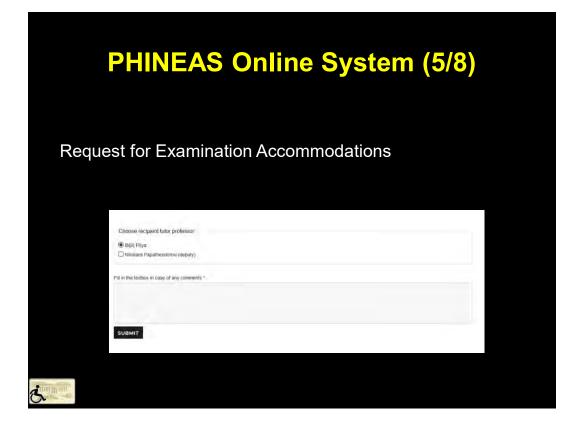
Request First Meeting

Request for Lesson Arrangements

Announcement of Courses to Attend

Announcement for Courses Examination

Request for Other Reasons



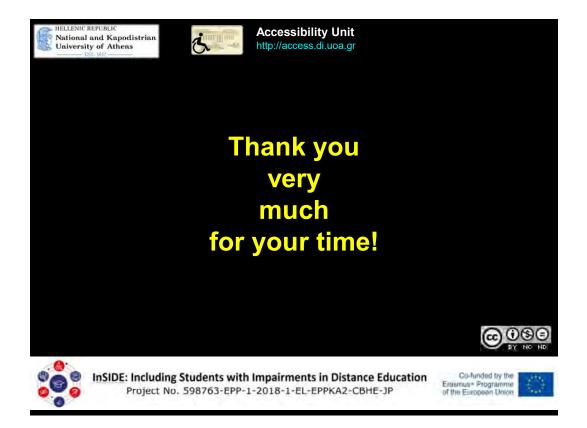
PHINEAS Online System (6/8)			
Announcem	ent for courses Examination		
	Please fill in the following fields: # dapma: @ hate: frame: Automore real 		
	C acres		
	COURSE #1 Pread for 6 at the cashe protocol (yune, banker; e-nat):		

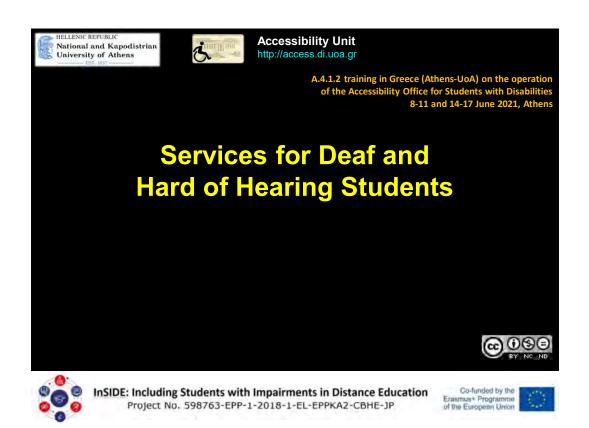
PHINEAS Online System (7/8)			
Announceme	ent for courses Examination		
	Course Type		
	Lecture Please this the course starting time	8	
	Passe film the course ending time :		
	Please film the course examination place		
	Please role ary solitional information regarding the come		
-	SUBMIT		

PHINEAS Online System (8/8)

E-mail Notification System

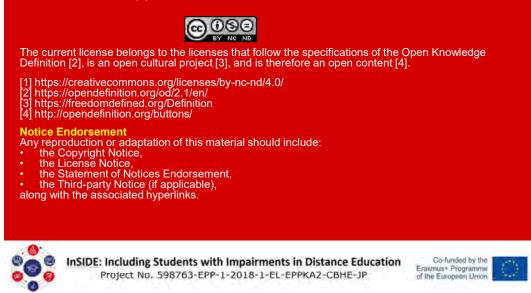
- PHINEAS Online System implements the following e-mail-based notification interface:
 - Registration Success/Rejection
 - Activity and Participation Restrintions' Registration Form Success
 - Successful Request Application
 - Request Completion
 - Communication between SwD AA
 - User Role Changes
 - Admin Messages





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General Information about SL in Greece

- 40.000 signers
- 2000: recognized as the main language in the education of deaf and hard of hearing students
- the knowledge of GSL is a compulsory qualification for the recruitment of professionals in the education of deaf students
- 2017: GSL was recognized as equal to the Greek language



Services for Deaf and Hard of Hearing Students at NKUA

- Video Relay Service
- Text Relay Service
- Volunteer Service
- Finding GSL Interpreters
- Assistive Technologies



Services' Target Groups

- Deaf students
 - Prelingual deafness
 - Post-lingual deafness
- Hard of hearing students
- Students with cochlear implants
- Students with severe dysarthria (or unintelligible speech)
- Students without speech



Cover basic student's requirements for interpersonal communication with:

- Accessibility Advisor Professors
- Professors
- Departmental Secretariat staff
- Staff of all departments of the University
- Peer students



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Aim of the Video Relay Service (VRS)

To allow students with any hearing or speaking impairment to tele-communicate with other persons



VRS Types of Operation

Real time text exchange

Text Relay Service

GSL via video conferencing

Video Relay Service



Text Relay Service

- A student writes to the interpreter text messages using computer, mobile phone, etc.
- The interpreter verbally recites the student's text messages to his interlocutor by phone
- The interlocutor responds to the messages orally
- The interpreter writes back to the student what he is listening from the interlocutor
- The student reads the text reply/ies that was sent by the interpreter





- A student communicates with the interpreter via online video conferencing
- The interpreter translates verbally and in real time by telephone to the student's interlocutor and vice versa
- > It can be combined with text relay service
- For the hard-of-hearing students: it helps to facilitate communication by lip reading



VIDEO





Applications for VRS

- Skype
- Viber
- Zoom
- Messenger



First meeting - contact with the student

- Process
- Required Supporting Documents
- Expectations



- Arrange an appointment via e-mail or VRS
- Fill the Activity and Participation Restrictions' Registration Form (ReF)
- Disability Certificates
- Discussion about his/hers specific needs



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Meet the student (2/3)

- Sign Language User or Lip Reading
- · Hearing aid or cochlear implant
- Oral speech level
- Writing level

Meet the student (3/3)

- English language level
- Discussion about his/hers goals
- Discussion about Assistive Technology
- Discussion about accommodations

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Accessibility Support Voluntary Service for the Deaf or Hard of Hearing

- Taking notes during in the classroom
- Sending notes via e-mail
- Attending the course together
- Meetings to discuss about the course
- Helping students during meetings with other students



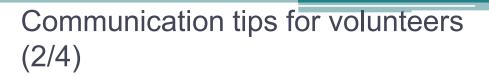
Volunteers' Training

- GSL knowledge not needed
- Educational and informational meeting
- Personal contact with deaf students
- Continuous communication
- During COVID



Communication tips for volunteers (1/4)

- GSL knowledge no needed
- · Gently tap them on the shoulder
- Standing or seating nearby
- Always have eye contact
- · Have light on the speaker's face
- Generally pay attention to the lighting
- Do not move when you speak



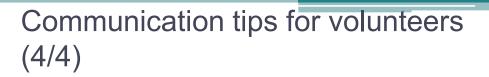
- Do not cover your face with your hands, especially lips, while speaking
- · Do not eat or chew gum while speaking
- Speak slowly and clearly using sort sentences
- Do not speak too slow
- Do not whisper
- Do not speak too loud



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Communication tips for volunteers (3/4)

- Inform when the subject changes
- Make sure there is no noise in the communication area
- Learn some signs
- Use gestures and face expressions
- Repeat your sentence in case of misunderstanding



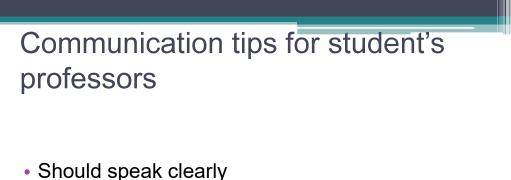
- Ask to repeat their sentence in case of misunderstanding
- Written communication if you have difficulty to understand each other
- Don't be ashamed to ask
- Do not put your hand in your ear
- Do not talk to the interpreter



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Student's professors

- Inform about the participation restrictions
- Communication tips



- Turn their face towards the student for lip reading
- In case of questions from peer students they should repeat the question
- Assurance a front row place



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During COVID

- Provision by Accessibility Unit masks with transparency or visors
- Good lighting on the face during the delivery of the course via videoconferencing
- Send the student important information that can be said during the course
- Acquittal homework
- Actions that must be taken to enable seamless video contact



Communication Cases (1/5)

- With Accessibility Advisor Professor
 - Arrange accommodations in for attending a course, lab, etc.
 - Arrange accommodations to participate in exams
 - Communicate agreed arrangements to other professors on a semester basis

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Communication Cases (2/5)

- With student's professors
 - Notes and lectures
 - Schedule changes
 - Upcoming tests
 - Project writing
 - Appointment arrangements





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Communication Cases (4/5)

• With the administrative staff

- Academic ID
- University restaurant
- Student residence
- University gym
- Student Ombudsman

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With volunteers and peer students

- Appointments
- Meetings about courses
- Scheduling group projects
- • • • •



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Other VRS Services in Greece

National Deaf Institution - Iris app



Assistive Technology (AT)

- Appointment with expert in Accessibility Unit
- Suggestion for appropriate AT
- Donation of AT
- Training of use
- Technical support
- Real time captioning



Finding GSL Interpreters

- A student sends his course schedule (request)
- The interpreter forwards the request to the relevant organization
- Difficulties
- Criteria for finding an interpreter from Hellenic
 Federation of the Deaf



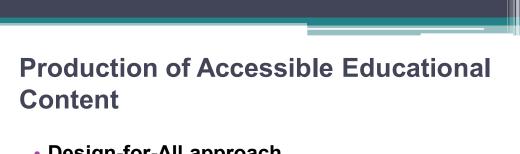
During COVID

- Difficulties
- Actions that must be taken to enable seamless video contact



Learning the written Greek Language

- Modern Greek Language Teaching Centre of NKUA
- Covers difficulties in:
 - Grammar
 - Syntax
 - Scientific Terms



- Design-for-All approach
- Conversion of textbooks or notes to various accessible formats



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Terms of Use

- Only for students of the NKUA
- Must be active students
- Must have completed the Activity and Participation Restrictions' Registration Form
- Must be consistent
- May use the VRS only for academic issues
- May not use the VRS for personal communication
- May not use the VRS on behalf of others students or friends for their issues
- Text message exchange should not be the main way of communication



Difficulties in Operation of the Service

- Inconsistency of students
- Limited student attendance
- Problems on the definition of scientific terms
- No tool to collect and spread the scientific terms
- Collaboration problems with organizations related to the deaf



Contacts

 Telephone:
 (+30) 2107275687

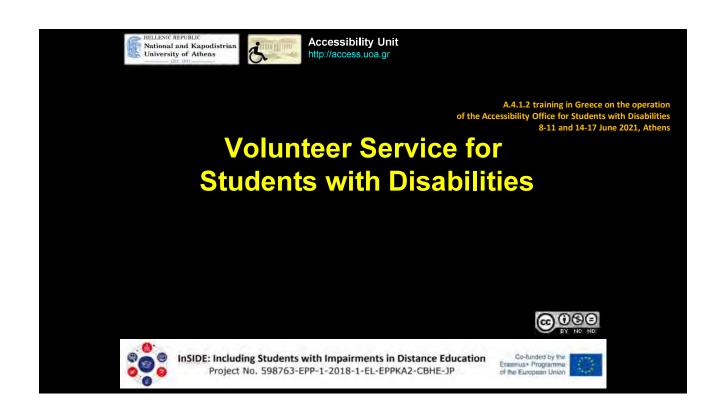
 E-mail:
 mamano@di.uoa.gr

 Skype ID:
 memmanouil

 SMS:
 (+30) 6958450861



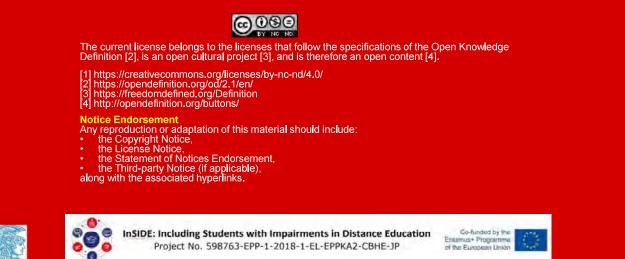
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- 1. Volunteer Support Service: WHY?
- 2. Organization
- 3. Provided Support
- 4. VS's Actions: Contents
- 5. Challenges, Stakes and Keys Of Success

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6. Results

1. Volunteer Support Service: WHY?

- 1.1. SwD's Obstacles
- 1.2. Inevitability of Human Support Service
- 1.3. Culture of Volunteering
- 1.4. Aim
- 1.5. Overview
- 1.6. Vision

1.1. SwDs' Obstacles (1/2)

- Autonomous movement: university's premises / residence university,
- Information gathering: accessibility, registration processes, etc. (freshmen),
- Courses/ lab: Note taking, receiving optical or sound signals, object handling, stress handling, attention retrieving,
- **Studying**: acquiring Eudoxo's books (gathered from Athens Center), acquiring accessible books on time, having access to accessible class notes, understanding concepts and theory, practice with exercise,
- Interpersonal communication with peers and academic staff.

1.1. SwDs' Obstacles (1/2)

Presence @ Uni

- Quarantine
- · Serious health conditions (hospitalization, therapies, immunosuppression),
- Psychosocial issues (agoraphobia, social stress),
- Lack of accessibility (lack of elevator, need of family care in another location.

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1.2. Inevitability of Human Support Service

When obstacles cannot be overcome by:

- SwD's Skill development
- Students' assistive technologies or technical aids
- Accessibility Service
 - o Buildings' Accessibility Service
 - Transportation Service
 - o Etc



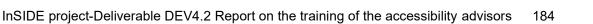
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1.3. Culture of Volunteering

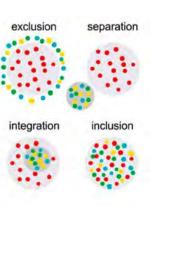


- Religion
- Olympic Games 2004
- School
- Solidarity
- Boy scouts
- · Community work
- Explosion of work in special education
- Voluntarism: career ladder / Learn new skills

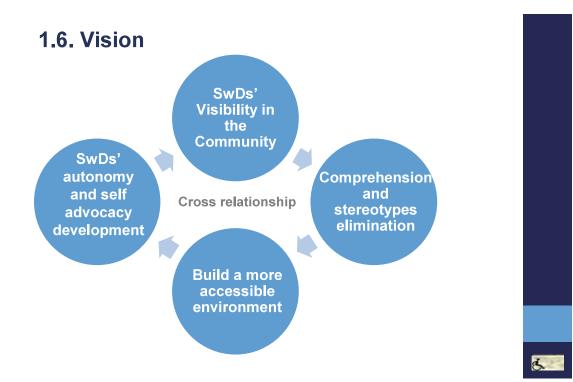


1.4. Aim

- Guarantee a smooth integration into the student's life and community.
- Improve Student's with Disabilities (SwD) transition and access to higher education.
- Relieve care givers which are members of the family and alleviate cost of professional assistance.
- Encourage SwD's acquisition of new communication and studies related skills.
- Enhance SwD's overall independence and participation.



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2. Organization

- 2.1. Distribution of competencies between VS and other university services and personnel
- 2.2. VS Coordinator's Actions
- 2.3. Meeting SwD's requests: Procedure
- 2.4. Complementary Actions

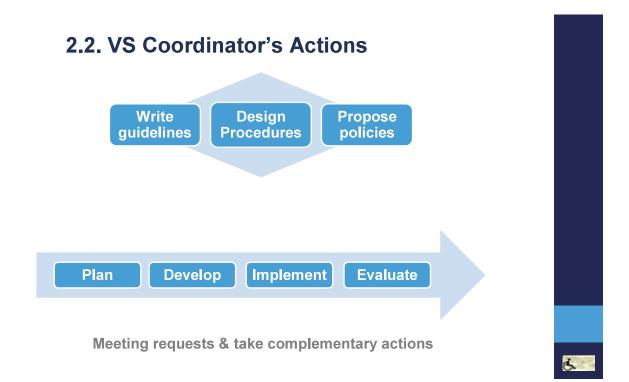
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2.1. Distribution of competencies between VS and other university's services and personnel

Understanding that Volunteers shouldn't be the major liability concerning the accessibility issues resolutions



□ Proposition of new services



2.3. Meeting SwD's requests: Procedure

- 1. SwD show interest for VS
- 2. Preparation of SwD
- 3. Request of SwD
- 4. Call for Volunteers (old or new)
- 5. Preparation of Volunteers
- 6. Mission proposition
- 7. Matching
- 8. First meeting of collaborators, beginning of collaborations

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- 9. Feedback and resolution of issues
- 10. End of Collaboration (1 semester)
- 11. Evaluation of Collaborations

2.4. Complementary Actions

- Track requests and activities.
- Deliver specialized skill training.
- Team building.
- Recognition of volunteers.
- Trace user satisfaction.

3. Provided Support

- 3.1. General Framework of VS
- 3.2. Participation Requirements
- 3.3. Form of Support

3.1. General Framework of VS

Peer-to-peer collaborations are:

- exclusively for academic matters,
- · additional to already existing services (without overlapping),

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prepared and closely supervised.

This collaboration consists of small missions:

- with a specific and well-defined type of intercourse, time, duration and location,
- · distributed and assigned individually to a team of volunteers,
- Subject to regular feedback.

3.2. Participation Requirements (1/3)

SwD & Volunteer:

- Orientation meeting (Only Once).
- Screening (Only Once).
- Note or provided by a doctor mentioning the diagnosis of the SwD / the volunteer, as information on the nature of possible physical or psychosocial emergencies + related guidelines (Only Once or if needed).

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- Sign a declaration of honor stating that the Accessibility Unit will be informed in cases a peer may represent a danger for himself or the rest of the community (drugs, self mutilation, suicidal tendencies, etc.).
- Sign a "Participation Agreement" (every semester)→ understanding
 - Mindset,
 - · Framework,
 - · Procedures,
 - · Eventual consequences.
- Sign "Disclosure agreement".
- · Commit, if needed, to develop new skills.
- · Commit, if needed, to follow a referral.
- If previous collaboration with VS, positive evaluation.

3.2. Participation Requirements (3/3)

<u>SwD:</u>

- · Be an active student.
- Disclose his disability and obstacles to the disability unit.
- Submit ReF and be certain the data are up to date.
- Disclose his disability and obstacles to his academic tutor and decide with him for appropriate measures for the exams.

<u>V:</u>

Students from NKUA.

3.3. Form of Support

- Direct
 - Regular (on a weekly basis)
 - Exceptional (as they occur)
- Indirect
 - Awareness raising campaigns
 - Building's accessibility recording
- Contact
 - Anonymous
 - Danger for SwD or Volunteer
 - Will of SwD or Volunteer
 - Excessive family presence
 - Face to face
 - In groups/one to one
 - DISTANCE: Video Meetings, Messenger Applications

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3.3.1. Regular Support (1/2)

- Escort/guide to and from university's locations & support in handling objects.
- Support in class or labs.
- Forward, in case of health or accessibility related absence: announcements, notes and any other related information.

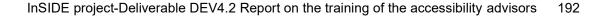
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- Production of accessible notes.
- Learning of computers
- Study groups:
 - vocabulary,
 - exercises,
 - study organization.

3.3.2. Exceptional Missions

- All of the above
- · Gather textbooks from their distribution points,
- Produce accessible textbooks (limited),
- Support during exams (escort, reading & writing),
- Support in the undertaking of assignments (writing, book or object handling, computer use),
- Workshop for skills development,
- Orientation day: showing the facilities and give advice on the courses.



3.3.3. Referral Cases

A referral to professional care is may be a necessity because:

- Support requires professional skills.
- The responsibility or the nature of the support may be too much of a physical or sentimental burden for young peers.
- The volunteer support might become a barrier to the SwDs' autonomy's development.

It might be for parallel support or for the full coverage of the accompaniment .

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- · Psychiatry,
- · Psychology,
- Professional caretaker,
- Doctor,
- · Use of technical aid/assistive technology,
- · Learning of a new skill,

4. VS's Actions: Contents

- 4.1. Volunteers' attraction
- 4.2. SwD Orientation and Screening
- 4.3. V Orientation
- 4.4. V Screening
- 4.5. Specialized Skills Training
- 4.6. Receiving and processing SwDs' requests
- 4.7. Matching
- 4.8. First Meeting of peers
- 4.9. Feedback and Problem solving

4.1. Volunteers' attraction (1/5)

Attract New Volunteers to Meet Specific Requests

HOW	MESSAGE	WHY
 SwD's professors address a call to students in e-class to find the ones willing to support the SwD in his courses. Posts in targeted social media student groups and forums. 	 Announcement describing requirements and proposing very specific missions. Invitation to attend to an orientation meeting. 	• Attract volunteers which are related with the field and are already motivated to attend the courses.

4.1. Volunteers' attraction (2/5)

Call for volunteers addressed in already formed and involved student groups: religious, student clubs, etc.



VS aims at a **global campaign** in order to attract all kind of volunteer profiles because:

- Disability unit neutral in color (cannot show preferences)
- Several types of mission = several type of volunteers
- Raise awareness to all students communities
- · Give an example of inclusion in all aspects of society.

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4.1. Volunteers' attraction (3/5)

Raise Awareness of VS In The Student Community

WHY

- Direct impact: spontaneous applications ٠
- Awareness raising amongst community
- Wide recognition
- Motivate indecisive potential volunteers



4.1. Volunteers' attraction (4/5)

HOW

- Presentations in media.
- Presence in social medias:
 - Groups of students, •
 - Fb pages of academic departments, Page for the team of volunteers and •
 - for the VS.
- Posters display at high visibility locations.
- Through secretariats:
 - Face-to-face: secretariats inform freshmen about VS during the scheduled meeting for their registration.
 - Online: publication of banners on departments' webpages.



4.1. Volunteers' attraction (5/5)

Through volunteers:

- Face-to-face: active volunteers are informing students in crowded locations (during specialized skill training workshops with white canes and wheelchairs).
- Collaborations with existing student groups (only if related with the department NO political or religious groups)



- Word of mouth referral:
 - registered volunteers are spreading the word.
 - SwD are recruiting helpful class mates and advises them to get registered as volunteers.

4.2. SwDs' Orientation and Screening (1/3)

The Meeting

- Description of framework of support and type of missions.
- Procedures and guidance on how to choose missions according to profile.
- Insist on the supervision role of the VS and the need of feedback.
- · Present skill development strategies or referrals
- Presentation of "Peer's Mindset"
- Discussing disclosure matters



 + SIGN DOCUMENTS (Terms of services and aisciosure agreements)

4.2. SwDs' Orientation and Screening (2/3)

Understanding SwD reality, profile and requests

When	 Discussion during the orientation day or complementary meeting. 	
Tool	 Questions+ empirical observation (for ex. way of walking, way to interact in front of parents, etc.). 	
Why	 Building a support strategy, prepare missions framework and analytical collaboration plan (type, duration, details, additional information's to give to the V). 	

4.2. SwDs' Orientation and Screening (3/3)

Subjects covered:

- Questions change according to disability, health problem, psychiatric or neurological disorder,
- · Evaluate objective capacities and obstacles,
- Evaluate transitional difficulties,
- Determine SWD Profile,
- Additional difficulties than the one for which the support is asked for (work, distance, parenthood, professional athletes, etc. ...),
- Tendency to seek sentimental bonding,
- Necessity to have a referral & additional services or already existing help of other structures,
- Necessity to gather more medical documents and with which information's,
- Necessity to have an emergency contact/ emergency protocols,
- See how SwD expects his relationship with the V, the support granted, the desirable results and disclosure wishes...

4.3. Orientation Meeting for Volunteers (1/3)

2 hours meeting

Purpose:

- Inform.
- Shape Volunteers' attitude in order to respond to any possible scenario, according to Disability Unit's principles.



After the orientation meeting:

- presentation of the proposed missions (link to doodle)
- + sign papers (Terms of services, disclosure agreements)

4.3. Orientation Meeting for Volunteers (2/3)

- · Population description (+individualized approach).
- Language/attitude used in peer support (+rights, not needs or super powers).
- · SwD's obstacles regarding studies accessibility.
- University structures and services for the integration of SwD (+ arrangements but not a decrease of the academic difficulty: fair to the other students).
- · VS procedures and participation requirements
- · Best way to choose missions according to motivations
- Peers' Mindset.
- Disclosure issues
- Discussion.

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4.3. Orientation Meeting for Volunteers (3/3)

Meetings AND trainings

m Involvement

- Students with Disabilities
- Former Volunteers
- Trainers from recognized collectivities







During the interview, opportunity to insist on matters in order to adjust mindset.

30 minutes of recorded semi directive interview – Recorded

Questions:

- How did you learn about the VS.
- Why did you decide to become a volunteer, and why do you wish to offer your time in this specific framework.
- Are you acquainted with people with disability, chronic disease, etc.? At what level?
- What are your expectations regarding your participation in this program.
- State 3 positive and 3 negative characteristics of yours (impact on your collaborations).

4.4. Volunteer's Screening (2/3)

- How do you cope with time management?
- Describe situations that make you abandon something you chose to do. Does it happen frequently?
- Role play: How would you react in front of a situation you find unfair? How do you react in an emergency situation concerning health issue? (with examples)
- How do you picture yourself as a volunteer?
- What are your strongest worries about your participation?
- If you were the volunteer coordinator, what would be the most important question you would ask to a new volunteer? Why? Please, answer the question.

4.4 Volunteer's Screening (2/3)

Challenge:

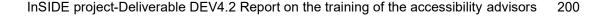
• Depending on the number of new volunteers **Time Management** problem

3 weeks workload (8 hours a day to see all volunteers) for this process, parallel with other activities as Welcoming new students, awareness raising campaigns, proceed to matching's etc.

Solutions:

- Video Meetings
- Group Screenings
- Written Screenings
- Less questions
- Prioritizing volunteers which will have interpersonal communication with the SwD / sensitive "task"





4.5. Specialized Skill Training (1/5)

• "Disability: stereotypes and prejudices" (2 hours).



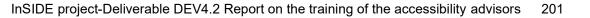


• "Wheelchair user assistance" (2 hours theory, 2 hours practice).

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4.5. Specialized Skill Training (3/5)

• "Sighted guide of students with sight loss techniques" (2 hours theory, 2 hours practice).



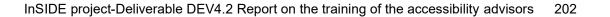
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4.5. Specialized Skill Training (4/5)

• "Support of students with hearing loss" (2 hours).

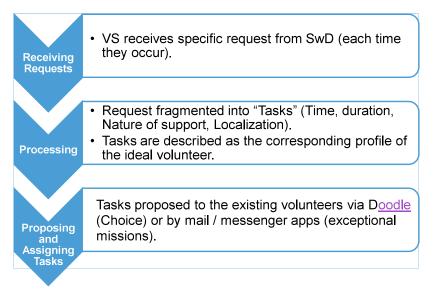


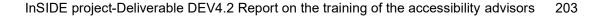


4.5. Specialized Skill Training (5/5)

- "Support of students with Asperger syndrome" (2 hours).
- "Support of students with ADHD" (2 hours).
- "Support of print disabled students" (accessible notes and books) (2 hours).
- "Accessibility of public buildings" (2 hours theory, 2 hours practice).







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4.6. Receiving and processing requests (2/3)

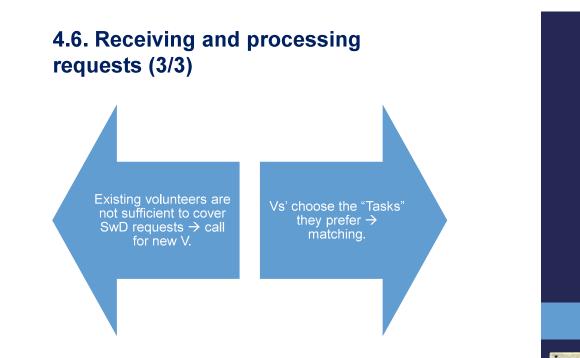
Notes on exam period and exceptional support

Requests for the Exam period are only accepted from the Examiner and only if the Academic Advisor was informed:

- Inclusion + responsibility → decision and process / certainty that the other requirement of SwD are met (accessible room or pc),
- Assignment of a contact person responsible and available for the collaboration,
- Certainty that changes concerning the time, the duration and the location of the exam will always be shared disclosed on time.

Treated by VS as an exceptional support.

- Preparation is achieved by **do and don'ts' document** forwarded to the examiner, the SwD, the volunteer, and the person in charge of each exam.
- The first meeting between the V and the SwD is not achieved.



4.7. Matching (1/2)

Exceptional missions

- It might be addressed by the SwD, a member of the teaching community or by the Accessibility Unit.
- First answer which fits the profile within the requested time gets the mission.
- First meeting is not achieved:Vs' and SwD are though prepared accordingly.



4.7. Matching (2/2)

Systematic missions

- Tasks are proposed to all volunteer, they choose what they would be interested to do (even if tasks may overlap)
- VS proceeds to final matching.
- VS proposes final tasks to each V + Analytical presentation of each assigned mission and their stakes. V may be assigned to one or more tasks and to one or more SWD. (Maximum of hours: they mention it in their declaration of interest form).
- If V agrees, specific, rapid preparation of each mission according to results of SwD Screening.
- Ask to give availabilities for 1st appointment with collaborator(s).

4.8. First Meeting Of Peers (1/3)

Meeting at the SwD's academics department's building. If needed, booked room for privacy. 30 minutes to 1 hour.

- Breaking the ice: 2 words about each other.
- Description of the mission of each volunteer.
- Presentation of guidelines and limits relating to the mission.
- Depending on the profile of the SwD and the volunteer, give emphasis on parts of "Participation's Conditions".
 For example in case of the matching of a SwD with an extraverted volunteer, a reminder of the discrete nature of the support, etc.
- Highlight disclosure to other students related matters (disability, nature of the peer's relationship).

4.8. First Meeting Of Peers (2/3)

- Escort rehearsal and specifications concerning escort scenarios.
- Protocol, guidelines and contact person relating to health/accessibility/cancellation emergencies.
- Answering questions.
- Outline the need of a weekly feedback.
- Creation of a group in a Social Network (messenger, viber) for direct communication purposes.
- Inclusion of all the members of the meeting + VS coordinator.

VS coordinator sends:

- Terms of participation,
- · Peer contracts,
- Link which conducts to the weekly feedback questionnaire.

4.8. First Meeting Of Peers (3/3)

In case of anonymous collaboration:

- 1. Creation of anonymous mail for each peer.
- 2. Access to a Google Drive File.



 \rightarrow volunteers may gather their notes anonymously

 \rightarrow SwD consult them anonymously. Communication is encouraged in the form of a new "document" (access of VS's Coordinator to its content).

Cute: They choose an Alias. Contact exists and may help peers.

4.9. Feedback and Problem solving

Collaboration Journal (Specific Questions)

- Each Peer
- · Each Week
- Via a Google Form, a weekly meeting, mail, messenger/ viber written or spoken message.

Case to case

- Meetings for solutions.
- Possible intervention of
 Accessibility Unit's Psychologist.
- Change of assignment, exclusion from specific missions or from the program.





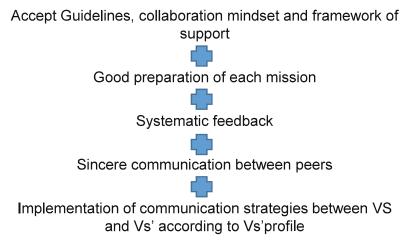
5. Challenges, Stakes and Keys Of Success

5.1. Main keys of success

5.2. Using effective managing tools and means of communication

- 5.3. Recognition of Volunteers
- 5.4. A beneficial collaboration for all peers
- 5.5. Team Building
- 5.6. VS attitude in front of Vs' types and
- profiles diversity
- 5.7. VS's Coordinator: Profile
- 5.8. Building Volunteers' and SwDs' Mindset
- 5.9. Matching Strategies
- 5.10. Peer preparation for missions
- 5.11. Responding to Challenges





5.2. : The tools (1/3)

Track Requests and Activities : IMPORTANT

- Excel (Google Drive)
- SwDs' requests treatment: analytic traceability of each request + progression to meet the request.
- Volunteers' activities:
 - declaration of interest,
 - orientation,
 - interview,
 - · date of assignment of each mission,
 - date attendance to each specialized skill training,
 - etc.

5.2. : The tools (2/3)

Communication Tools

- Talking 1-1
 - Telephone
 - Mail (lists are very useful)
 - Mail list from the University
 - E-Class announcements
 - Videoconference Meeting
 - Face to Face Meetings
 - Messenger applications (SmS, Viber, Messenger, What's' Up):
 - Video or Sound Messages
 - Written Messages



Groups Communications

- Messenger applications
- Videoconference
- Face to Face Meetings
- Proposing: Doodle
- Sharing: Google Drive



5.2. The tools (3/3)

Tracking User Satisfaction

- Final Evaluation: anonymous feedback form concerning volunteer's and SwD's perception of the volunteer service sent separately to peers.
- Jovial evaluation meetings with volunteers.
- Departure interview of volunteers.

Topics

- supervision,
- politeness,
- punctuality,
- · easiness of communication,
- speed and handling of problems resolutions,
- sufficiency of information and orientation,
- overall satisfaction,
- willingness to continue the collaboration with the VS,
- intention to recommend the experience,
- description of personal benefits from collaborations,
- mention of ideas, recommendations and concerns.

5.3. Recognition of Volunteers

- Positive gratification.
- Participation certificate.
- Certification of acquired specific skills (attendance to workshops).
- Recommendation letters / advice on curriculum.
- Food and beverages during meetings.
- Award ceremonies.
- Show interest for volunteers life (exams, holidays, ...) during communication + keep contact + never forget to

say ...



5.4. A beneficial collaboration for all peers

- No sentimental, physical or program burden
- · Learn new skills
- Develop open-mindedness
- Discover different lifestyles
- Improve Self value
- Mature in communication and in decision making
- Official recognition/career ladder
- Improve consistency of attendance in courses and quality of note taking

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5.5. Team Building

- First meeting of SwD with his team of volunteers: indirect encouragement to also communicate with each other.
- Group on Social Networks (VS and Volunteers can propose events, media, activities).
- Workshops.
- Other voluntary projects propositions.
- Strategic planning meetings (Raising awareness campaigns).
- Evaluation meetings.

5.6. VS attitude in front of Vs' types and profiles diversity

- 1. Be analytic and strict concerning the responsibility VS may not have if the framework is not respected.

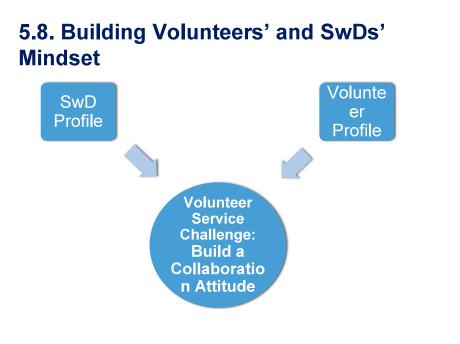
of the participation to the program or specific missions.

3. VS shows V's their motivations are taken into account and a wide variety of type of missions, locations and timeframes.

5.7. VS's Coordinator: Profile



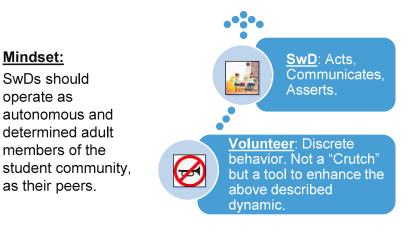




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Involvement of volunteers in regard to SwDs' autonomy and self advocacy development



Interaction: roles, limits, behaviors, responsibilities



Balance:

- Studies Assistant
- Peer Student
- Volunteer

Develop principles of mutual support and solidarity as an equal □ ≠acts resulting from feelings of insufficiency (SwD) or pity (Vs).

Volunteer

- Works within a framework and follows guidelines. He accepts procedures and supervision.
- Has a responsibility to provide feedback to the VS.
- Channels vision and image of Disability Unit through community.
- Is neutral in colors (politics, religion, football teams).
- · Chooses realistically the missions he can handle.
- Respects hierarchy communication channels of the University of Athens.
- Handles personal information of SwD and of other volunteers carefully.
- Knows when he can act and when it is indicated to coordinate help because it would be irresponsible to act.

Peer Student

- Is himself.
- Respects his own limits.
- Recognizes ethic issues and boundaries.
- Enjoys the mutual learning and growing experience.
- Interacts with the SwD and not with his family.
- Expects SwD to act and react as he desires inside the academic and student community, as he would do with another peer.
- Is not acting on pity (for example is not giving money to SwD).

Studies Assistant

- Understands that the missions which are assigned to him are strictly related to academic matters.
- He is not expected to provide health (physical/psychological) or hygiene (toilets, etc.) related assistance.
- · Does not undertake tasks the SwD can do himself.
- Understands the commitment, punctuality and concentration needed to provide a quality service.
- Shows an available but discreet presence.
- Avoids close personal relationship development.

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5.9. Matching Strategies

Many declaration of interest for the same missions Preference for very suitable matching's.

- Be practical (concerning the program, the location, the scientific field of the collaboration).
- Respect wishes concerning the gender (or other characteristic) of the volunteers, if considered justified
- Understand the physical barriers of the support.
- Understand the importance of motivations, profile and the character of the future collaborators.
- Reorientation of a collaborator with certain characteristics for some type of support (Sometimes, empirical).

5.10. Peer preparation for missions (1/2)

In any case, according to the matched profiles, before final attribution:

- Clarification of all the mission's details + emergencies that may arise,
- Justification of the choice,
- Objections' discussions,
- Clarification on the attitude to adopt,
- Explanations of the impossibilities of parts of the mission,
- Close supervision.

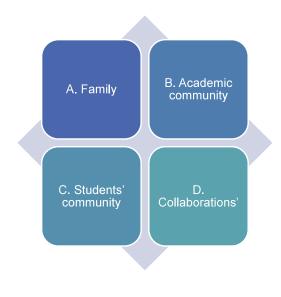
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5.10. Peer preparation for missions (2/2)

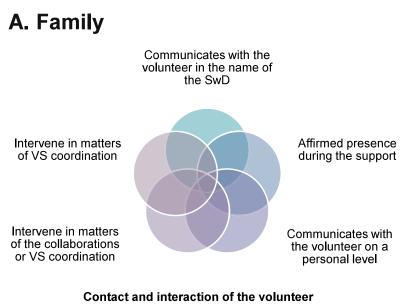
Additional psychiatric or health related issues or other characteristics (not related with the original request for support) :

- Analytical description of the situation to both parties (with the agreement of the peers for disclosure)
- Need to create emergency protocols,
- · Support may remain anonymous (no personal contact),
- · Worst case scenario: no intervention possible.

5.11. Responding to Challenges



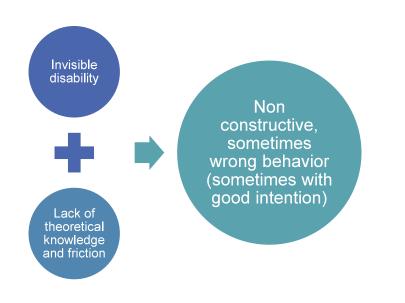




Only with the SWD

- Build a trust and understanding relationship: parents are the first to be influenced by the wellbeing of their child.
- Gradually and politely take distance (2 weeks) :
 - · body language,
 - address only to the SWD,
 - clear appointment after the mission.
- VS may intervene politely if the distance isn't respected.
- If distance is still not respected, the missions and interaction with the volunteers will be restricted and limited (for example only note taking anonymously).
- VS Keeps contact with parents only for S with Asperger, mental health disorders and cognitive disorders.

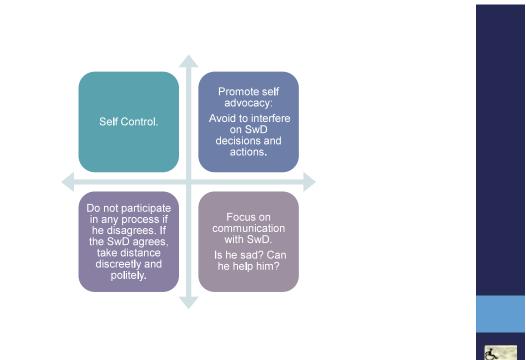
B. Academic community



- Intervention on the body and the tool of the SwD: ask 2 person to take the wheelchair from the wheels to descend stairs without asking the SwD. Drag a blind student instead of accompany him.
- · Communicate with the SwD escort instead of the SwD
- Underestimate, avoid awkward situations : doesn't let the SwD read aloud because of an articulation difficulty when all the class did.

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- Doesn't know procedures for SwD in order to orientate him
- Is not able/willing to create an inclusive environment/educational material
- Is annoyed with different behavior or accommodation he doesn't understand: show irritation.

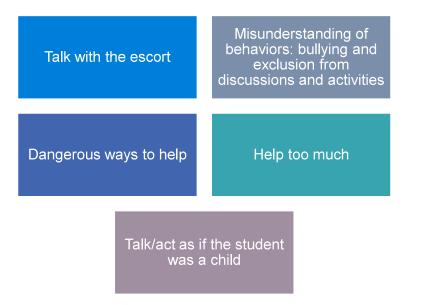


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Inform VS: Intervention via the right hierarchical channel

- Promote an new guideline to the academic community,
- Awareness raising campaign,
- Discreet phone call,
- etc.

C. Students' community



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*Immediate physical threat

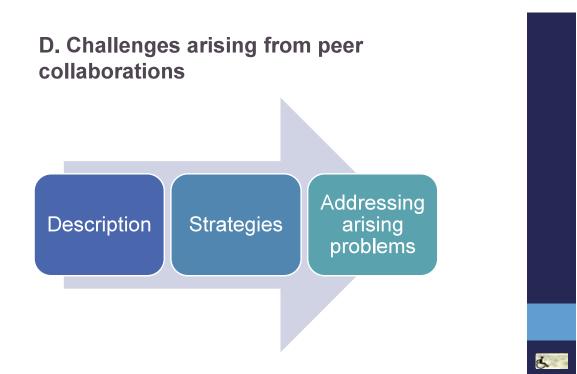
interfere, ask for help, inform.

Matters of disclosure of disability and relation with the peer

 discuss with the SWD during screening what he would like to disclose or not.
 Role plays during Vs' preparation according to SwD wishes.

Relationships within common student groups

□ V is a tool for the volunteer to be more approachable to other student. V remains discreet during the mission.



Description (1/2)

- Sentimental issues:
 - Extreme bonding,
 - Difficulty to open up // opening up to much,
 - Rest on the collaboration instead of develop new friendships.

Organizational:

- Punctuality,
- Drop out the program,
- · Difficulties to keep activities within the framework,
- Will to build own network.

Communication issues:

- Difficulties to give feedback about behavior or the quality of the support,
- Disagreements.

Description (2/2)

- Emergencies:
 - Known accessibility or health emergency
 - Additional unknown mental or physical health issues.
 - Inappropriate behavior.

SwD:

• Difficulty to overcome transition challenges (first slides) despite the collaboration

Volunteer Hyper investment :

- Take additional missions without limits and without VS knowledge: burnout
- Take personally the defeats of the SwD
- · Wants to do things where there is no need

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Strategies

- According to collaborators profiles: preparation of every known possibility + role plays/case studies during orientation day and screening.
- Check weekly feedbacks, discuss with collaborators if something is mentioned or seems to start developing.
- Encourage sincere and mature communication between collaborators, as with all peers.

Addressing arising problems

- Discreet phonecall, ask collaborators for information's on the matter and their possibilities to evolve in a better direction (no good or bad answer but be clear on difficulties to keep VS responsibility over the collaboration)
- 2. Ask for personal meeting with both peers. Possibility of DS Unit Psycholog's presence.
- Immediate withdrawal from the collaboration, anonymous support or withdrawal from the program if the situation is grave.

Results (1/2)

Pilot: 2010 with 10 volunteers and 10 SwD. Each semester, requests from 20 to 45 SwD and orientation of 20 to 80 volunteers. Half the volunteers stay for one or more semester.

This Semester: 95% of requests met 100% SwD collaborating with a peer



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Results (2/2)

- Evaluation extracts (Volunteers): «I had the opportunity to learn things about a group of people with misunderstood abilities» . «I acquired a lot of knowledge and by helping, i became more social. Also, i learned to take action». «My participation made me more punctual, and collaborative. Also, I learned to be more patient trough communication».
- SwD: «Notes were truly helpful. Psychologically i felt a huge satisfaction seeing that people care about me, without expecting something back».

□ Minimum cost: university locals, food, beverages, wheelchairs for the trainings.



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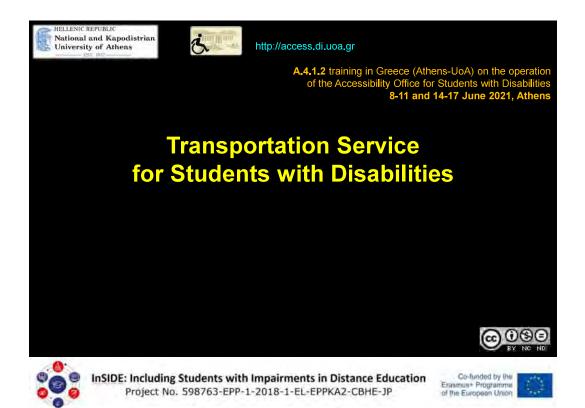
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Complementary Measures To Complete VS

- Building's accessibility improvement.
- Care giving personnel specialized in disability in every university's building complex (nursing care, toilet assistance).
- Academic departments' implementation of Universal Design for Learning.







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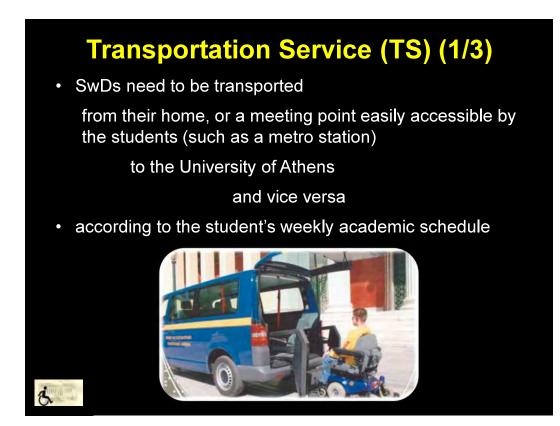
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Criteria on which students' transports are based

Students who use a wheelchair or those with severe motor disabilities have priority in being transported from their home to the University and vice versa.

Transportation Service (TS) for Students with Disabilities (SwDs) serves on an annual basis, ~ 62 students, realizing ~ 1.202 itineraries per year (based on the annual statistics of the academic year 2018-2019).





Transportation Service (2/3)

- itineraries are carried out every day
- from 06:00 to 22:00
- During the examination periods: itineraries are carried out, exceptionally, on **Saturdays**, too
- 4 employees:
 - a secretary
 - three drivers



Modifications made to old vehicles

The two vehicles of the Accessibility Unit have been modified as soon as they are purchased, being equipped with:

- a special electric step
- an electric ramp for wheelchairs
- lashing belts for wheelchairs
- support handles

The special electric step (1/2)

It is a folding step used by SwDs in order to board the vehicle, setting aside the difficulties they encounter.





The electric ramp

It is an electric folding ramp used by students who use wheelchairs in order to board the vehicle. The ramp is placed at the rear of the vehicle.

Vehicles capacity (as far as the students who use wheelchair is concerned):

- the first vehicle can transport two students in a wheelchair and
- the second vehicle only one of them



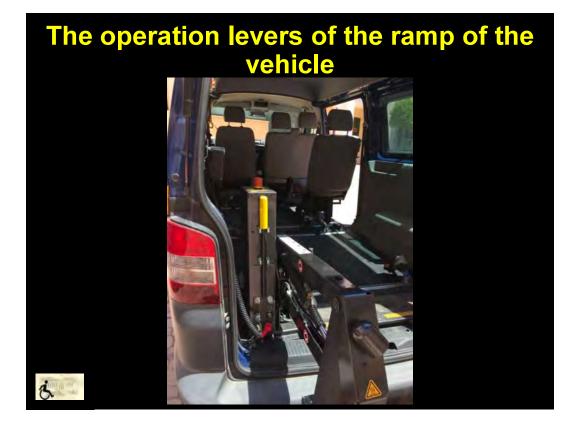
The electric ramp of the vehicle (1/3)





The electric ramp of the vehicle (3/3)

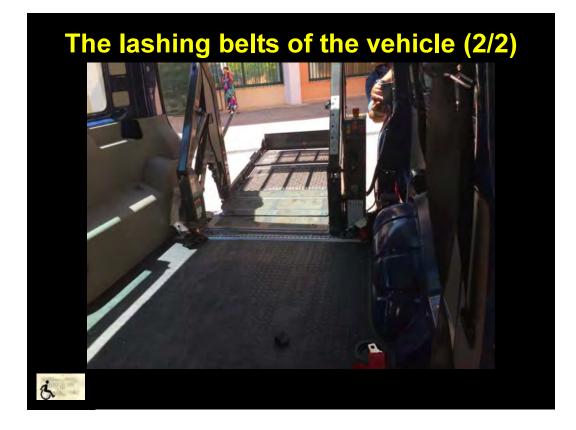




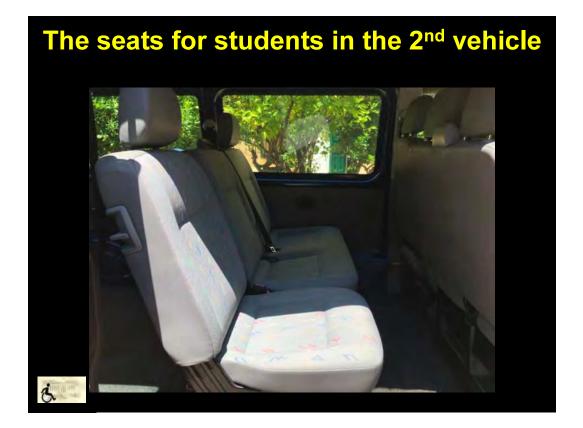
The lashing belts of the vehicle (1/2)

These are some belts used in order students in wheelchairs to be fastened throughout their travel from their home to the premises of the University of Athens and vice versa, so as to be safe in the Accessibility Unit's vehicles.









The lashing belts of the 2nd vehicle





The new vehicles of the Accessibility Unit

Currently, we have purchased two more vehicles to cover the needs of the students of the University of Athens, setting aside the fuel restrictions.

After months of research, we ended up in the following option:

Nissan NV-300 Combi

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Nissan NV-300 Combi (2/2)

The vehicle technical characteristics are:

- number of seats for both the students and the drivers: 9
- reversing camera and parking sensors
- NAVI & Bluetooth
- fog lights
- driver/co-driver airbag
- rain/light sensors





The interior of the Accessibility Unit's new vehicles (2/2)



















Restrictions (1/2)

Since 2012, a monthly fuel consumption restriction has been imposed on the state vehicles of the country, which can be calculated based on the following type:

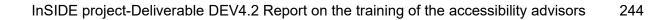
It to be consumed = max quantity of It '200' * (km traveled / upper limit of km '1200')

As a result, each one of the Accessibility Unit's vehicles has the ability to consume only 200lt per month.



This fact inevitably, led to the selection of SwDs who will finally be transported by the Accessibility Unit's vehicles, the percentage of whom is extremely small in relation to those who apply for being transported each semester.

SwDs and their families have tried their best for this restriction to be abolished, respect to the Accessibility Unit's vehicles, but the only thing they succeeded was the total quantity of liters to be consumed per month to be increased by 50lt (a quantity which is included in 200lt per month total quantity).









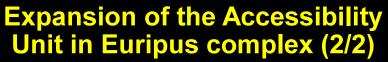


Expansion of the Accessibility Unit in Euripus complex (1/2)

National and Kapodistrian University of Athens has acquired new departments at Psachna, Evia island, thus the services of the Accessibility Unit have been expanded to cover the needs of this region, too.

Therefore, a branch of the TS exists in Psachna, staffed by

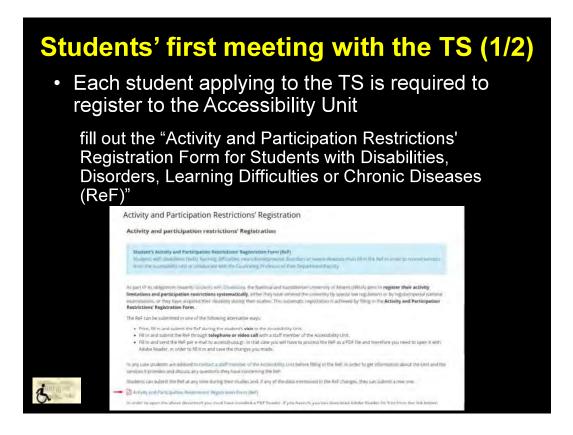
- two employees and
- a driver

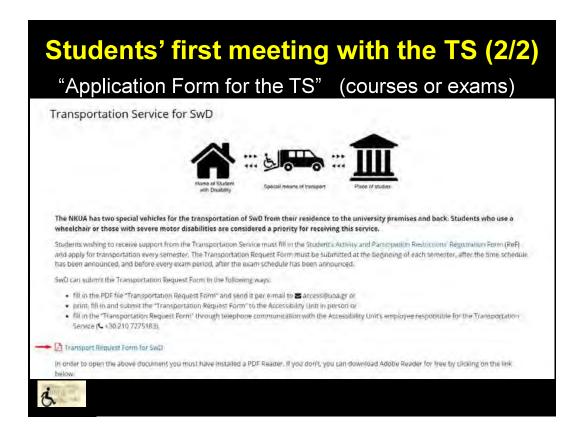


One of the vehicles, serves the SwDs who study in five new departments, at Psachna.

The specific vehicle transports the SwDs who study in the specific new departments of the Euripus campus branch from their home or train/bus station to the amphitheaters and vice versa.

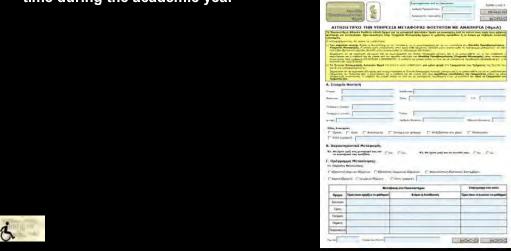






Transport Request Form for SwD

- at the beginning of each semester
- before each examination period
- new students or those with a temporary motor disability can apply at any time during the academic year



The organization of the itineraries timetable

Each student is informed by the Secretary of the TS about the receipt of his/her application and the time period within which he/she will receive a response to his/her request.

After gathering all the students' applications, **an itineraries timetable** must be organized. This timetable depends on:

- the priority that each student has over the others
- the program overlays
- the distances to be covered in each case
- the availability of the TS in reference with the fuel to be consumed (due to the monthly fuel consumption restriction)

· the availability of the vehicles

Modifications on an itinerary of the TS

- A scheduled itinerary can be modified by the student e.g.: due to illness
- another student's transfer can be scheduled
- In extremely unexpected cases: students can call the drivers on the mobile phone (even in the morning of the day their transportation is scheduled)

Communication between SwDs and the Secretariat of the TS

All students who have expressed interest in being served are informed about **the ability** of the TS to transfer them (on which days)

SwDs **are informed** about their upcoming transfer (exact time of transfer) **the day before the realization of the transfer**

The Secretary of the TS and each student arrange **together** the time on which the driver will take the student from the meeting point

The Secretary of the TS communicates with the SwDs **on a daily basis**, in order to confirm their attendance



Details regarding itineraries (1/2)

TS fills out a daily form which includes the details of the itineraries:

- the current date
- per itinerary:
 - · the student's address / the meeting point
 - the student's department
 - the departure time
 - the indication of the odometer at the departure point
 - the time of the arrival
 - the indication of the odometer at the arrival point
- · the signature of the Accessibility Unit's director



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Vehicles certifications for the transportation of People with Disabilities

The Accessibility Unit's vehicles are certified for:

 being fully equipped as vehicles who transport People with Disabilities

The Accessibility Unit's vehicles licenses contain both all the vehicle characteristics and all the evidence which prove that the vehicles can transport People with Disabilities.



Annual Statistics of the TS

- Total number of students served: 62
- Total number of itineraries: 1.202
- Total distance covered: 23.923 kilometers
- Total amount of gasoline consumed: 3.600 liters

Cooperation between the services of the Accessibility Unit (1/2)

In general, all the services of the Accessibility Unit cooperate with each other several times in order to serve SwDs as effectively as possible.

First of all, the secretaries of all the Accessibility Unit's services inform together the SwDs, during their first contact with the Unit. Each one of them analyzes the provisions of each service to SwDs, so that they have an overview of the Unit's provisions.

Especially, the cooperation between the Transportation and Accessibility Support Voluntary Services is perfect and effective, since in most cases, volunteer students undertake to help students with mobility problems move from the Unit's vehicles to the amphitheaters and vice versa.



Cooperation between the services of the Accessibility Unit (2/2)

A case of a student helping her classmate move from the Accessibility Unit's vehicle to the amphitheater is depicted in the picture below:



Case studies

To say the truth, every semester, the employees of the Accessibility Unit encounter various difficulties while interacting with the SwDs and their families. Especially, as far as the TS is concerned, these difficulties are focusing on the monthly fuel consumption restriction which has been mentioned before.

Nevertheless, there are some specific examples of SwDs that have provoked malfunction within the Accessibility Unit's environment, for example:

- a SwD who wanted to be transported to the toilet by volunteer students, which is prohibited under the Accessibility Unit's regulations
- a SwD was impossible to be matched with volunteer students who will help her be transported from one amphitheater to another or other areas of the University

Results from the evaluation of the Accessibility Unit operation

In general, SwDs are quite satisfied from the way they are transported by the Accessibility Unit's vehicles and their cooperation with the employees of the Unit and the volunteer students who help them in their everyday life.

This is evident from the thanks of the students and their families, at the end of their studies, not only to the Unit in general, but also to the drivers and the employees of the Unit, in a personal level.

Moreover, there are many cases where articles have been published in the Press that highlight the importance of the Accessibility Unit and how the Unit's services facilitate the daily life of SwDs.

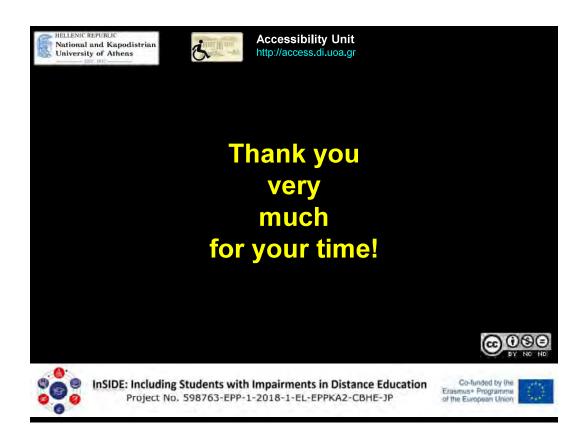


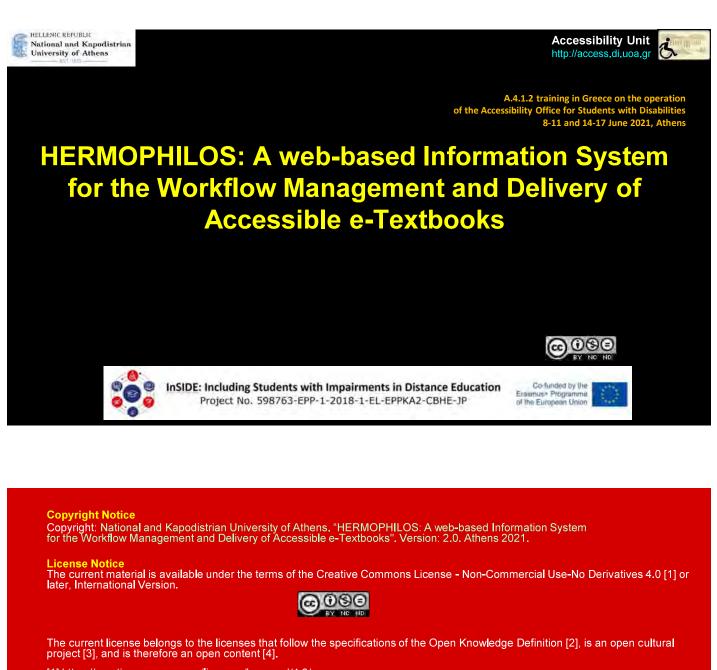
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Special missions

Even if the Accessibility Unit's vehicles have been purchased to transport SwDs from their home to the premises of the University of Athens and vice versa, there are some special cases that these vehicles and their drivers have been used so far. For example, during the current period, that the whole planet suffers from the COVID-19 Coronavirus Pandemic, the Unit's drivers were called to transport:

- antiseptics to the University premises
- armchairs and blood collection materials for antibody testing as far as the disease control of the University of Athens staff





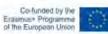
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InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP

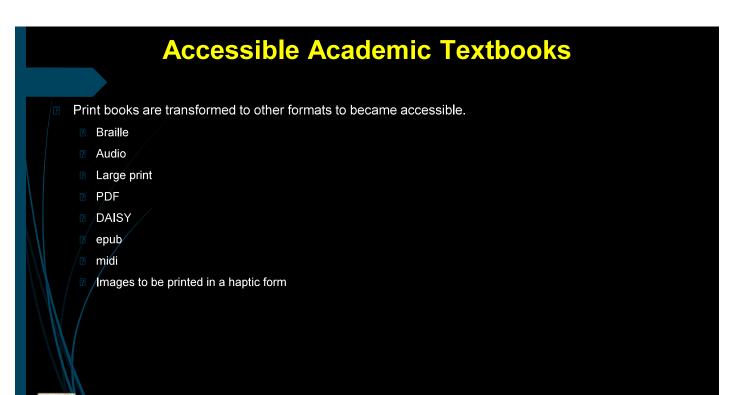


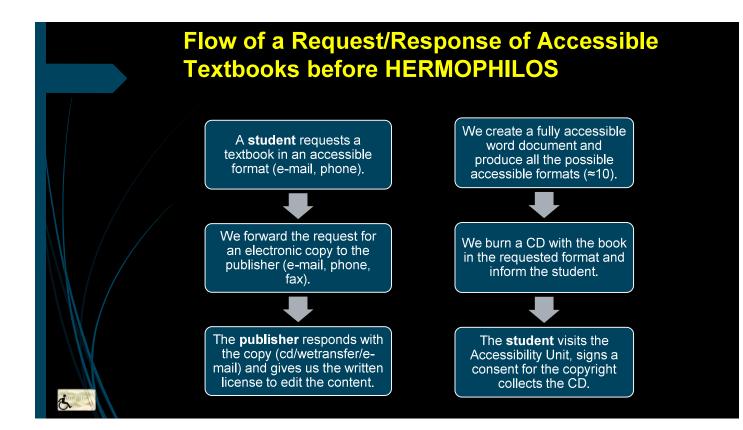
Academic Textbooks

- Each year the academic staff propose a set of book titles for their courses (**≈ 3**).
- Pre-graduate students of the public universities of Greece are entitled to receive free textbooks for their studies, 1 textbook/course.
- Students attending study programs for a second bachelor's degree are also entitled to free printed copies of academic textbooks.
- The electronic service of integrated textbooks management <u>EUDOXUS</u> offers free academic textbooks to all active students of first cycle programs since 2010-2011.
- Students who have exceeded the officially set course duration or post-graduate students can either borrow textbooks from the university libraries or buy them.
 - Returns of EUXODUS textbooks that are part of the Library's collection fall under the borrowing regulations of the Library (short-term, long-term lending).

Print Disabilities

- A print disability is a difficulty or inability to read printed material due to a perceptual, physical or visual disability.
- 2 The reasons for print disability vary but may include:
 - vision impairment or blindness
 - B physical dexterity problems such as multiple sclerosis, Parkinson's disease, arthritis or paralysis
 - Iearning disability, such as dyslexia
 - I brain injury or cognitive impairment
 - literacy difficulties
 - early dementia

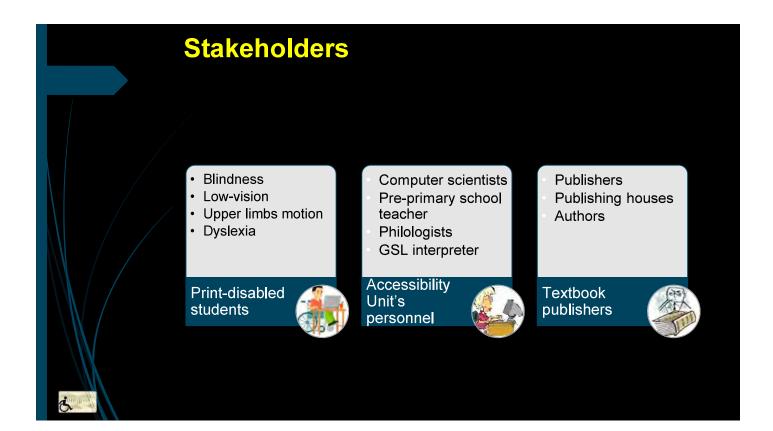




Hermophilos homepage







Interconnections with external academic systems

- GRNET
- MyStudies
- Eudoxus
- Pergamos

Delos Federation – Authentication and authorization Infrastructure (AAI)

- allows different organizations that span across the country to cooperate in the assignment of access rights for bi-institutional applications, such as access to digital libraries
 - LDAP server for the lookup of NKUA directory information of faculty, staff, and students
 - Institutional user account
- Delos Federation consists of 57 institutions of the academic, research and educational community in Greece
- **GRNET** participation in the GÉANT pan-European research and educational network

MyStudies system

Electronic secretariat of the NKUA

Uses for students

- ☑ View curriculum (teaching units, teaching hours, teacher, books, etc.)
- Select courses per semester
- View course scores
- Apply for certificates

EUDOXUS system

Immediate and integrated provision of university books to Higher Education students

GRNET "<u>EUDOXUS</u>" is an innovative online service for the immediate and integrated provision of university books to Higher Education students

EUDOXUS was launched in the academic year 2010-2011 and it offers:

- accurate online information about the pool of books that are available for each course
- quick delivery of the books to the students
- effective mechanisms for publishers' compensation
- parallel distribution of free e-books and notes
- public resources' abuse prevention
- more transparency and less bureaucracy

PERGAMOS digital library

Integrated platform of the institutional repository / digital library of the NKUA

Users

- **Students:** Deposit PhD, graduate and postgraduate theses.
 - **Professors and researchers:** Deposit research papers.
 - Accessibility Unit: Manage the collection of Accessible Academic Textbooks
- General public: Easy access to NKUA research data

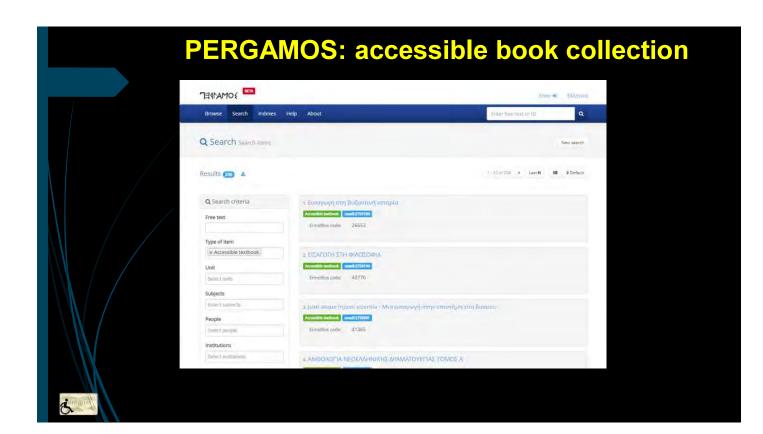
Uses

- **Navigation & Search:** Unified access to scientific, cultural and archival items of UoA.
- **Personalized services:** My items, Favorites, Social networking, Notifications.
- **Open Data:** Interoperability based on international standards and best practices.

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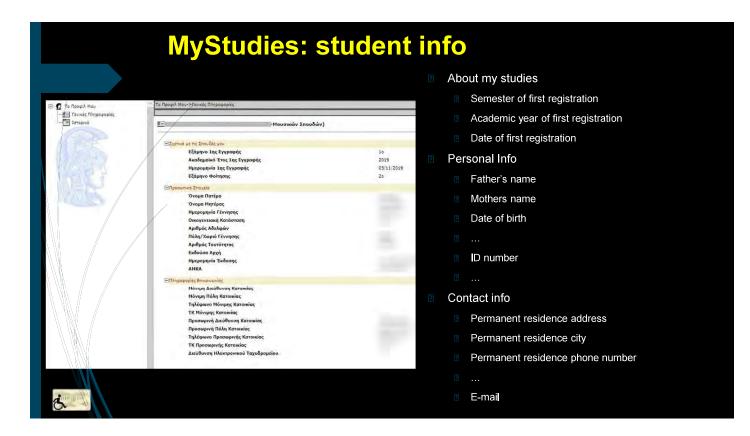
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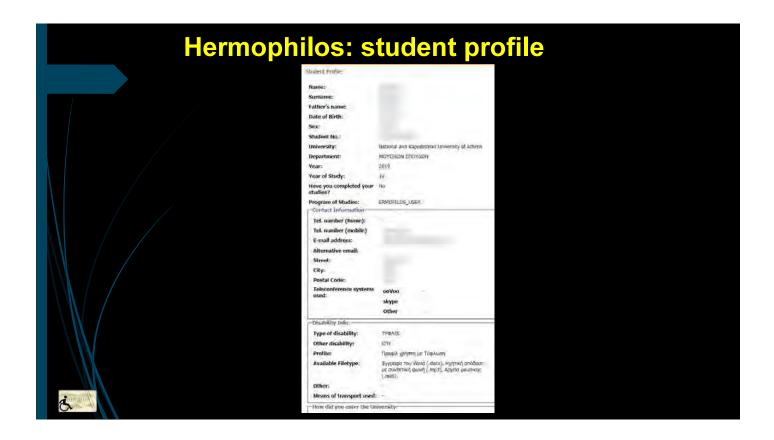


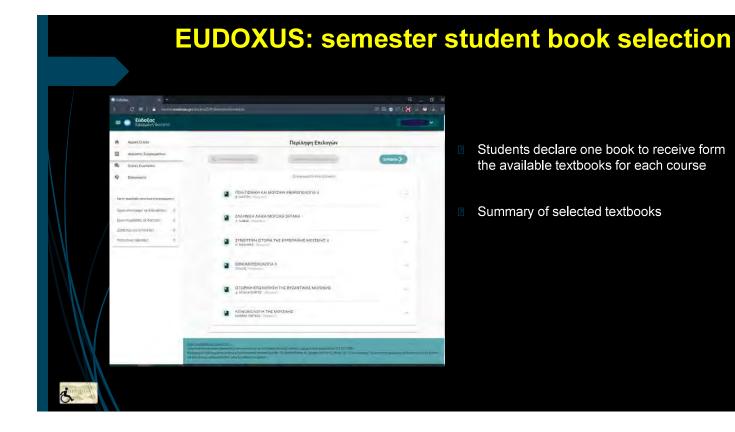


Students with Disabilities

- Basic info is pulled from MyStudies (*academic ID, name, surname, university, department, semester, phone, email*)
- Further info about disabled students is gathered from our Student's Activity and Participation Restrictions' Registration Form in user sign-up
- A subset of these students is print-disabled and also asks for accessible textbooks
 Eudoxus student ID and *list of received textbooks* are pulled from Eudoxus
 Books obtained from Hermophilos along with signed acknowledgment forms are saved in Hermophilos



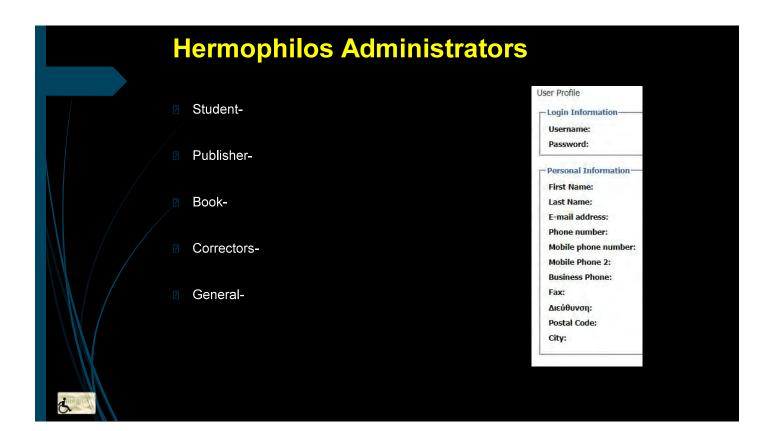


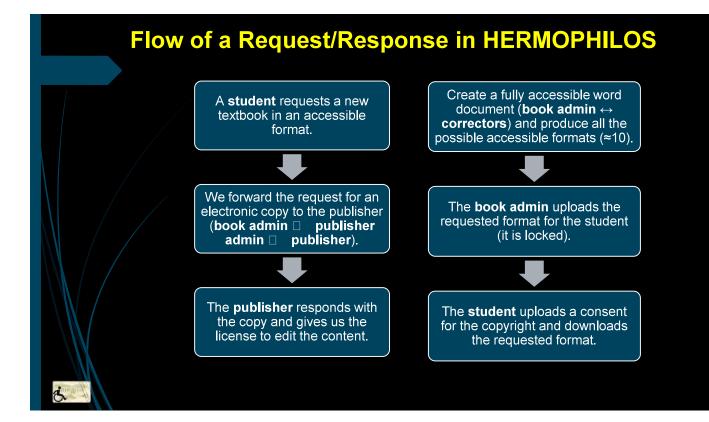


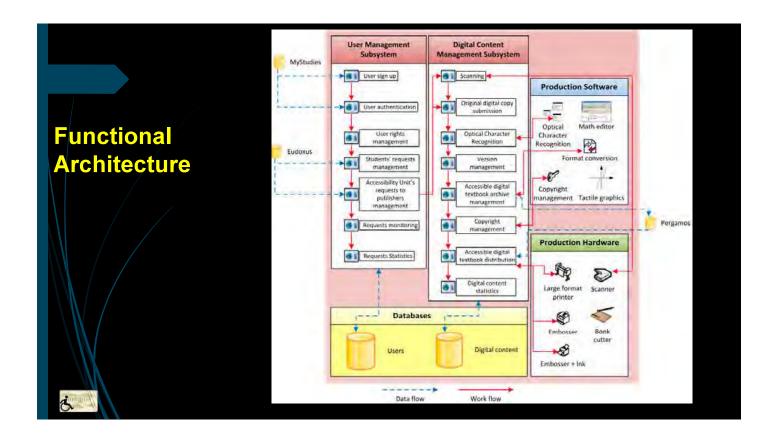
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Services for Students with disabilities

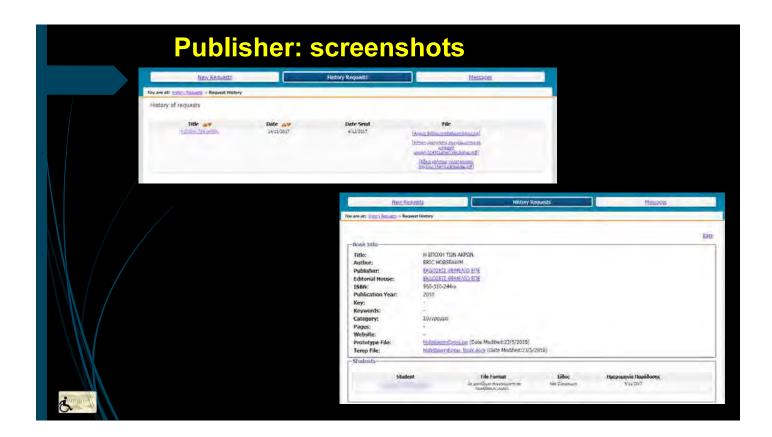
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- Registration form student profile
- Contact

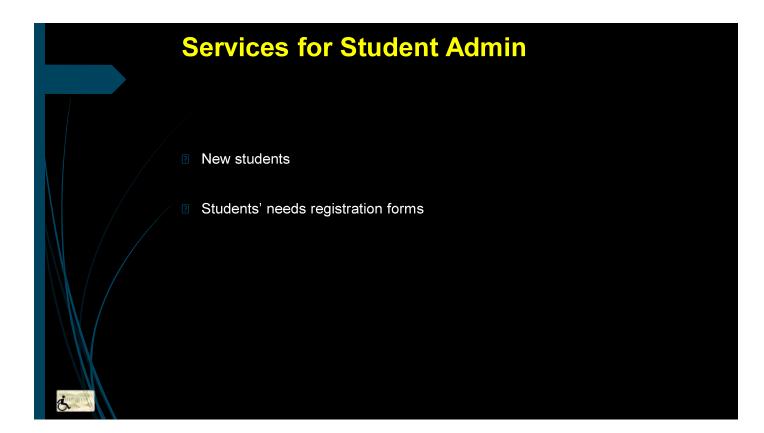
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Services for Correctors

- Registration form (volunteers)
- Tasks per textbook
- File per task

Services for Publishers





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Services for Publisher Admin

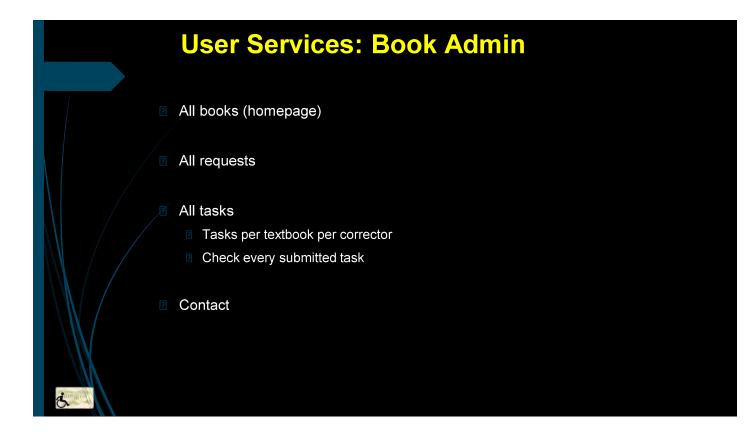
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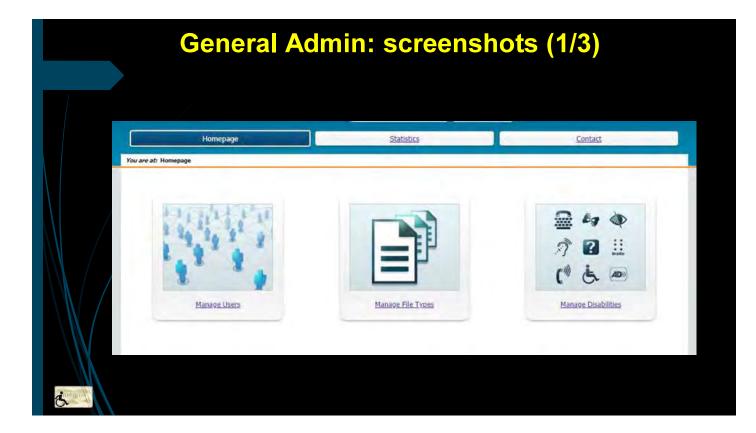


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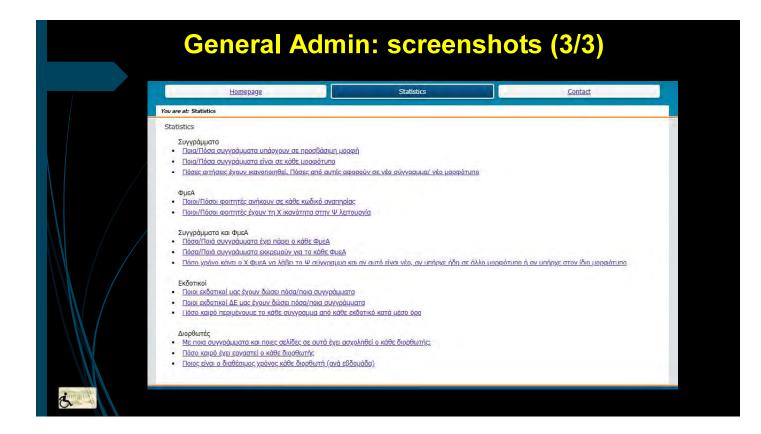
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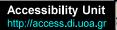
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Any questions?

HELLENIC REPUBLIC

National and Kapodistrian University of Athens

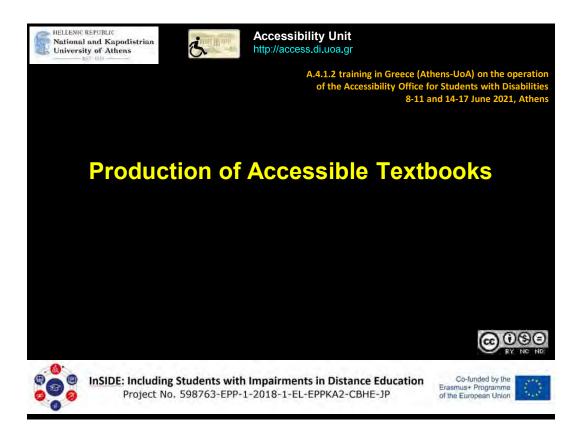
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InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP



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Introduction

- The following instructions aren't guidelines used in Greece, but the practices we use as Accessibility Unit
- What is our goal?
 - To create a document in any accessible format without losing any of the content of the original textbook.

Stages of conversion

- Conversion of the textbook into editable electronic form
- Description of images and graphs
- Conversion of mathematical expressions into accessible formats
- Conversion of music to an accessible format
- Production of accessible file formats

1. Scanning

• When?

- In case the print book doesn't exist in any digital form
- Tools:
 - KW-TRIO Cutter
 - Fi-6770 Scanner
- Disadvantages:
 - Requires great physical strength
 - Destroys the textbook





2. Optical Character Recognition (1/2)

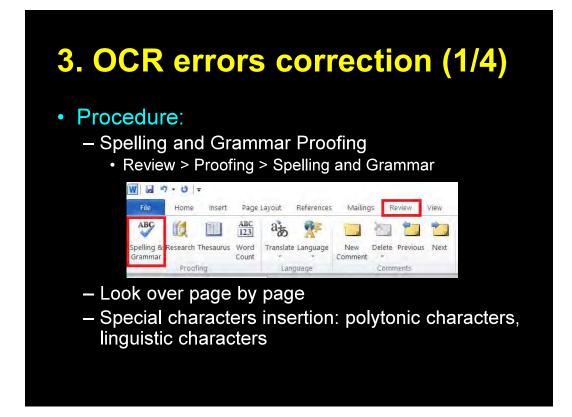
- When?
 - In case of a book in an non accessible pdf form or a scanned book
- Tool:
 - ABBYY FineReader 12.0 Professional
- · Characteristics:
 - 190 languages, including the Greek language
 - Simultaneous recognition of more than 2 languages
 - Language and recognition templates creation
 - Analysis of the structure of the entire document and identification of areas containing text, images and tables and editing of the result

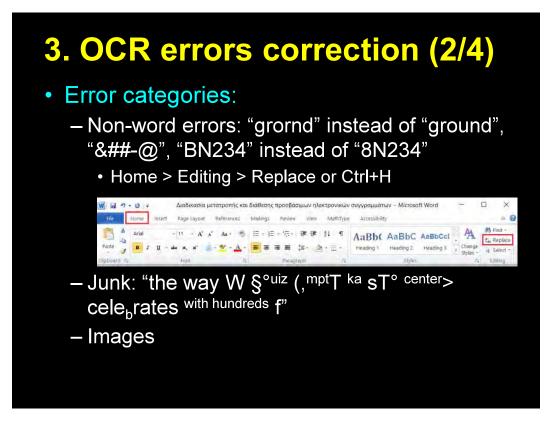
2. Optical Character Recognition (2/2)

- Procedure:
 - Automatic OCR based on program settings selected after testing

• Disadvantages:

- Strange font
- Decorative characters and pictures
- Polytonic writing system
- Mathematics
- Music





3. OCR errors correction (3/4) ELK. 2. 2 E. R. Kandel, J. H. Schwartz & T. M. Jessel, Essentials of Neural Science and Behavior, νέα Υόρκη: McGrow-Hill Companies, 1995 Εικ. 2-2 Παραχώρηση: κ. κωτσάκης· Εικ. <mark>🤁 – 🖸 α – δ</mark> J. P. Mallory, *Οι Ινδοευρωπαίοι*, μτφρ. Ε. αστεριάδου, αθήνα: Δελφίνι/στάχυ, 1995· Εικ. 🛛 Sir A. H. Gardiner, Egyptian Grammar: Being an Introduction to the Study of Ieroglyphs, οξφόρδη: Griffith Institute, 1957, 3η έκδ.• Εικ. 20 I. I. Gelb, A Study of Writing: The Foundations of Grammatology, σικάγο: University of Chicago Press, 1952 · Εικ. 🗖 αμερικανική σχολή κλασικών σπουδών της αθήνας: ανασκαφές αρχαίας αγοράς· Εικ. 22. 22 L. H. Jeffery, The Local Scripts of Archaic Greece, οξφόρδη: Oxford University + <mark>παρασκευή κοτζιά</mark>, Κλασική Φιλόλογος, <mark>αριστοτέλειο</mark> Πανεπιστήμιο Θεσσαλονίκης <mark>hλίας κούβελας</mark>, Γιατρός Φυσιολόγος, Πανεπιστήμιο Πατρών <mark>δημήτριος i.</mark> <mark>κυρτάτας</mark>, Ιστορικός, Πανεπιστήμιο Θεσσαλίας <mark>κώστας κωτσάκης</mark>, <mark>αρχαιολόγος, αριστοτέλειο</mark> Πανεπιστήμιο Θεσσαλονίκης pierre-yves lambert, Γλωσσολόγος (κελτικές γλώσσες), Centre National de la Recherche Scientifique και École Pratique des Hautes Études, Γαλλία nicholas de lange Γλωσσολόγος (εβραϊκές, ιουδαϊκές σπουδές)

3. OCR errors correction (4/4) -Books in polytonic greek

- What is the polytonic system?
- Standard system of Ancient Greek which used a variety of diacritics: an acute accent (´), a grave accent (`), a perispomeni accent (~), a rough breathing (`), a smooth breathing (`)
- Until 1982
- Ancient Greek, purist Greek/archaising form of Modern Greek, Modern Greek
- Unicode symbols: Time consuming process
- MANGENTA Automated Accentuator

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4. Insets (1/21)

- What are the insets?
 - Images, graphs, tables, text boxes, etc.
- What we have to do?
 - Delete the text boxes
 - Correct the tables
 - Describe the images and the graphs
 - Place the insets in the right position
 - Don't delete or change the content

4. Insets (2/21)

Procedure for text boxes

- Object with which we place and type text anywhere in a document
- Find the paragraph it is referring to or the closest neighbor and place it right after that paragraph
- State the beginning and ending of the text box [beginning of text box] Content [ending of text box]



4. Insets (3/21)

- Images (most common):
 - Decorative
 - Informative
- Graphs (most common):
 - Flow Charts
 - Bar graphs
 - Line graphs
 - Pie Charts
 - Venn Diagrams
 - Scatter plots
 - Hierarchy/Tree Diagrams
 - Maps

4. Insets (4/21)

- Guidelines for descriptions:
 - be objective
 - be brief
 - be descriptive
 - be logical
 - be accurate

4. Insets (5/21)

- Guidelines for STEM images' descriptions:
 - be brief
 - focus on data, not extraneous visual elements
 - be clear
 - use a drill-down organization
 - use narrative description if necessary

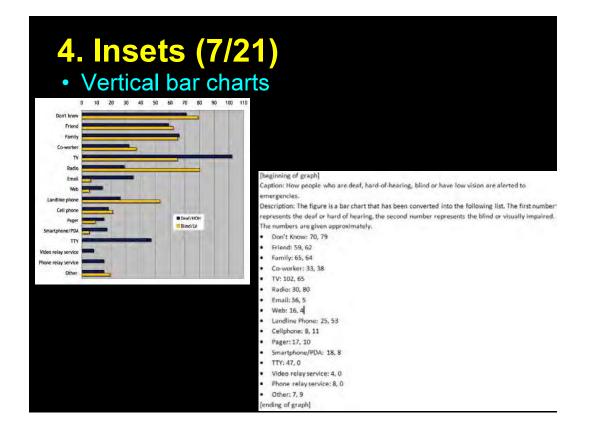
4. Insets (6/21)

Procedure for images/graphs:

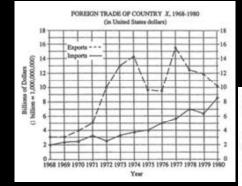
- The description of each image/graph is placed below the paragraph where the image starts at height
- State the beginning and ending of the image/graph:
 - [beginning of image/graph]
 - Caption:

Description:

[ending of image/graph]





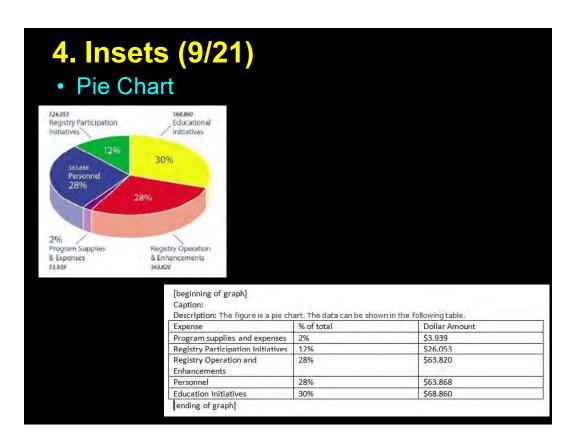


[beginning of graph] Caption: FOREIGN TRADE OF COUNTRY X, 1968-1980 (in United States dollars)

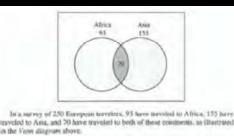
Caption: FDREIGN (FARDE OF COUNTRY X, 1963-1980) (in United States dellars) Description: The figure is entitled "FOREIGN FRADE OF COUNTRY X, 1968 (knowph 1980), in United States dollars". There are two fines on the graph, a disched line labeled "Sports" and a solid line labeled "Imports". The vertical axis is labeled "Billion et Dollars," beginning with zero to eightwein in increments of 2, a note: one billion equals a one followed by 9 arosi. The horizontal axis is labeled "Year" and lass all the years from 1968 direcuph 1980. In the graph, the Export line begins in 1968 at 3 billion dollars, tries steaply to 14 billion in 1974, then drops to 9.5 billion in 1975, and 1975. In 1977, the Exports line shoats up to 15.5 billion, then trials all to 16 billion in 1980. The imports line begins in 1968 at 2 billion and reac-stradily to 3.75 billion in 1980, except for minor dips in 1972 and 1979.

The data are summarized in the following table. Figures are in billions of dollars. All data are

Year	Exports	Imports
1968	3	2
1969	3	2.3
1970	4	2,4
1971	5	3.1
1972	10	2.5
1973	13	3.3
1974	14.2	3,7
1975	9.7	4
1976	9.5	5
1977	15.5	5.7
1978	12.5	7
1979	12	6.3
1980	10.2	8.6

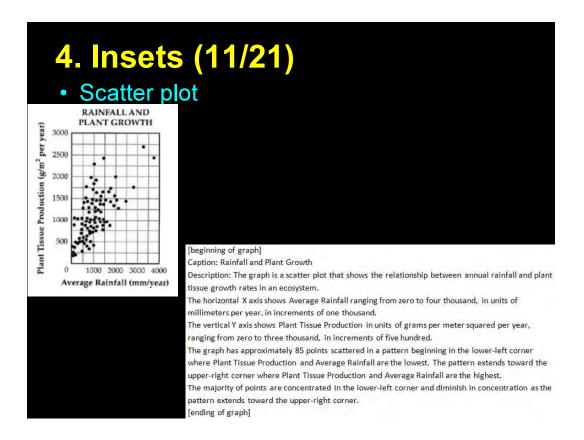


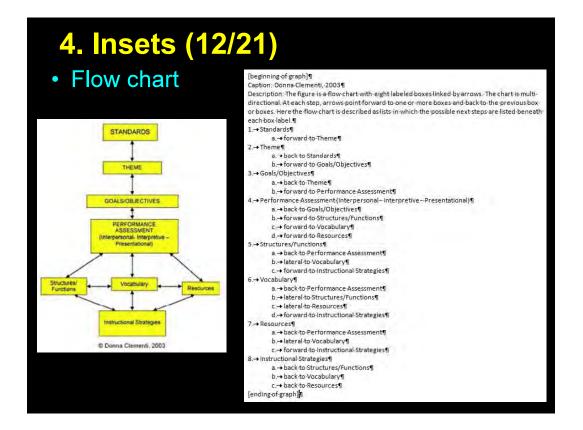
4. Insets (10/21)Venn diagram

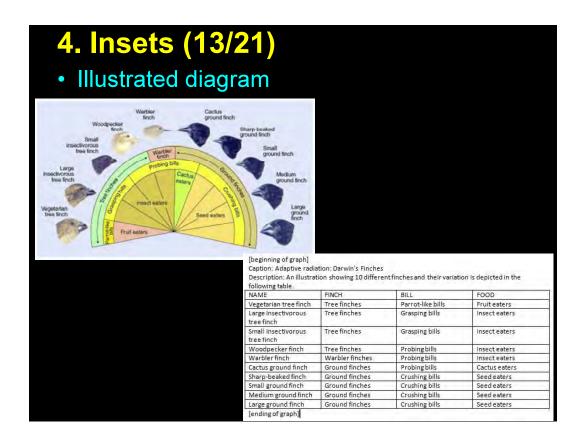


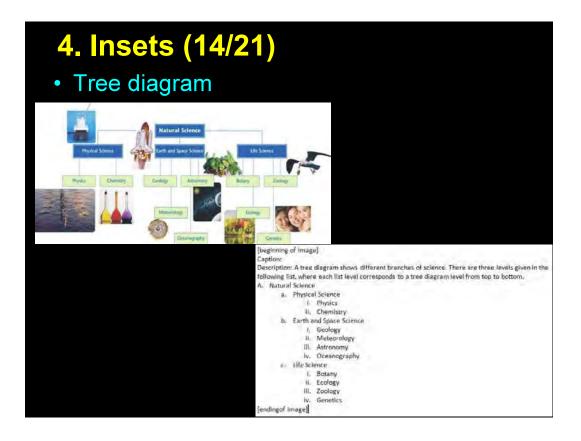
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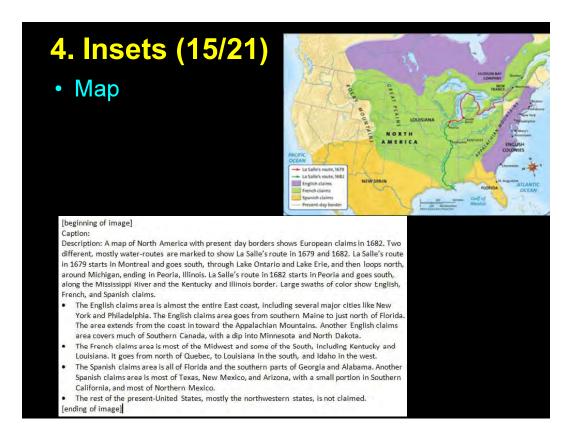
Caption: In a survey of 250 European travelers, 93 have traveled to Africa, 155 have traveled to Asia, and 70 have traveled to both of these continents, as illustrated in the Venn diagram above. Description: The Venn diagram shows 2 intersecting circles, one labeled Africa 93 and the other labeled Asia 155. The area of intersection is labeled 70. [ending of graph]













4. Insets (17/21)

References

- "Effective Practices for Description of Science Content within Digital Talking Books", National Center for Accessible Media
- "Image Description Guidelines", DIAGRAM Center
- "Basics of Inclusive Design for Online Education" (MOOCS)

4. Insets (18/21)

Procedure for tables:

- The caption is placed before the table
- Insert table
- Define the headings of columns and rows
- Do not merge cells

• How to insert?

- Insert > Tables > Insert Table...
- Insert Table > Table Size > Number of columns and Number of rows

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4 In	sets (19)/21)	
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Αμετοχος ερευνητής	Συμμέτοχος ερευνητής		
Δοκιμή Θεωρίας	Ανάδυση θεωρίας		
Στατικότητα	Διαδικασία		
Δομημένη	Μη δομημένη		
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		Δοκιμή θεωρίας	Ανάδυση θεωρίας
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		Απτά, αξιόπιστα δεδομένα	Πλούσια, βαθιά δεδομένα
		Μακροεπίπεδο	Μικροεπίπεδο
		Μακροεπιπεδο Συμπεριφορά Τεχνητές συνθήκες	Μικροεπίπεδο Νόημα Φυσικές συνθήκες

4. Insets (20/21)• Tables (2/3)

Before

Πίνακας 10.1. Τα πλεονεκτήματα των επισκοπήσεων μέσω ηλεκτρονικού τοχυδρομείου και του Παγκόσμιου ίστου σε σύγκριση με την κατά πρόσωπο συνέντευξη, την τηλεφωνική συνέντευξη και τις επισκοπήσεις βάσει ταχυδρομικού ερωτηματολογίου

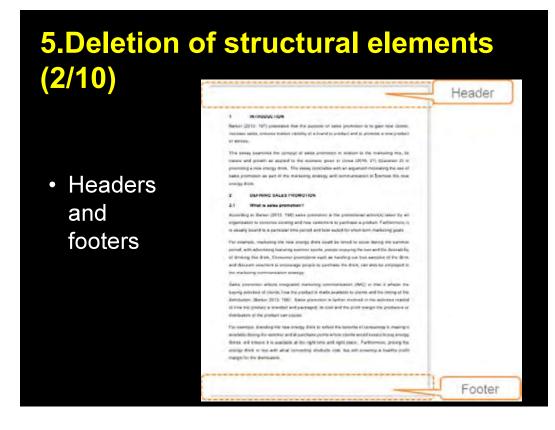
Ζητήματα που θα πρεπει να ληφθούν υπόψη	Τρόπος χορήγη	οης της επίσκο	πησης		
	Κατά πρόσωπο συνέντευξη	Τηλεφωνική συνέντευξη	Ταχυδρομικό ερωτηματολόγιο	Ηλεκτρονικό ταχυδρομείο	Παγκόσμιος Ιστός
Ζητήματα πόρων					
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Απαιτείται μικρή τεχνική εξειδίκευση για τον σχεδίασμό του ερωτηματολογίου,	111	***	111	"	*
Ζητήματα δειγματοληψίας					
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Insets (2) Tables (3/3)	,				
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5.Deletion of structural elements (1/10)

• What are the structural elements?

Fruit	Supplier	City	Container	Pr	ice	Value
Apples	Tasmania Growers	5	Box	\$	10.00	\$ 50.0
Pears	Somerset Distributors	6	Bags	\$	6.00	\$ 36.0
Ganinas	Coffs Farmers	10	Crates	5	20.00	\$ 200.0
Grapes	Vineyard Enterprises	15	Crates	5	15.00	\$ 225.0
Peaches	Tasmania Growers		Cartons	5	12.00	
Apricate	Vizionia Cooperative	10	Bags	5	2.00	\$ 80.0
Pluma	Somerset Distributors	12	Box	\$	6.00	\$ 72.0
Oranges	Murrumbidgee Growers	20	Crates	\$	5.00	\$ 100.0
Total			-	-		\$ 859.0



5.Deletion of structural elements (3/10)

- Why should structural elements be erased?
 - 1. Expensive printing.



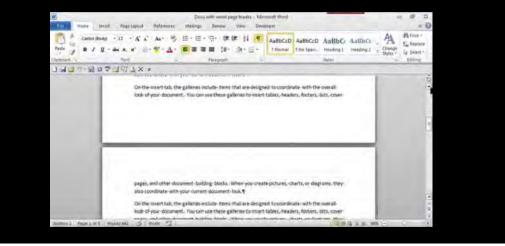


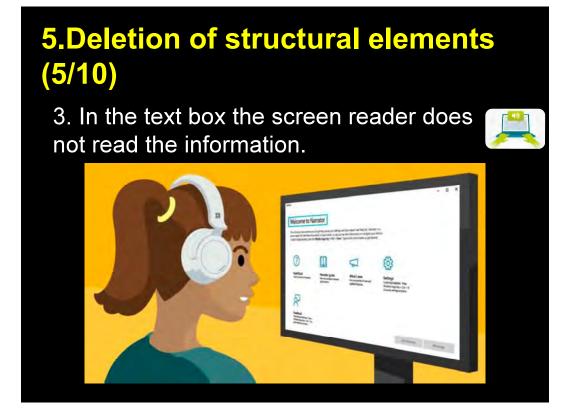
of September, and the equinoctial gales had set in with exceptional violence. All day the wind had screamed and the rain had beaten against the windows, so that even here in the heart of great, handmade London we were forced to raise our minds for the instant from the routine of life and to

5.Deletion of structural elements (4/10)

2. Broken paragraph and the meaning is lost.









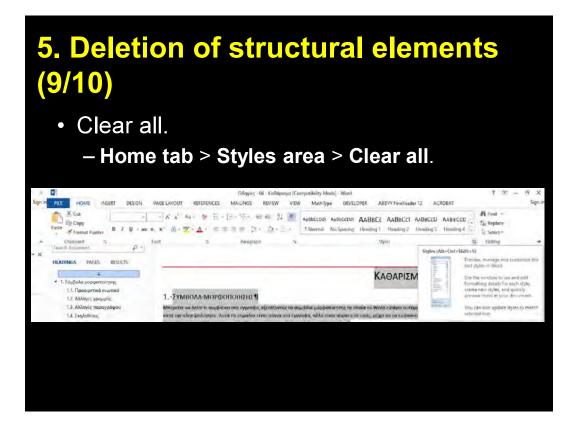
5. Deletion of structural elements 7/10)

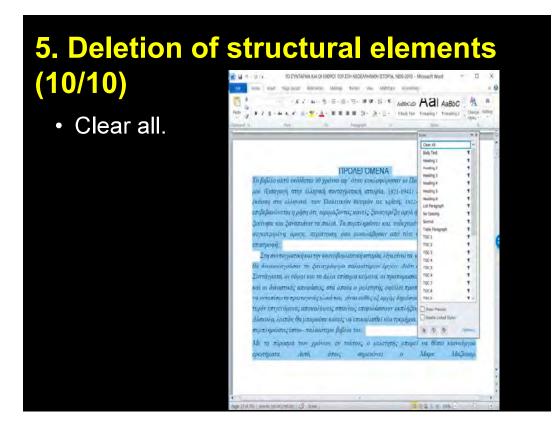
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5. Deletion of structural elements (8/10)

- Clear all.
 - Select the text (Ctrl+A or Home tab > Editing area > Select button > Select All).

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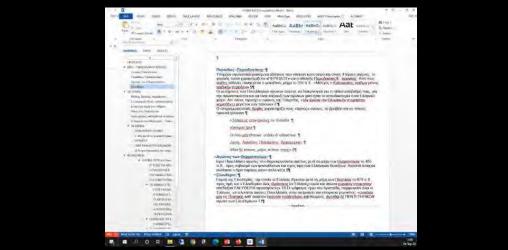




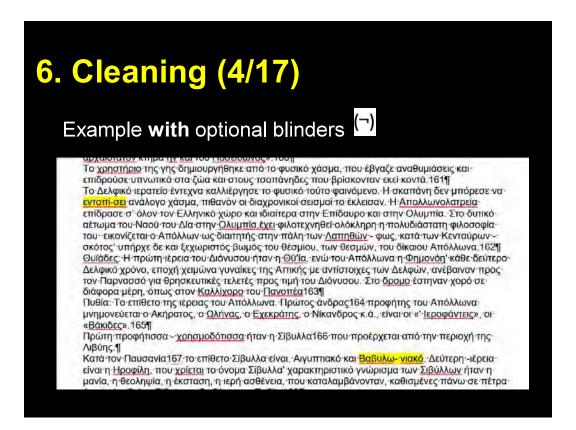


6. Cleaning (2/17)

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6. Cleaning (3/17)	
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6. Cleaning (5/17)

Example **whithout** optional blinders (¬)

επδρούσε υπνωτικά στα ζώα και στους τασπάνηδες που βρίσκονταν εκεί κοντά.161¶ Το Δελφικό ιερατείο έντεχνα καλλιέργησε το φυσικό τουτο φαινόμενο. Η σκαπάνη δεν μπόρεσε να εντοπίσει ανάλογο χάσμα, πιθανόν οι διαχρονικοί σεισμοί το έκλεισαν. Η <u>Απολλωνολατρεία</u> επίδρασε σ' όλον τον Ελληνικό χώρο και ιδιαίτερα στην Επίδαυρο και στην Ολυμπία. Στο δυτικό αέτωμα του Ναού του Δία στην <u>Ολυμπία έχει</u> φιλοτεχνηθεί ολόκληρη η πολυδιάστατη φιλοσοφίατου εικονίζεται ο Απόλλων ως διαιτητής στην πάλη των <u>Λαπηθών</u> - φως, κατά των Κενταύρων σκότος' υπήρχε δε και ξεχωριστός βωμός του θέσμιου, των θεσμών, του δίκαιου Απόλλωνα 162¶ <u>Θυίαδες</u>: Η πρώτη ιέρεια του Διόνυσου ήταν η <u>Θύ'</u>ία, ενώ του Απόλλωνα η <u>Φημονόη</u>' κάθε δεύτερο Δελφικό χρόνο, εποχή χειμώνα γυναίκες της Απικής με αντίστοχες των Δελφών, ανέβαιναν προς τον Γιαρνασσό για θρησκευτικές τελειές προς τιμή του Διόνυσου. Στο δρομο έστηναν χορό σε διάφορα μέρη, όπως στον <u>Καλλίχορο</u> του <u>Πανοπέα</u>163¶

Πυθία, Το επίθετο της ιέρειας του Απόλλωνα, Πρώτος άνδρας 164 προφήτης του Απόλλωνα μνημονεύεται ο Ακήρατος, ο <u>Ολήνας</u>, ο <u>Εχεκράτης</u>, ο Νίκανδρος κ.ά., είναι οι «Ι<u>εροφάντεις</u>», οι «<u>Βάκιδες</u>», 165¶

Πρώτη προφήτισσα - χ<u>ρησμοδότισσα</u> ήταν η Σίβυλλα166 που προέρχεται από την περιοχή της Λιβύης.¶

Κατά τον Παυσανία 167 το επίθετο Σίβυλλα είναι. Αιγυπτισκό και Βαβυλωνισκό, Δεύτερη «ιέρεια είναι η <u>Ηροφίλη</u>, που χρίεται το όνομα Σίβυλλα' χαρακτηριστικό γνωρισμα των <u>Σιβύλλων</u> ήταν η μανία, η θεοληψία, η έκοταση, η ιερή ασθένεια, που καταλαμβάνονταν, καθισμένες πάνω σε πέτραι ή σε τρίποδα' τη Σίδυλα τη διαδέχεται η Πυθία 1581

6. Cleaning (6/1	7)
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6. Cleaning (7/17)

Example with blanks and tabs 🚽

πμη του Απολλωνα, αλλα οιθυραμβοι τηρος πμη του Διονούου, του Ατοπροφηταπο τα τεμπητου. Φοίβου γιορταζόταν με «τά Θεοφάνεια». 159¶

Κατέβαλε προσπάθεια η Απολλώνεια φιλοσοφία για να εδραιωθεί και να επιβληθεί γιατί αντιμετώπισε στους Δελφούς και την αντίδραση της λατρείας του Ποσειδώνα: «τό μαντείον τό άρχαιότατον κτήμα ήν καί του Ποσειδώνος». 160¶

6. Cleaning (8/17)

Example without blanks and tabs 🚽

τιμή του Απόλλωνα, αλλά διθύραμβοι προς τιμή του Διόνυσου 158 Η επιστροφή από τα Τέμπη του Φοίβου γιορταζόταν με «<u>τά Θεοφάνεια</u>» 159¶

<mark>Κατέβαλε προσπάθεια η Απολλώνεια φ</mark>ιλοσοφία για να εδραιωθεί και να επιβληθεί γιατί αντιμετώπισε <mark>στους Δελφούς</mark> και την αντίδραση της λατρείας του <u>Ποσειδώνα</u>: «τό μαντείον τό άρχαιότατον κτήμα <u>ην καί</u> του <u>Ποσειδώνος</u>» 160¶

Το <u>χρηστήριο</u> της <mark>γης δημιουργήθηκε</mark> από το φυσικό χάσμα, που έβγαζε αναθυμιάσεις και επιδρούσε υπνωτικά στα ζώα και στους τσοπάνηδες που βρίσκονταν εκεί κοντά 161¶ Το Δελφικό ιερατείο έντεχνα καλλιέργησε το φυσικό τουτο φαινόμενο. Η σκαπάνη δεν μπόρεσε να ενταπίσει ανάλογο χάσμα, πιθανόν οι διαχρονικοί σεισμοί το έκλεισαν. Η Απολλωνολατρεία επιδρασε σ' όλον τον <mark>Ελληνικό χώρο</mark> και ιδιαίτερα στην Επίδαυρο και στην Ολυμπία. Στο δυτικό αέτωμα του Ναού του Δία στην Ολυμπία, έχει φιλοτεχνηθεί ολόκληρη η πολυδιάστατη φιλοσοφία του εικονίζεται ο Απόλλων ως διαιτητής στην πάλη των <u>Απηθών</u> - φως, κατά των Κενταύρων --<mark>σκότος υπηρχε</mark>δε και ξεχωριστός βωμός του θέσμιου, των θεσμών, του δίκαιου Απόλλωνα.162¶

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6. Cleaning (10/17) Example with excessive vacancies/tabs

6. Cleaning (11/17)

Example without excessive vacancies/tabs

Κατά τον Παυσανία167 το επίθετο Σίβυλλα είναι. Αιγυπτιακό και Βαβυλωνιακό. Δεύτερη «ιέρεια είναι η <u>Ηροφίλη, που χρίεται</u> το όνομα Σίβυλλα χαρακτηριστικό γνώρισμα των <u>Σιβύλλων</u> ήταν η μανία, η θεοληψία, η έκσταση, η ιερή ασθένεια, που καταλαμβάνονταν, καθισμένες πάνω σε πέτρα ή σε τρίποδα τη <u>Σίβυλα</u> τη <mark>διαδέχεται η Πυθία</mark> 168¶

Η απάντηση, ο χρησμός, από την Πυθία είχε φιλοσοφική έννοια" απαντούσε σ' όλες τις ερωτήσειςμε ακατανόητες φράσεις που το μορφωμένο ειδικό ιερατείο τις διαμόρφωνε;..[... σ' άλλεςερωτήσεις έδινε σκολιές <mark>και αμφίβολες</mark> απαντήσεις σ' άλλες πολύ σκοτεινές, γιατί και το σκοτεινό φαινόταν προσόν των χρησμών. Σ΄ άλλους επέτρεπε ή προέτρεπε όπως έκρινε καλύτερο και πιθανότερο, σ' άλλους <mark>προέλεγε θεραπείες</mark>, συμβουλές, δίαιτες].169¶

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6. Cleaning (13/17)

Example with line changes

ή σε τρίποδα τη <u>Σίβυλα</u> τη διαδέχεται η Πυθία.168¶

Η απάντηση, ο χρησμός, από την Πυθία είχε φιλοσοφική έννοια

<mark>·απαντούσε</mark>·σ'·όλες·τις·ερωτήσεις·με·ακατανόητες·φράσεις·που·το·μορφωμένο·ειδικό·ιερατείο·τις· διαμόρφωνε;.-[...·σ'·άλλες·ερωτήσεις·έδινε·σκολιές·και·αμφίβολες·απαντήσεις·σ'·άλλες·πολύ·

σκοτεινές, -γιατί και το σκοτεινό φαινόταν προσόν των χρησμών. -Σ'--

αλλους επέτρεπε ή προέτρεπε όπως έκρινε καλύτερο και πιθανότερο, σ' άλλους προέλεγε θεραπείες, συμβουλές, δίαιτες] 169¶

Το χρησμοδοτικό προσωπικό του Μαντείου: «εχων συνεργούς, υπη- ρέτας καί πευθήνας καί

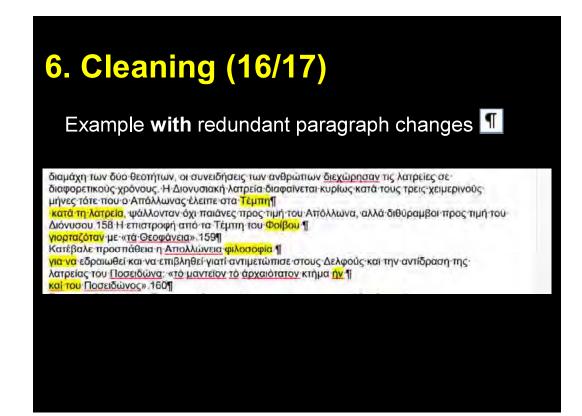
6. Cleaning (14/17)

Example without line changes

ή σε τρίποδα τη <u>Σίβυλα</u> τη διαδέχεται η Πυθία 168¶

Η απάντηση, ο χρησμός, από την Πυθία είχε φιλοσοφική <mark>έννοια απαντούσε</mark> σ' όλες τις ερωτήσεις με ακατανόητες φράσεις που το μορφωμένο ειδικό ιερατείο τις διαμόρφωνε;. [...σ' άλλες ερωτήσεις έδινε σκολιές και αμφίβολες απαντήσεις σ' άλλες πολύ <mark>σκοτεινές, γιατί και τα</mark> σκοτεινό φαινόταν προσόν των χρησμών. Σ' άλλους επέτρεπε ή προέτρεπε όπως έκρινε καλύτερο και πιθανότερο, σ' άλλους προέλεγε θεραπείες, συμβουλές, δίαιτες]. 169¶

Find and Replace P Find and Replace P Find and Replace P Find what: 113(2) Options: Use Wildcards Replace with: 113 <<< Search Options Replace Search Options Replace Search Options Match prefix Find what and the works only Watch prefix With Cards Match prefix Find what works only Watch and the cards With Cards Inforce works only With Cards Inforce works only With Cards Inforce works only		
Find Register 50 To Find what: ^113(2) Options: Use Wildcards Replace with: ^1.5 << <td><<td>Search Options Search Options Search Options Search Options Search Options Search Quite works only Match prefix Match softs Match softs Find whole works only Match softs Sounds like (English) Isprese punctuation characterg</td></td>	< <td>Search Options Search Options Search Options Search Options Search Options Search Quite works only Match prefix Match softs Match softs Find whole works only Match softs Sounds like (English) Isprese punctuation characterg</td>	Search Options Search Options Search Options Search Options Search Options Search Quite works only Match prefix Match softs Match softs Find whole works only Match softs Sounds like (English) Isprese punctuation characterg
Figd what: 113(2) Options: Use Wildcards Replace with: 113 << (class) Search Options Beplace Search Options Search Options Search Quitons Match prefix Match prefix Match prefix Find what works only Match prefix Search Quitons fits Search Quiton duractery		
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Image: several state Image: se		



6. Cleaning (17/17)

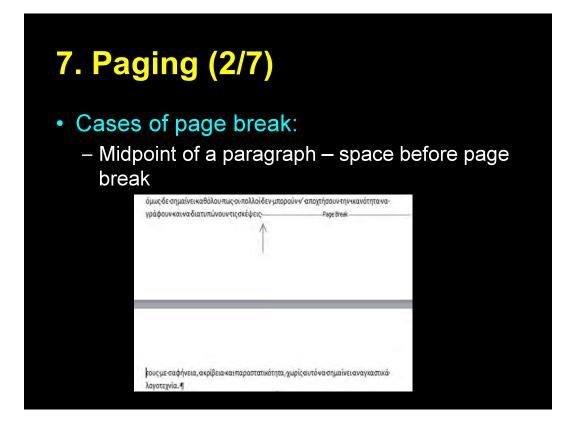
Example without redundant paragraph changes 📶

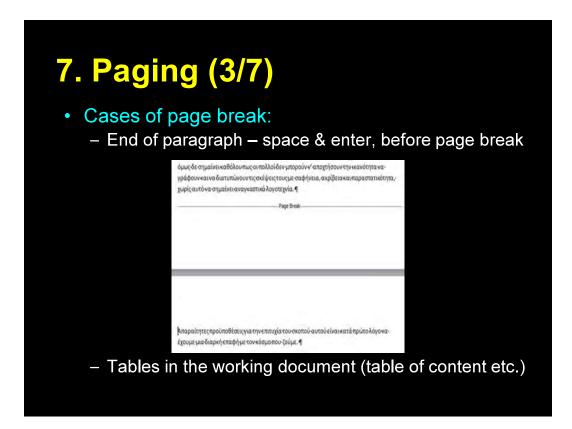
διαμάχη των δύο θεοτήτων, οι συνειδήσεις των ανθρώπων <u>διεχώρησαν</u> τις λατρείες σε διαφορετικούς χρόνους. Η Διονυσιακή λατρεία διαφαίνεται κυρίως κατά τους τρεις χειμερινούς μήνες τότε που ο Απόλλωνας έλειπε στα Τέμπη κατά τη λατρεία, ψάλλονταν όχι παιάνες προς τιμή του Απόλλωνα, αλλά διθύραμβοι προς τιμή του Διόνυσου.158 Η επιστροφή από τα Τέμπη του Φοίβου γιορταζόταν με «τά Θεοφάνεια».159

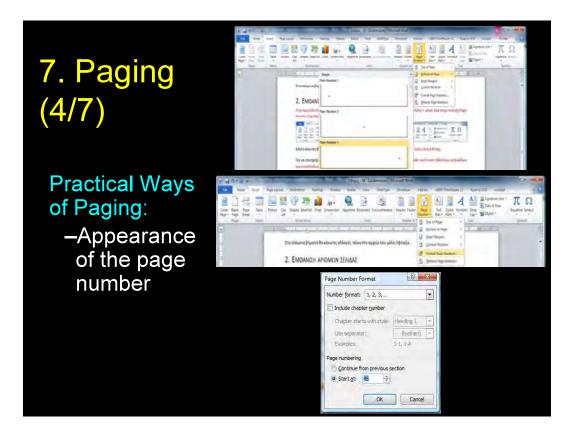
Κατέβαλε·προσπάθεια·η·<u>Απολλώνεια</u>·φιλοσοφία·για·να</mark>·εδραιωθεί·και·να·επιβληθεί·γιατί· αντιμετώπισε·στους·Δελφούς·και·την·αντίδραση·της·λατρείας·του·<u>Ποσειδώνα</u>:·«<u>τό·μαντεϊον·τό·</u> άρχαιότατον·κτήμα·<u>ήν·καί·του</u>·<u>Ποσειδώνος</u>».160¶

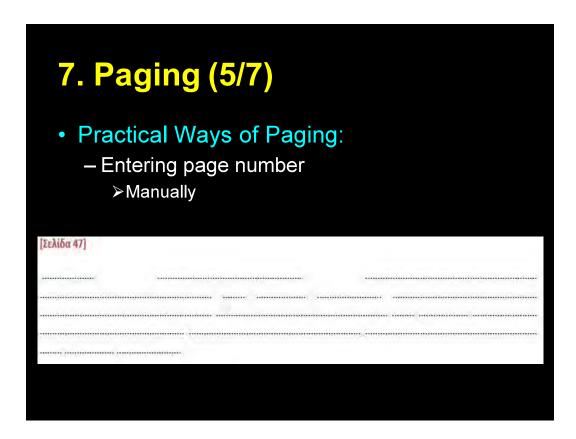
7. Paging (1/7)

- Match the page of the developing word document with the original text.
- Procedure:
 - 1. Page break where needed on every page.
 - 2. Section break when the number of pages or footnotes changes.
 - 3. Remove temporary additional page breaks and section breaks that caused from OCR procedure.
 - 4. Change font size or spacing if needed.
 - 5. Insert page breaks in a uniform and correct way.

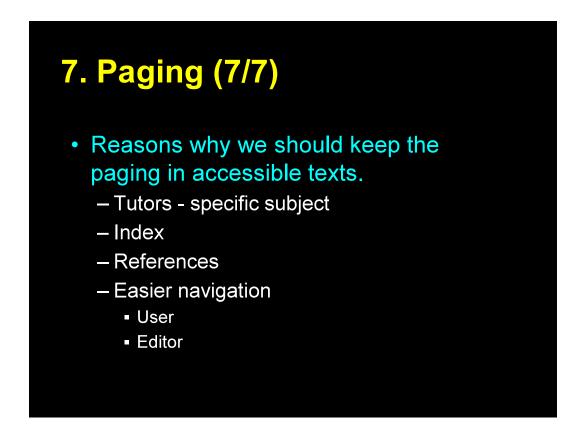


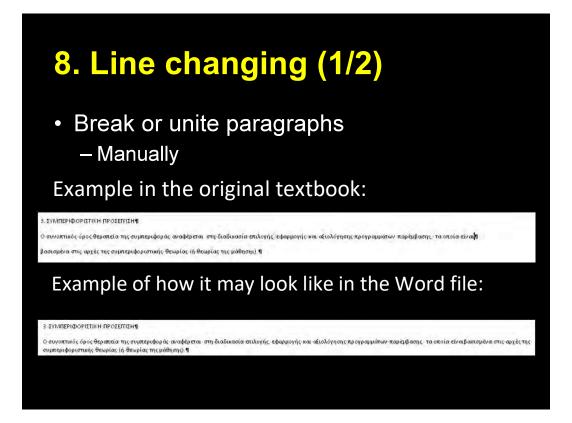


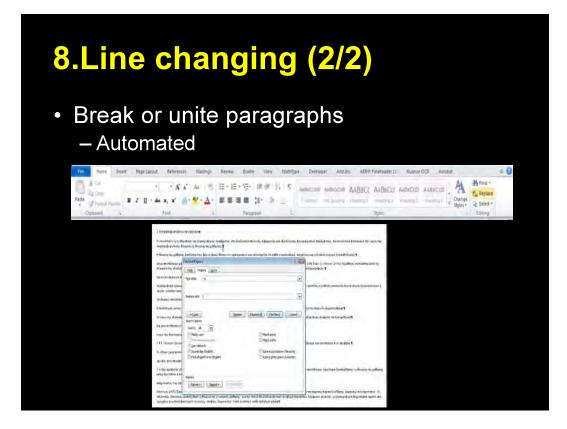


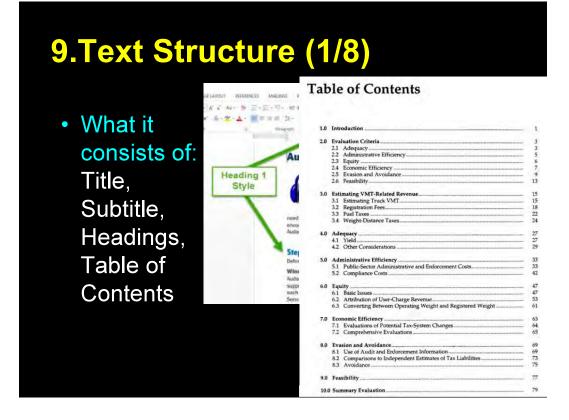


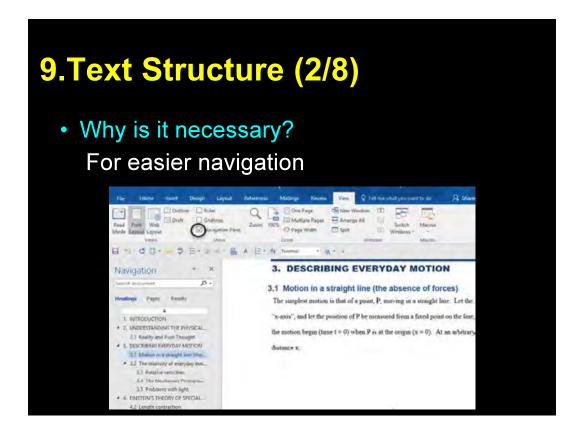
Paging (6/7)			
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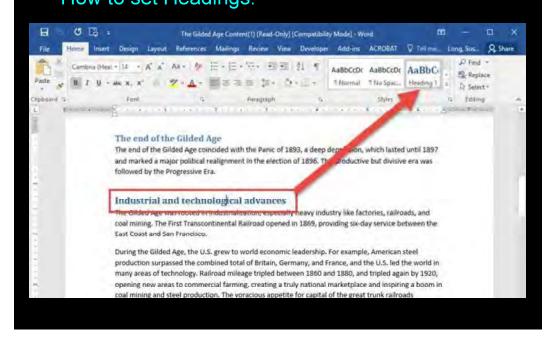
9.Text Structure (3/8)

• Take into consideration:

- Content Table of the original textbook.
- Document optical features.
- Editor's judgment.

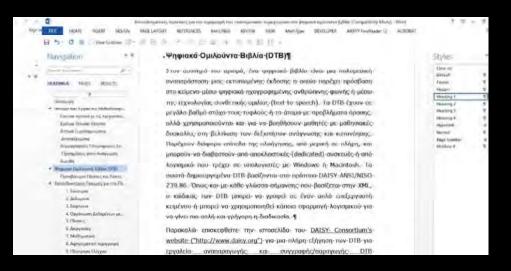


9.Text Structure (4/8) • How to set Headings:

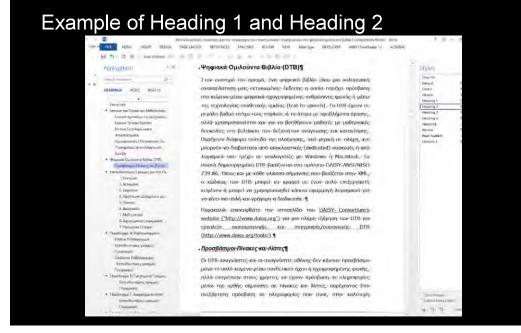


9.Text Structure (5/8)

Example of Heading 1

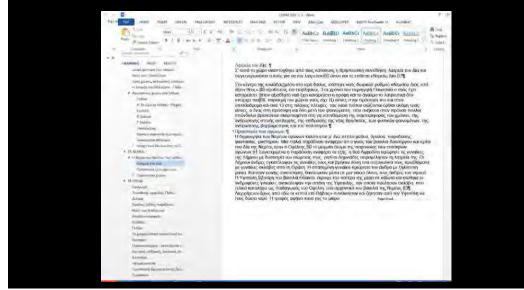


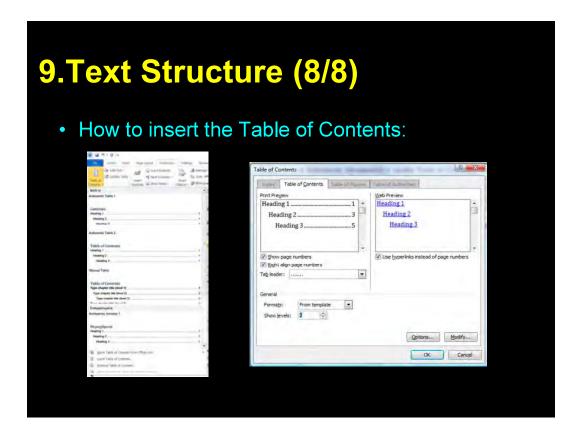
9.Text Structure (6/8)



9.Text Structure (7/8)

Example of Heading 3





10.Lists (1/15)

Types of Lists:

- Numbering of Headings
- Numbering of paragraphs
- Lists inside the main text

Set manually: Numbering of Headings and Paragraphs Set automatically: Lists inside the main text

10.Lists (2/15)

Numbered Headings and Paragraphs: Example in the original textbook:

I. Learning to Write in School

To learn how to write well, where do people turn for help? Most look first to the schools, but few find help there. Indeed, a growing number of critics blame the schools themselves for bad writing.¹³ Let me add my voice to that chorus.

Example of how it may look like in the Word file:

Learning to Write in School

To learn how to write well, where do people turn for help? Most look first to schools, but few find help there. Indeed, a growing number of critics blame the schools themselves for bad writing. Let me add my voice to that chorus

10.Lists (3/15)

Numbered Headings and Paragraphs: We set the number manually: We place the cursor before the Heading and type the number

I, Learning to Write in School

To learn how to write well, where do people turn for help? Most look first to schools, but few find help there. Indeed, a growing number of critics blame the schools themselves for bad writing. Let me add my voice to that chorus

10.Lists (4/15)

Numbered Headings and Paragraphs:

1 Heading 1

1.1 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus sed viverra massa. Sed placerat viverra orci in accumsan. In sollicitudin nisl a dui blandit ullamcorper.

10.Lists (5/15) Lists inside the main text: Example in the original textbook:

The following is a list of some of the key features of a graph that should be described:

- Read the labels on the axes and any marking or scale on the axes.
 If possible, read from left to right, and state in which quadrant the graph begins and in
- which it ends.
 As the graph traverses from left to right, state where it goes up or down and over what point on the x-axis it changes direction.

Example of how it may look like in the Word



The following is a list of some of the key features of a graph that should be described:

Read the labels on the axes and any marking or scale the axes

If possible, read from left to right, and state in which quadrant the graph begins and in which it ends

As the graph traverses from left to right, state where it goes up or down and over what point on the xaxes it changes direction

10.Lists (6/15)

Lists inside the main text:

We set the list automatically using the Word icon

- 1. We mark the listed items
- We select Home → Paragraph
 →Numbering icon



 We select the correct type of list. We may have to create a custom list by choosing Home → Paragraph → Numbering Icon → Define New Number Format

10.Lists (7/15)

Lists inside the main text:

How the previous example looks like after setting the list:

The following is a list of some of the key features of a graph that should be described:

- Read the labels on the axes and any marking or scale the axes
- If possible, read from left to right, and state in which quadrant the graph begins and in which it
 ends
- As the graph traverses from left to right, state where it goes up or down and over what point on the x-axes it changes direction

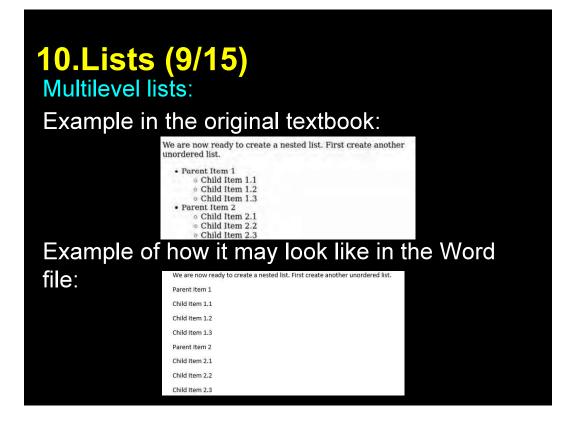
It is important to set lists automatically because screen readers recognize the list as one item.

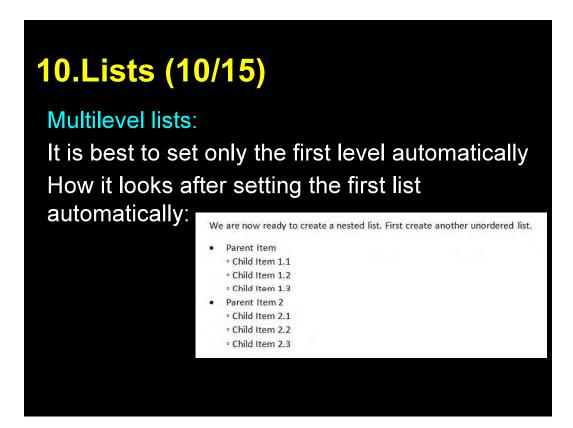
10.Lists (8/15)

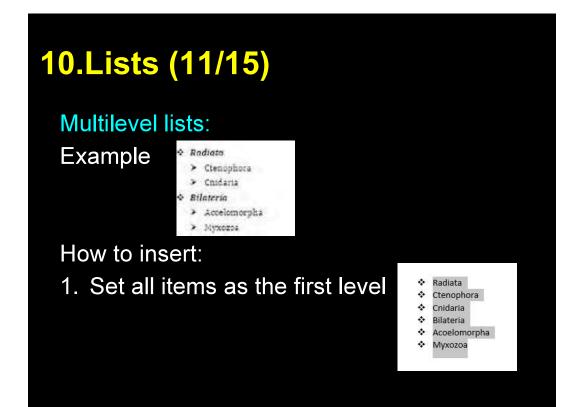
Listed items as part of a sentence: Example:

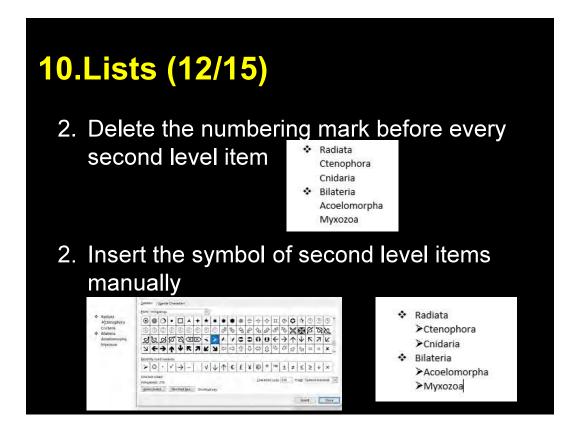
the entire diagram. An example of the former case is a flow chart, a chart consisting of circles, squares, triangles, etc., with connecting arrows. An example of the latter case would be a pie diagram, where a circle is cut into ple-shaped sections or wedges. Besides stating the basic

We leave the list as it is









10.Lists (13/15)

Formatting the text:

Formatting: Parts in bold, italics and quotes Why it is important: Formatting is part of the content and not just a matter of styling

Example in the original textbook:

Principles of operant conditioning predict that there are two options available for increasing or maintaining obedient behavior: *positive reinforcement* or *negative reinforcement*. Reinforcements are acts that have a positive outcome and, as such, will be rewarding, thereby increasing the likelihood that a behavior will be

10.Lists (14/15) Formatting the text: How it may look on the Word file:

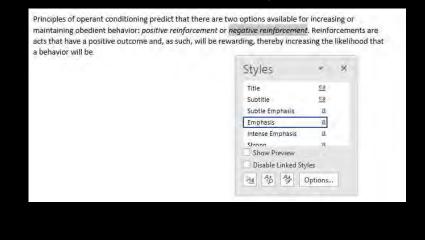
Principles of operant conditioning predict that there are two options available for increasing or maintaining obedient behavior: positive reinforcement or negative reinforcement. Reinforcements are acts that have a positive outcome and, as such, will be rewarding, thereby increasing the likelihood that a behavior will be

How to format the text:

- 1. We mark the text
- 2. We select Home \rightarrow Styles \rightarrow down right arrow
- 3. We select Strong for bold, Emphasis for italics and Quote for quotes

10.Lists (15/15)

Formatting the text: How it looks after formatting



11.Pictures (1/4)

What we have to do?

- Place the images at the correct position
- Add alternative text to image

[beginning of picture] Caption: Picture 1: Boy and a bike

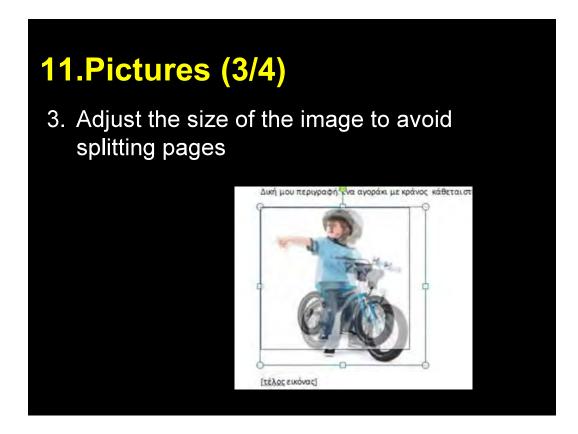
My description: A little boy wearing a helmet sitting on its bike and pointing to the right [ending of picture]

11.Pictures (2/4)

How to add pictures:

- 1. Place it right before the [Ending of Picture] tag
- 2. Insert image: Illustrations area \rightarrow Picture



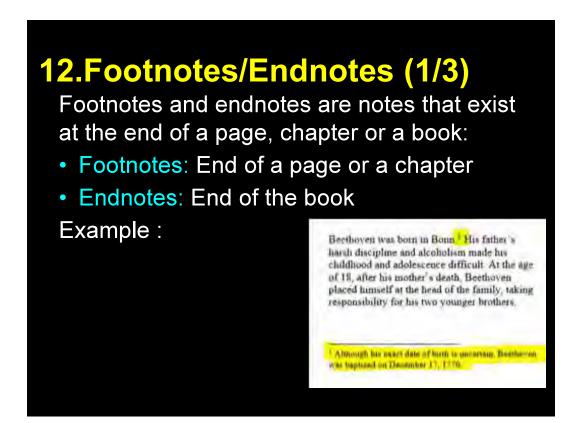


11.Pictures (4/4)

How to add alternative text:

- 1. Copy the description and caption
- 2. Place the description as alternative text in the Alt text description box





12.Footnotes/Endnotes (2/3)

Example of how the Word file might look like:

Beethoven was born in Bonn¹. His father's harsh discipline and alcoholism made his childhood and adolescence difficult. At the age of 18, after his mother's death, Beethoven placed himself at the head of the family, taking responsibility for his two younger brothers,

How the example looks after adding the footnote:

Beethoven was born in Bonn^{1.} His father's harsh discipline and alcoholism made his childhood and adolescence difficult. At the age of 18, after his mother's death, Beethoven placed himself at the head of the family, taking responsibility for his two younger brothers,

¹ Although his exact date of birth is uncertain, Beethoven was baptized on December 17, 1770

13. Accessible Mathematics (1/20) Overview

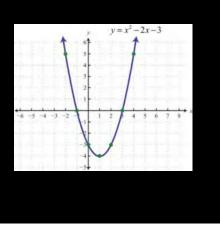
In general we refer to many objects such as equations, graphs, charts etc.

Here we will talk about how to make mathematical equations accessible

There is not a universally preferred modality: Speech Braille Tactile graphics (for graphs)

13. Accessible Mathematics (2/20) Difficulties

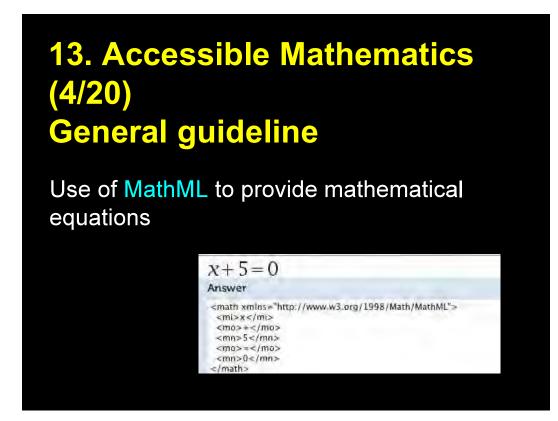
- Difficult to get an overview
- Complexity
- Ambiguity of symbolism



13. Accessible Mathematics(3/20)Practical Difficulties

Cost of resources: Tools like MathType require a subscription

 Language specific problems: A lot of tools don't support a variety of languages

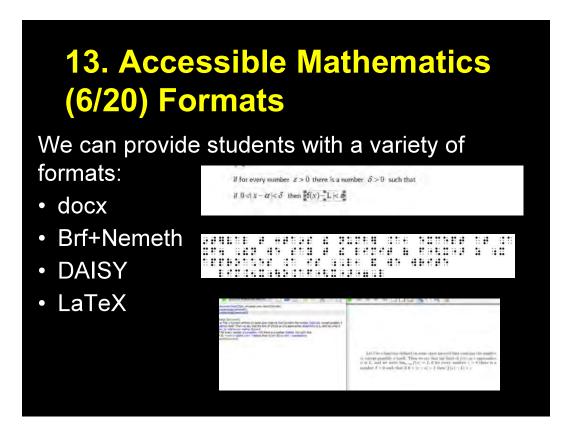


13. Accessible Mathematics (5/20) MathML

- Is a markup language
- Can be rendered in different formats
- Can be written using an editor, like MathType
- MathType: Word add-in that translates mathematical notation to MathML

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13. Accessible Mathematics (7/20) Step 13

- We insert equations after we have inserted footnotes and endnotes
- Any images of mathematical content have already been removed in previous steps
- We use MathType to insert equations.

13. Accessible Mathematics (8/20) Step 13- Example

Example from a textbook:

2 Precise Definition of a Limit Let f be a function defined on some open interval that contains the number a, except possibly at a itself. Then we say that the limit of f(x) as x approaches a is L, and we write

 $\lim f(x) = L$

if for every number $\epsilon > 0$ there is a number $\delta > 0$ such that

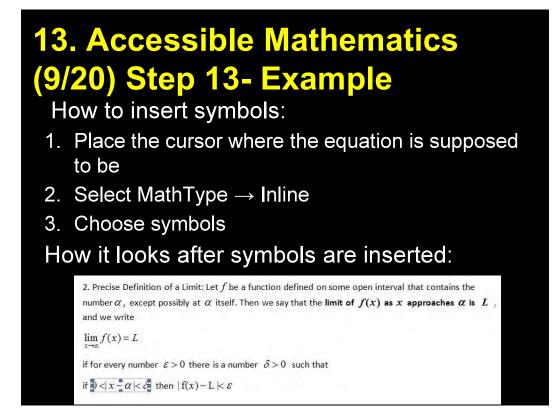
if $0 < |x - a| < \delta$ then $|f(x) - L| < \varepsilon$

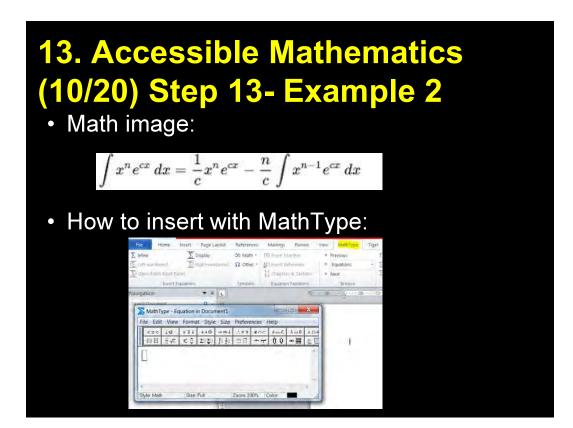
Word file before equation insertion:

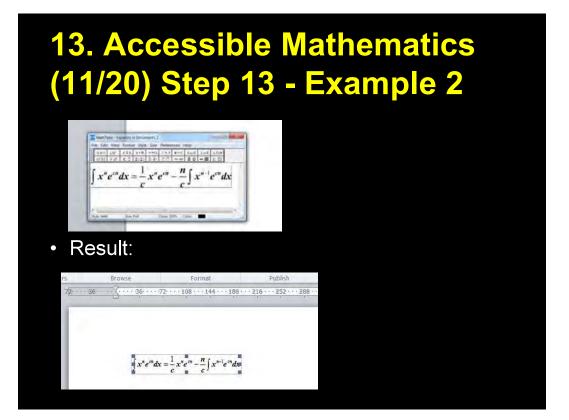
2. Precise Definition of a Limit: Let f be a function defined on some open interval that contains the number, except possibly at itself. Then we say that the limit of f(x) as x approaches is L and we write

if for every number there is a number such that

if then





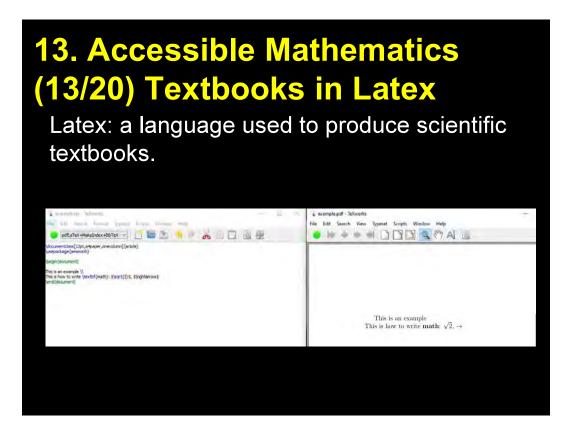


13. Accessible Mathematics (12/20) Step 13

After we insert the mathematical symbolism using MathType, the information can then :

- become accessible using MathPlayer (MathML+ NVDA+ MathPlayer)
- be converted to a DAISY book using MathDAISY
- (MathML +Save As Daisy + MathDaisy →DAISY book)

MathPlayer: a supporting math and speech options add-in



13. Accessible Mathematics (14/20) Latex in accessibility

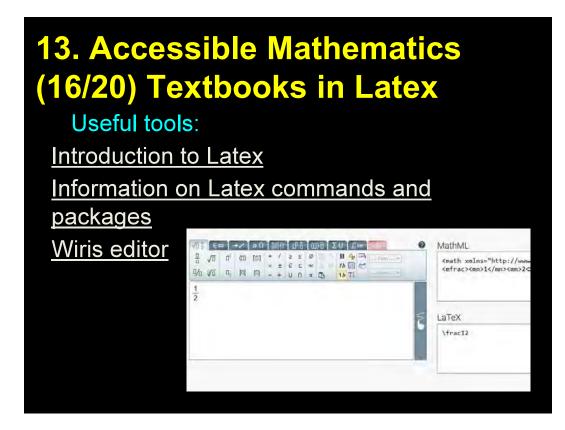
- MathType doesn't offer the full extend of mathematical symbolism
- Latex like MathML can be used to convert to multiple formats
- A lot of scientific content is already provided in Latex

13. Accessible Mathematics (15/20) Textbooks in Latex

Tools that can be used to convert Latex to different formats:

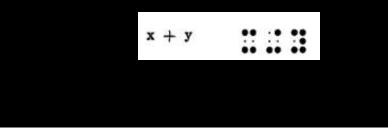
- Latex2nemeth: conversion to Nemeth
- Braille Blaster: conversion to Nemeth
- Infty: conversion to speech formats

Note: Tools are not always accurate.



14. Accessible Mathematics (17/20) Nemeth

- Nemeth is a standard for representing mathematical symbolism in Braille
- Nemeth is not the only representation of mathematics in Braille
- In Greece we use the Nemeth code

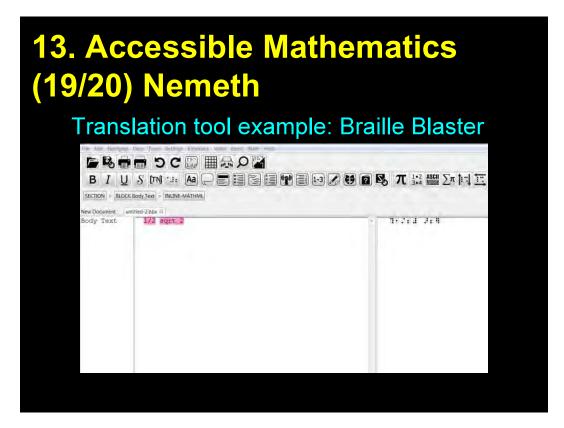


13. Accessible Mathematics (18/20) Nemeth

Nemeth translation tools:

- · Latex2Nemeth
- · BrailleBlaster
- · Tiger Software Suite (with MathType)

We have to be careful when using translation tools



13. Accessible Mathematics (20/20) Infty Project

Infty Reader:optical recognition for math Infty Editor: Authoring tool ChattyInfty: Navigation,exporting to accessible formats (DAISY, EPUB3, MathML,LaTeX)

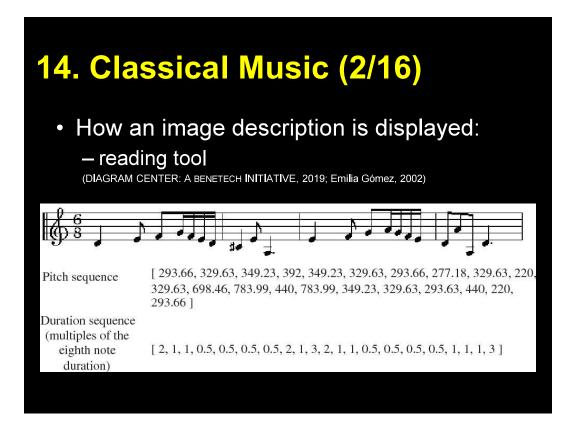


14. Classical Music (1/16)

- Music excerpts converted to an accessible format using:
 - image descriptions
 - creating additional support files in a variety of formats:
 - MusicXML
 - MIDI

standard audio files (MP3, WAV or AIFF files).

(DIAGRAM CENTER: A BENETECH INITIATIVE, 2019)

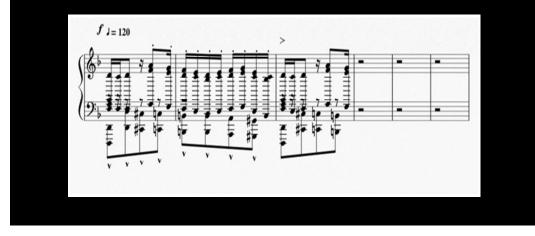


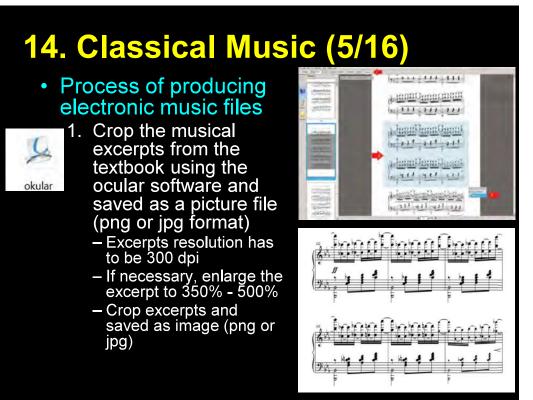
14. Classical Music (3/16)

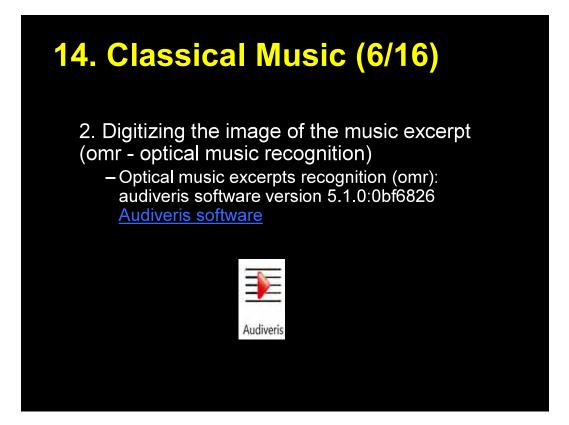
- Accessible formats:
 - MusicXML
 - MIDI
 - Recorded Audio
 - Text or Audio Description

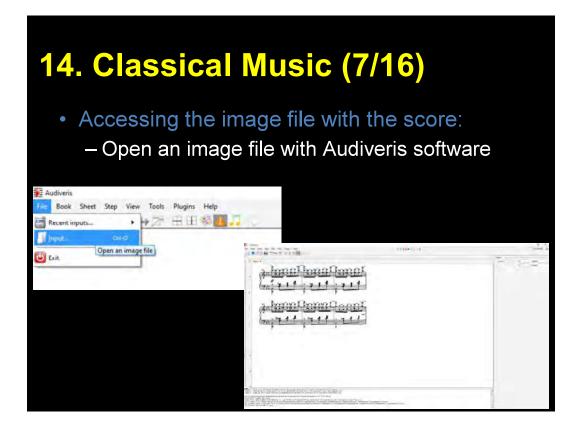
14. Classical Music (4/16)

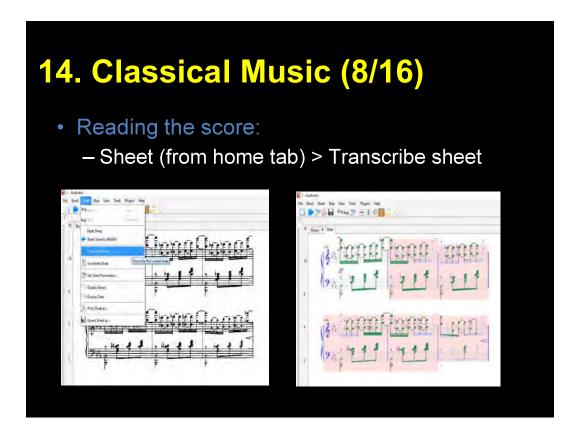
- Music excerpts converted to electronic midi audio files
 - Easy conversion to audio files
 - Convert to music scores

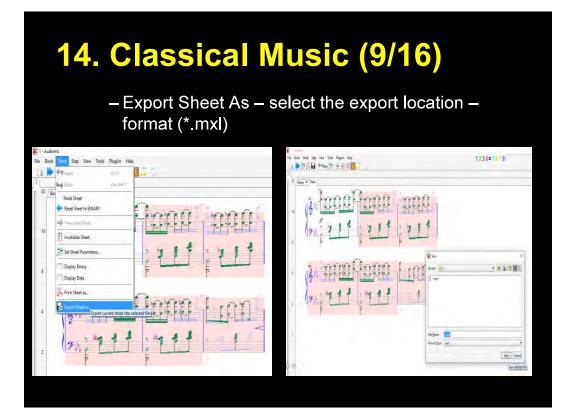




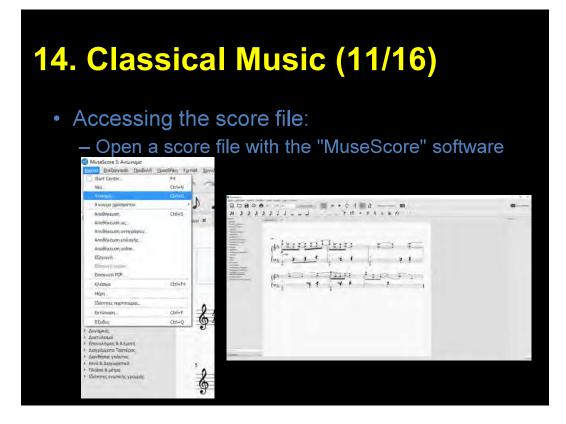


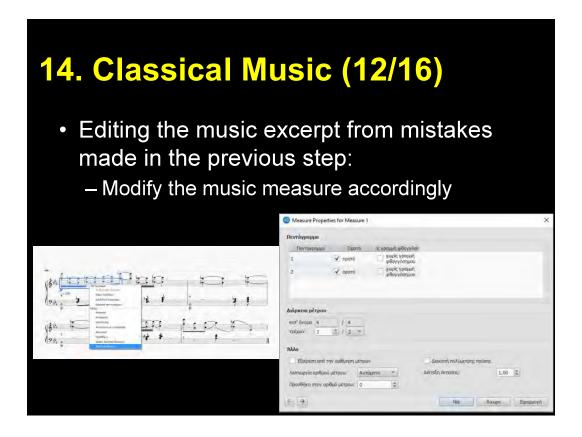




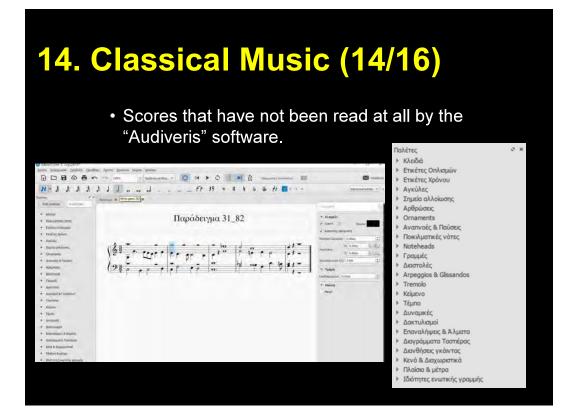


14. Classical Music (10/16) 3. Editing and converting the digitized excerpt - MuseScore software version 2.3.2 MuseScore software) - Editing the music excerpt from mistakes made in the previous step - Completion of musical elements. (Symbol restriction) MuseScore 3 - Improved excerpt performance based on the composer -Knowledge of music and related software - The file is saved in MuseScore format (* .mscz)

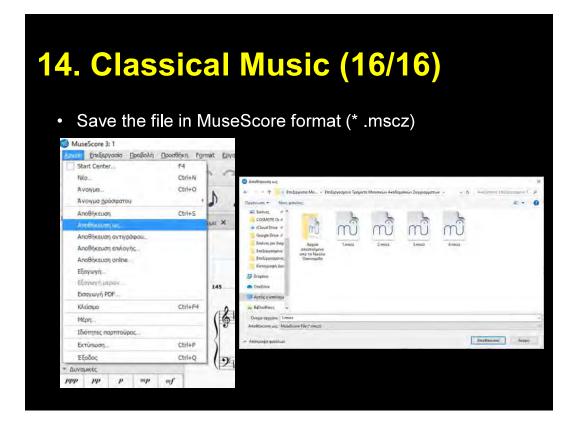












15. Byzantine Music (1/3)

- dates back to the 4th century AD
- liturgical music used in the Greek Orthodox Church
- consisted of songs and hymns composed to Greek texts
- different notes, measures and colors

A HOAYTIKION A FIOY NIKOAAOY Hyos Z AL 1340 LE . εγ κρα τει ας Δι δασκα λον α νε δει 356 σε τη ποι οιμνη σε η τουν πρα γματονα λη θει α δί α τε το ε κη σοι τη το πει νω σει τα υ ψη λα η πτω χει α τα πλε σι α Πα τερ Ι ε ραρχαΝι κο λα ε πρεσθεω ε Χρι στω τω Θε ω σω θη ναι τας ψυ Door! χα ας ημον

15. Byzantine Music (2/3)

- Studying the basic rules of Byzantine music
 - <u>Θεωρία Πράξη της</u>
 <u>Βυζαντινής Μουσικής Μέρος</u>
 <u>Πρώτο</u>
 - Stanthonys monastery
 - Papline

إنى أنا مدينتك - Τῆ ὑπερμάχϣ στρατηγῷ لعن ۲۲ ۲۲ الم Ng A η υ περ μα χω στρα יש דמ אין גדן דן דע מג אט דףש לפו σα τωωνδεινων ευ χα ρι στη ρι יתרנטרושרט-שול α Α να γραφωσοι η πο λιις σου 20-""."-"" Θε ο το κε Αυλ φως ε χου σα το 0"---" 2"-" vec кра то; а проти и то Точ Ек па ичтон ων με κιν δυ νων ε λευ θε ρω σον Ι να

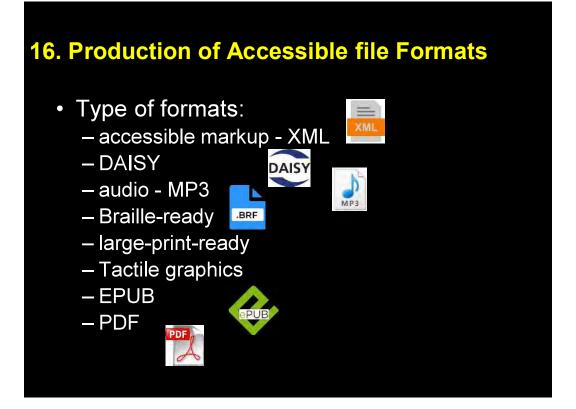
15. Byzantine Music (3/3)

- Byzantine music authoring package EZ(ez Psaltica Editor)
 - a musical font (the user remembers the matches of the Byzantine symbols with the corresponding positions on the keyboard)



This is the end of the process

The accessible document we produced is a matrix document that can be converted to various accessible formats



Production delays

• Most common difficulties/Reasons for delay:

Books that contain the following:

- Polytonic system
- Specific linguistics notation
- Byzantine musical notation
- Plenty of maps, pictures, tables, graphs, illustrations
- Text Frames
- Need for multiple styles (Emphasis, Quote, Strong)

Errors occur during OCR recognition Time-consuming placement of textboxes content

Accessible Notes

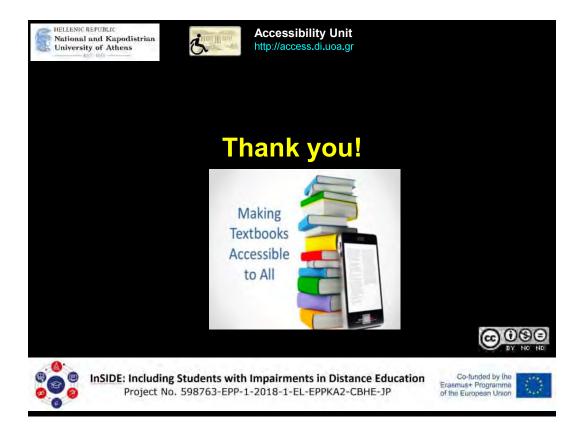
- from lectures, in the case they are in digital form
- The same process as in accessible textbooks
- We keep in mind the specific needs of the student
- may be created by volunteers

References (1/2)

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- MathML: <u>W3C-MathML</u>
- The Nemeth Code: <u>Nemeth 1972</u>

References (2/2)

- Converting to Nemeth: <u>Perkins Learning- Producing Nemeth Code through</u>
 <u>MathType</u>
- Latex2Nemeth
- A Method for Labeling a Tactile Graphic Using Tiger Software Suite
- Braille Blaster
- MathType, MathPlayer, MathDAISY: Design Science
- Latex: CTAN Network
- Wiris Editor: Wiris editor
- Infty Project: Infty project
- Other Tools: <u>W3C Math Tools</u>









InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP

Co-funded by the Execution - Programme of the European Union



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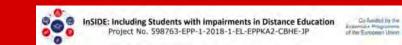
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[3] https://freedomdefined.org/Definition
[4] http://opendefinition.org/buttons/

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Rehabilitation



 Rehabilitation allows people with disabilities whose functions are limited to stay or return home or to society, to live independently and to participate in education, the labour market and social life.

Challenges of Informatics/Computer Science in the domain of rehabilitation

- Concerning the reduced **functioning**:
 - Augmentation/improvement of the reduced functionality,
 - Provision of alternative functionality
- Concerning the **participation** in the main activities:
 - Augmentation/improvement of the participation,
 - Provision of alternative mean for participation

Apple-Accessibility-Sady Video



Rehabilitation Solutions provided by Informatics/Computer Science

- Computer based Assistive Technologies (AT)

 by themselves they do not guarantee accessibility
- Content Digital Accessibility
 - Guidelines/ standards
 - Methods & Tools for evaluating Digital Accessibility
- Implementation of Universal Design / Design for All

Assistive Technology

Any: equipment, product, system, software, or service

whether: purchased ready to use, modified or customized,

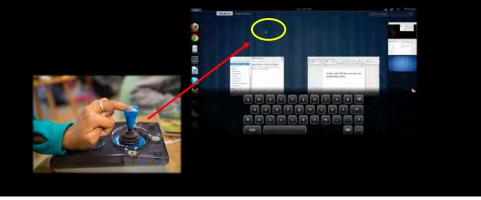
used to increase, maintain or improve: the functional abilities of the disabled and / or their participation in the main activities of life

Computer based Assistive Technology (AT)

- Beyond medical solutions for PwD(e.g. surgical methods, prostheses, implants)
- They require an interdisciplinary approach
- The important role of Information Technology professionals in the selection and implementation of a suitable AT solution

Example-1a

- Writing (function) > with a pen/pencil or computer keyboard
- Users with reduced functioning of upper extremes:
- augmentation: joystick with virtual / on screen keyboard



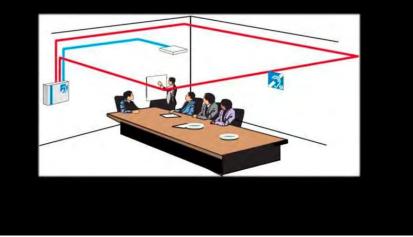
Example-1b

- Writing (function) > with a pen/pencil or computer keyboard
- Users without any functionality in upper extremes:
- *alternative*: cursor control with head movement detection combined with virtual on screen keyboard, puff switch and word prediction software



Example-2a

- Conversation (participation) > face to face or distance
- Users with reduced hearing ability (hearing loss):
- *augmentation*: inductive hearing loop system



Example-2b

- Conversation (participation) > face to face or distance
- Users without any hearing ability (deaf):
- *alternative*: relay service (Sign Language remote interpretation)



Computer based Assistive Technologies (1/2)

- Many times they are commercially available: Challenges:
- not available on the local market,
- do not support the local language
- or the local Braille system
- or the Greek local language
- high cost> who should cover the cost?



- Sometimes they are only available as a result of research or development efforts
- Sometimes they require the development of standards / standardizations
- Sometimes they require the development of special services

Computer based Assistive Technologies (2/2)

- Sometimes they are available as free software or even open source software e.g. http://access.uoa.gr/ATHENA/
- They are integrated into the operating system following the Universal Design approach



Computer based Assistive Technologies Classification-1

A) For usual desktop or laptop PCs

B) For mobile devices – smart telephones or tablets

C) Peripheral devices of A or B with wired or wireless connection

D) Embedded or wearable or autonomous systems



Computer based Assistive Technologies Classification-2

Personal AT

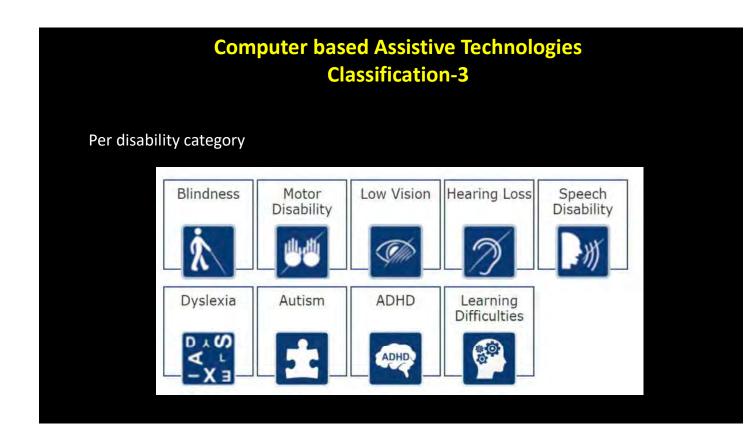
- act as an extension of the individual
- Set / calibrated to that person
- the person knows them and has practiced using them

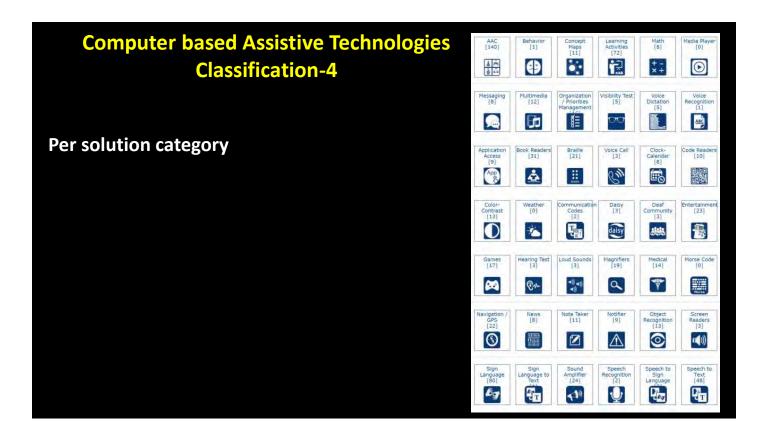
• Environmental adaptation AT

- Set / calibrated the disability category
- the person do now knows them and do not has practiced using them

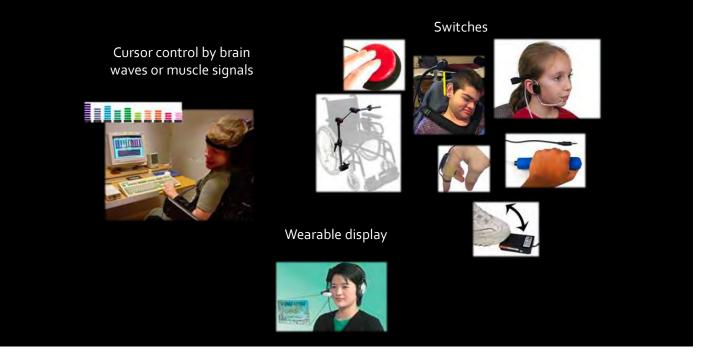


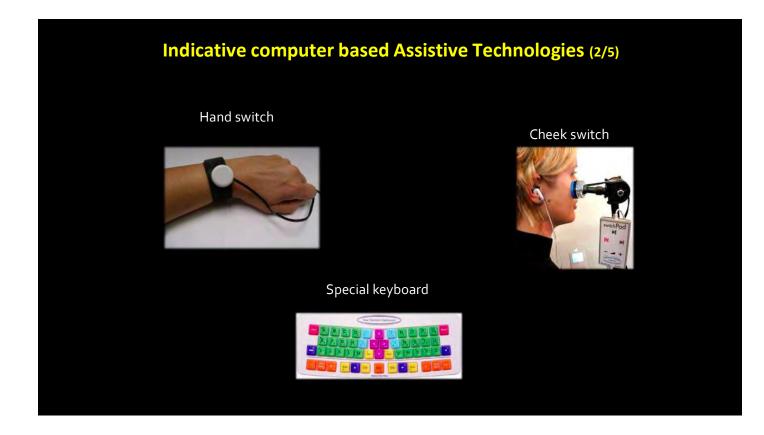




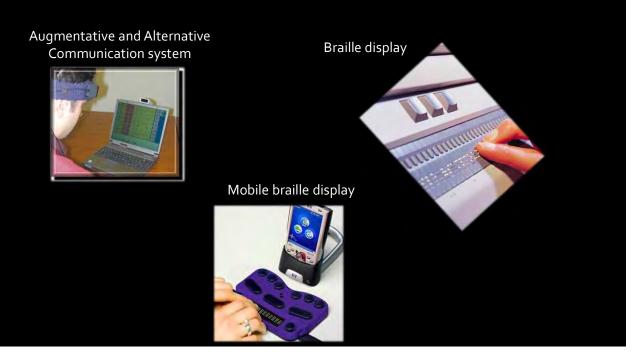


Indicative computer based Assistive Technologies (1/5)





Indicative computer based Assistive Technologies (3/5)



Indicative computer based Assistive Technologies (4/5)

6 Degree of Freedom Mouse for the blind



Sensors for Sign Language Synthesis and Recognition



Cursor control with head movements and lips switch



Indicative computer based Assistive Technologies (5/5)









CCTV magnification system



Indicative software Assistive Technologies (1/5)

On screen magnifier



Word prediction for accelerating writing



Display color and contrast selection



Indicative software Assistive Technologies (2/5)

Non-querty on screen keyboard

μνξοπρστ

. @ X U W C

U

δεζηθ

Y

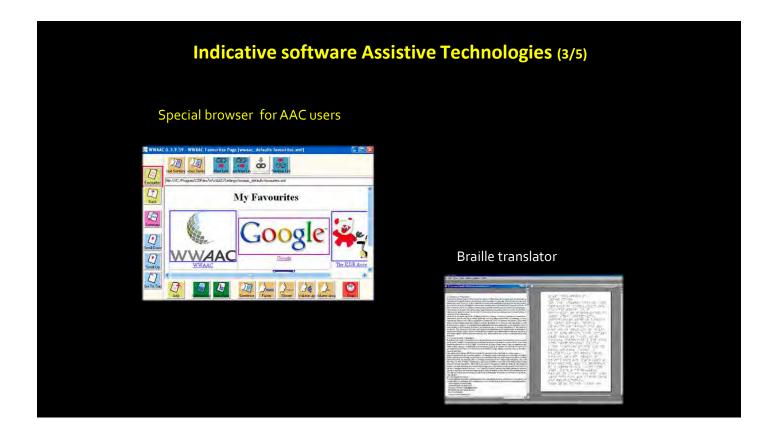
A

Speech-based rotation control

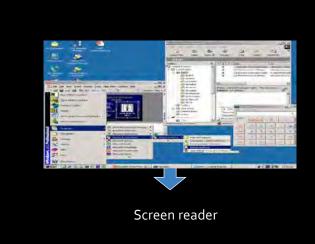


Text to Speech synthesis





Indicative software Assistive Technologies (4/5)



Alternative and Augmentative Communication systems

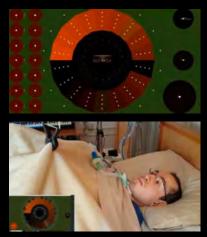




Indicative software Assistive Technologies (5/5) Eye gazed cursor control Cursor selection Mouse settings ClickAid - 🗆 × P Ctrl Shift Alt ₿. 2円 ... 0 5 -

EYEHARP

Zaharias Vamvakousis http://theeyeharp.org/





http://access.uoa.gr/mATHENA/

Spec	Linear of Albertics			Free Ass		ogy So	and oftware	Acce Inven	iversity of ad Telecomm ssibilit tory	unications
Home	All applications	All disabilities	All operating sys	tems All s	oftware categories	Credits	Contact	Login		
Searc	s for All Operating Sy	stems	use them. Choose	your devic	oplications by the Ope s's Operating Syste		item of the	devices.	in which we c	an install a
display	ave a nonactivated version ys up to 10 search results. nodulé here: MyExt.eu		Android [461]	105 [187]						
									648	

Design for All – D4All

Equivalent terms:

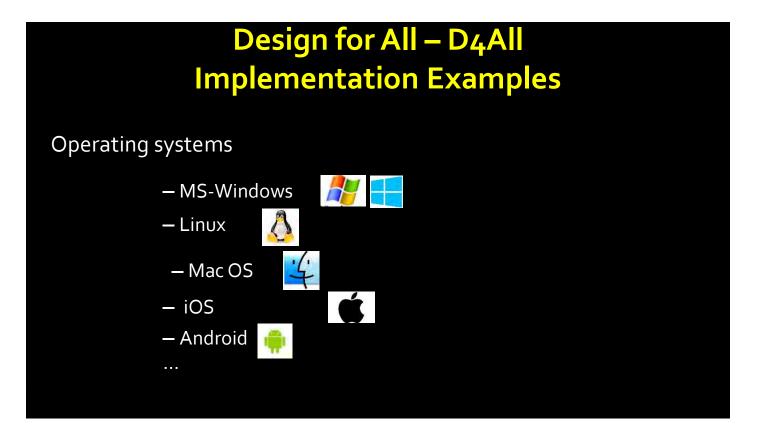
- Universal Design
- Inclusive design

"The conscious and systematic effort to **proactively** apply principles, methods and tools, in order to develop products and services which are **accessible and usable** by all citizens, thus avoiding the need for **a posteriori** adaptations or specialised design"

• The design process that maximizes user acceptability.

Universal Design / Design for All – D4All

- Essential for the 15% of the population (PwD)
- Supportive for the 40% of the population (PwD & elderly)
- Convenient for the 100% of the population



https://support.microsoft.com/en-us/products/windows-accessibility?os=windows-10	
Accessibility support for Windows	
On this page, you'll find links to topics about Windows accessibility features and tools. These features and tools make Windows more accessible and easier to use for everyone. If you don't find the help you need here, please visit the Disability Answer Desk.	
Windows 10 Windows 8.1 Windows 7	
Vision	
Make Windows easier to see	
 Use Magnifier to make things on the screen larger 	
 Keyboard shortcuts in Windows 	
 Keyboard shortcuts in apps 	
 Windows keyboard shortcuts for accessibility 	
Use high contrast mode	
Complete guide to Narrator	
Use the Movies & TV app with Namator	
Use the Windows DVD Player app with Narrator	
Use color filters in Windows 10	

https://support.microsoft.com/en-us/products/windows-accessibility?os=windows-10 Accessibility support for Windows On this page, you'll find links to topics about Windows accessibility features and tools. These features and tools make Windows more accessible and easier to use for everyone. If you don't find the help you need here, please visit the Disability Answer Desk. Windows 8.1 Windows 10 Windows 7 Dexterity & mobility Use touch with Windows Use the On-Screen Keyboard (OSK) to type . Windows Speech Recognition commands . Use voice recognition in Windows 10 . Use your PC like a tablet . Learn about Windows Hello and set it up . Make your mouse, keyboard, and other input devices easier to use . Open the touch keyboard . Use dictation to talk instead of type on your PC . Get started with eye control in Windows 10

https://support.microsoft.com/en-us/products/windows-accessibility?os=wi	ndows-10				
Accessibility support for Windows	Accessibility support for Windows				
On this page, you'll find links to topics about Windows accessibility features and tools. These features and tools make Windows more accessible and easier to use for everyone. If you don't find the help you need here, please visit the Disability Answer Desk.					
Windows 10 Windows 8.1 Windows 7					
Hearing					
 Make Windows easier to hear 					
Change Windows closed caption settings					
 Use text or visual alternative to sounds 					
Focus					
 Make it easier to focus on tasks 					
 How to use the taskbar in Windows 10 					

Embedded AT in ipad, iphone, ipod touch https://www.apple.com/accessibility/vision/

Hear what's happening on your screen.

Use your camera to get a closer look.

Enlarge your screen to your liking.

Make everything easier on the eyes.

Keep your apps close and your settings closer.

Tone down the special effects.

A scene to be heard. Find the right view for you.

Go from written word to spoken word.

Get a quick size boost of what you're reading.

Apps can automatically adapt to larger, bolder type.

Customize your braille experience.

- VoiceOver
- VoiceOver + Braille
- Magnifier
- Spoken Content
- Zoom
- Hover Text
- Reduce Motion
- Audio Descriptions
- Display
- Text Size
- Dark Mode
- Accessibility Shortcuts
 - Dictation Everything you say goes.
- Siri Find what you're looking for without looking at all.

Embedded AT in ipad, iphone, ipod touch

https://www.apple.com/accessibility/mobility/ https://www.apple.com/accessibility/hearing/ https://www.apple.com/accessibility/cognitive/

Embedded AT in Android devices

https://support.google.com/accessibility/android/answer/6006564?hl=en

- Use a screen reader TalkBack, TalkBack braille keyboard, Select to Speak
- Change your display: Display size and font size, Magnification, Contrast and color options
- Interaction controls: Lookout, Voice Access, Switch Access, Action Blocks, Time to take action
- Use a braille display: BrailleBack
- Audio & on-screen text: Captions, Live Caption, Live Transcribe & Sound Notifications, Sound Amplifier, Hearing aid support, Real-time text (RTT) during calls

Computer based Assistive Technologies by themselves do not guarantee the accessibility of the digital content

What is Digital Content (or e-content)

- 1. Any information displayed in a web page
- 2. Any file we open or download from a webpage or it is transferred through the internet, such as:
 - Presentation slides (e.g. MS-Power point)
 - Document files (e.g. MS-Word or PDF)
 - video or audio files

Digital Accessibility

Design and development of digital content

so that it can:

- be used effectively
 - from more people

in more circumstances or usage context

more people (1/5)

Persons with Disability (PwD):

- Sensory
 - Blindness or low vision or achromatopsia
 - Deafness or hard of hearing
- Motor
 - Dexterity
 - Stretching and reaching
 - Movement

more people (2 / 5)

Persons with Disability (PwD):

- Cognitive
 - Dyslexia
 - Language / communication
 - Attention deficit
 - Memory
 - Understanding
- Multi-disabilities

more people (3 / 5)

PwD: > 10-15 % population



more people (4 / 5)

- Accidental or occasional disability
- People without language proficiency
- Older technology users
- Users of new computer devices

more people (5 / 5)

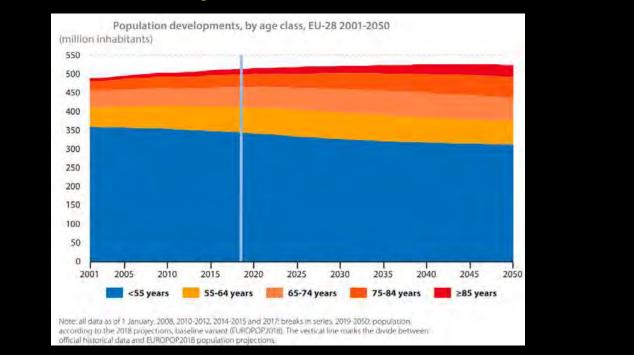
- New or not frequent users of computer / telecom technology
- Users of spart phones or tablets
-
- Elderly

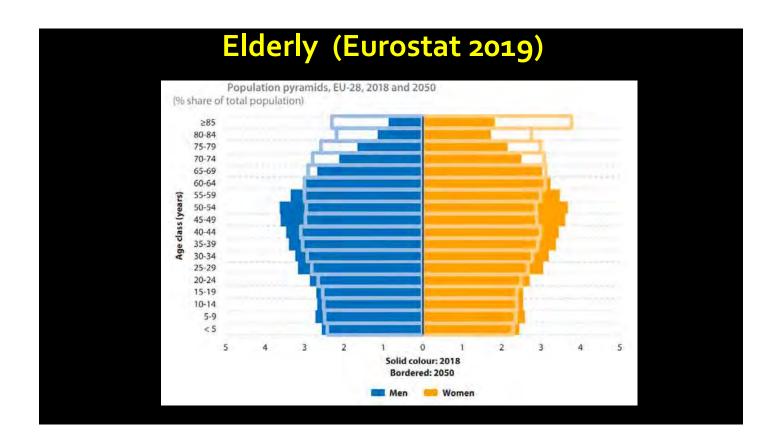
Elderly (65+ years) in European Union % of the general population

Year	65+ years	80+	
		years	
2010	17%	5%	
2020	20%	6%	
2030	24%	7%	
2040	27%	8%	
2050	29%	12%	

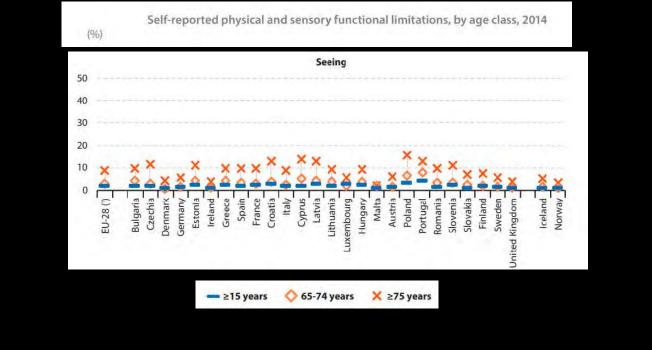


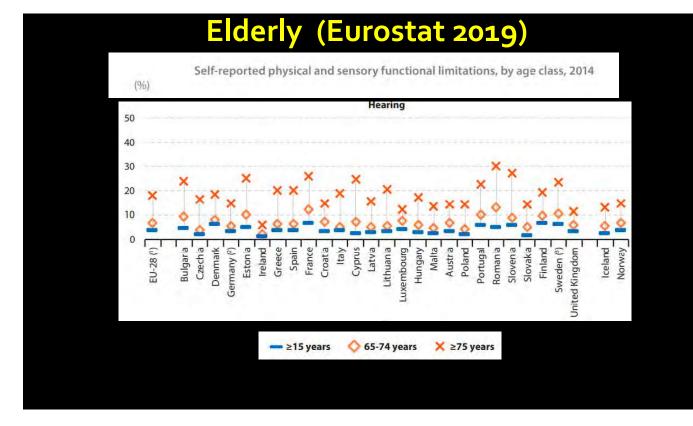
Elderly (Eurostat 2019)

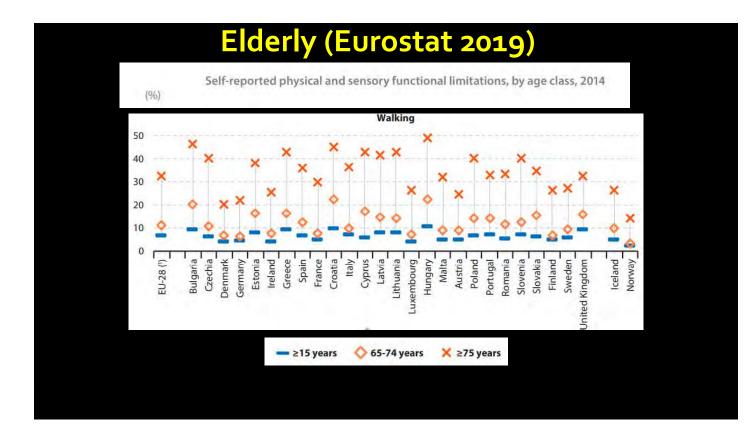




Elderly (Eurostat 2019)







more circumstances or usage context(1/3)



more circumstances or usage context(2/3)



more circumstances or usage context (3 / 3)



«57% of PC users aged 18 to 64 directly or indirectly benefit from accessibility technologies due to the difficulties and inability to use computers."

Investigation Results by Forrester Research, Inc. for the Microsoft

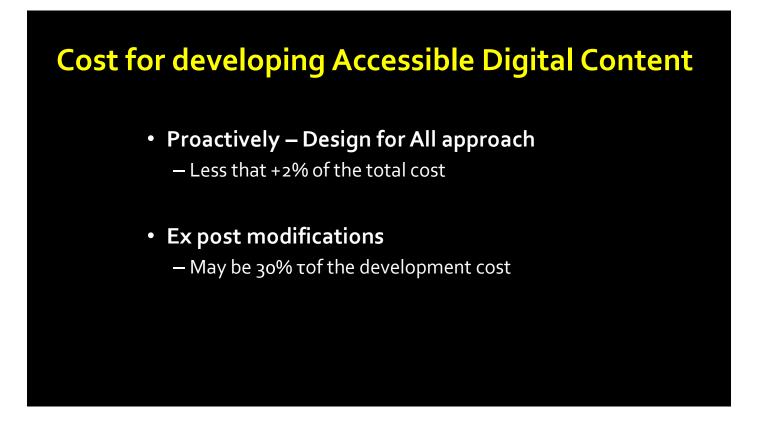
Digital Accessibility

Dimensions:

- Legal
- Economic
- Societal / Ethical
- Technological

Economic Dimension of Digital Accessibility

- Development cost
- Profits from the application of DA



Profits from the development of Accessible Digital Content (1 / 3)

- Increasing the usability of more people (e.g. tourists)
- Increase the ability to find content through search engines
- Increase usability in more situations
- Increasing the positive image of the institution / organization

Profits from the development of Accessible Digital Content (2 / 3)

- Reduce content maintenance costs
- Reduce the total storage volume of content on the servers of the websites
- Reduce the need to create multiple versions of content (e.g. for mobile devices)

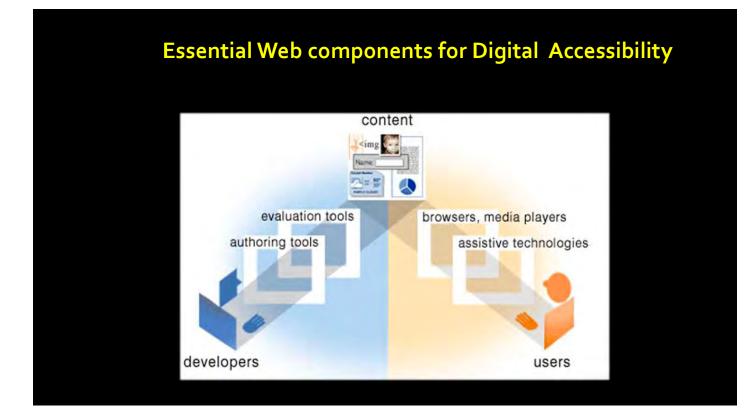
Profits from the development of Accessible Digital Content (3 / 3)

- Reduce the cost for penalties and court costs for noncompliance, in countries where relevant legislation exist
- Reduce the cost of producing content in alternative formats, e.g. production of audio books.

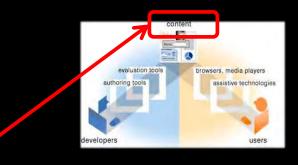
Social Dimension of Digital Accessibility

Content Digital Accessibility:

- constitutes an essential factor in providing equal opportunities
- helps to reduce the digital divide
- is included in the Social Responsibility of the organization / institution that provides the electronic content



Essential Web components for Digital Accessibility



content - the information in a web page or web application, including:

- natural information such as text, images, and sounds
- code or markup that defines structure, presentation, etc.

Essential Web components for Digital Accessibility



developers - designers, coders, authors, etc., including developers with disabilities and users who contribute content

They use:

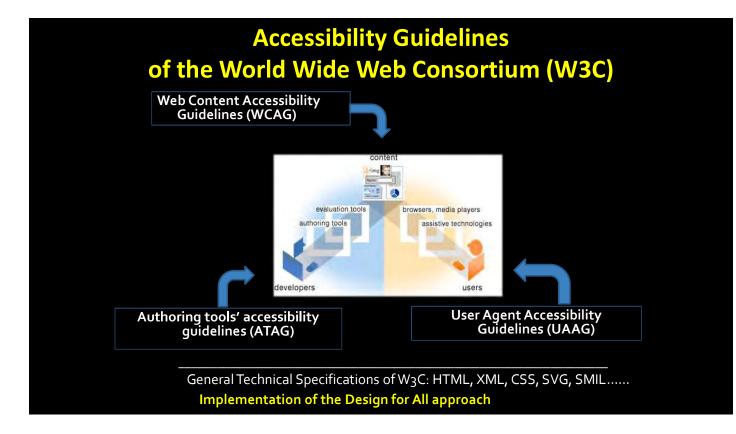
- authoring tools software that creates websites
- evaluation tools web accessibility evaluation tools, HTML validators, CSS validators, etc.

Essential Web components for Digital Accessibility

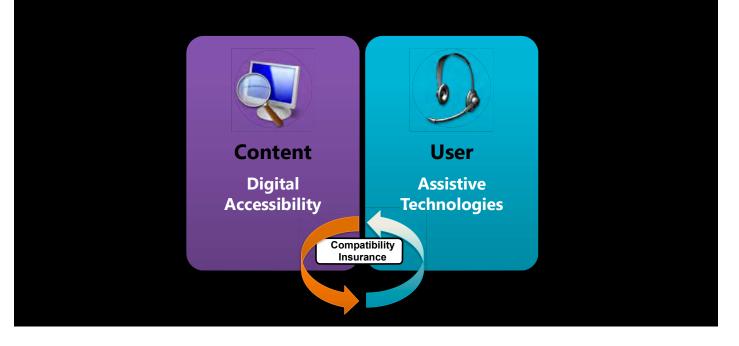


Users:

- web browsers, media players, and other "user agents"
- **assistive technology**, in some cases screen readers, alternative keyboards, switches, scanning software, etc.



Digital Accessibility and AT = compatibility insurance



Web Content Accessibility Guidelines (WCAG) 2.1

Perceivable

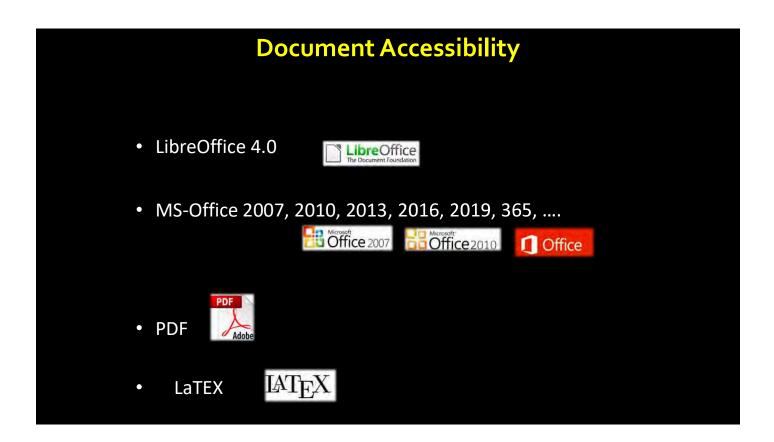
- Provide text alternatives for non-text content.
- Provide captions and other alternatives for multimedia.
- Create content that can be **presented in different ways**, including by assistive technologies, without losing meaning.
- Make it easier for users to see and hear content.

Operable

- Make all functionality available from a keyboard.
- Give users enough time to read and use content.
- Do not use content that causes **seizures** or physical reactions.
- Help users navigate and find content.
- Make it easier to use inputs other than keyboard.

Understandable

- Make text readable and understandable.
- Make content appear and operate in **predictable** ways.
- Help users avoid and correct mistakes.
- Robust
 - Maximize **compatibility** with current and future user tools.



Creating Accessible Documents

https://www.washington.edu/accessibility/documents/

- Checking PDFs for Accessibility
- <u>Creating accessible documents in Microsoft Word</u>
- <u>Creating accessible presentations in Microsoft PowerPoint</u>
- <u>Creating accessible PDFs from Microsoft Word</u>
- <u>Creating accessible PDFs from Adobe InDesign</u>
- Creating accessible PDF forms using Adobe Acrobat Pro

Effectiveness of the implementation of AT and Digital Accessibility













Ten+1 myths for the Digital Accessibility (1 / 2)

- 1. Digital content accessibility is just for the PwD
- 2. Accessible content is ugly or boring and without high aesthetics
- 3. Digital accessibility is hard to be implemented
- 4. PwD are not going to read my content
- 5. I have to concentrate to the majority. Most of the people do have a disability
- 6. PDF and Flash files cannot become accessible

Ten+1 myths for the Digital Accessibility(2 / 2)

- 7. There is no one who will force me to do it. Why I have to worry?
- 8. I have to develop a second (accessible) version of my content
- 9. The cost of accessible content developing is large
- 10. Ultimately, I will not have any benefit or profit from my accessible content
- 11. Every electronic file (e.g. MS-Word) is accessible

Computer based Technologies for PwD

by themselves they do not solve problems, nor are they a panacea

The following play an important role:

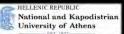
- human factors
- synergies
- education
- staff training
- culture
- the participation of people with disabilities in all phases of technological development and decision making

Basic Reference

• World Wide Web Consortium (W3C):

Web Accessibility Initiative(WAI)

https://www.w3.org/WAI/





Accessibility Unit http://access.di.uoa.gr

Thank you!







InSIDE: Including Students with Impairments in Distance Education Project No. 598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP



www.inside-project.org



Including Students with Impairments in Distance Education

Co-funded by the Erasmus+ Programme of the European Union



This project (598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP) has been co-funded by the Erasmus+ Programme of the European Commission. This publication [communication] reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein

WP4 DEVELOPMENT

Task 4.1 Training of two accessibility advisors from each University on the use of assistive technology and the operation of the accessibility office in and beyond the context of DE programmes
 A.4.1.2 8-days training in Greece (Athens-UOA) on the operation of the accessibility office

8-11 and 14-17 June 2021, Athens

Assistive Technology



HELLENIC REPUBLIC National and Kapodistrian University of Athens Department of Informatics and Telecommunications Division of Communications and Signal Processing Speech and Accessibility Lab

Erasmus+

Dr Alexandros Pino Laboratory Teaching Staff





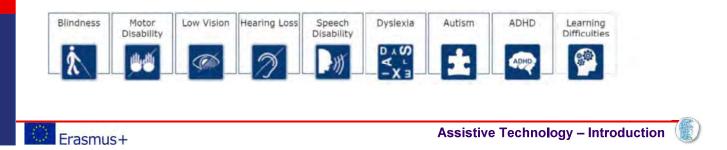
Assistive Technology (AT)

This presentation focuses to computer hardware and software designed to assist students with disabilities

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• Although the term "disabled" is sometimes used to refer to a compact population, it is actually a diverse group of people with a wide range of needs. Two people with the same type of disability can be affected in very different ways. Some disabilities may be hidden or inconspicuous.





According to the World Health Organization (WHO), disability has three dimensions:

- **1. Impairment** in a person's body structure or function, or mental functioning; examples of impairments include loss of a limb, loss of vision or memory loss.
- **2.** Activity limitation, such as difficulty seeing, hearing, walking, or problem solving.
- **3. Participation restrictions** in normal daily activities, such as working, engaging in social and recreational activities, and obtaining health care and preventive services.

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Assistive Technology – Introduction



International Classification of Functioning, Disability and Health (ICF)

- A classification of health and health-related domains
- As the functioning and disability of an individual occurs in a context, ICF also includes a list of environmental factors.
- ICF is the WHO framework for measuring health and disability at both individual and population levels
- ICF was officially endorsed by all 191 WHO Member States in 2001 as the international standard to describe and measure health and disability.

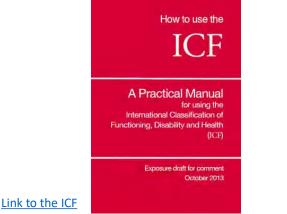
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Assistive Technology – Introduction



There are many taxonomies for disabilities, functioning-wise we can just distinguish them as those that affect a person's:

- Vision
- Movement
- Thinking
- Memory
- Learning
- Communication
- Hearing
- Mental health
- Social relationships





Assistive Technology – Introduction



Impairments, Activity Limitations, and Participation Restrictions

What is disability?

• A disability is any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions).

Learn about disability @ CDC



Erasmus+

Assistive Technology – Introduction



Definition of Assistive Technology (USA)

- A formal, legal definition of AT was first published in the Technology-Related Assistance for Individuals with Disabilities Act of 1988 (The Tech Act)
- This act was amended in 1994
- In 1998, it was repealed and replaced with the Assistive Technology Act of 1998 (AT Act)
- Throughout this history, the original definition of assistive technology remained consistent
- The Federal Law known as public law 108-446 (2004), entitled **Individuals with Disabilities Education Act (IDEA)** further supported this definition of AT

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Assistive Technology – Introduction



Assistive Technology (AT) is a term that applies both to AT devices, and AT services:

- **AT device** is any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.
- **AT service** means any service that directly assists an individual with a disability in the selection, acquisition or use of an AT device.

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Assistive Technology – Introduction



WHO's description of AT

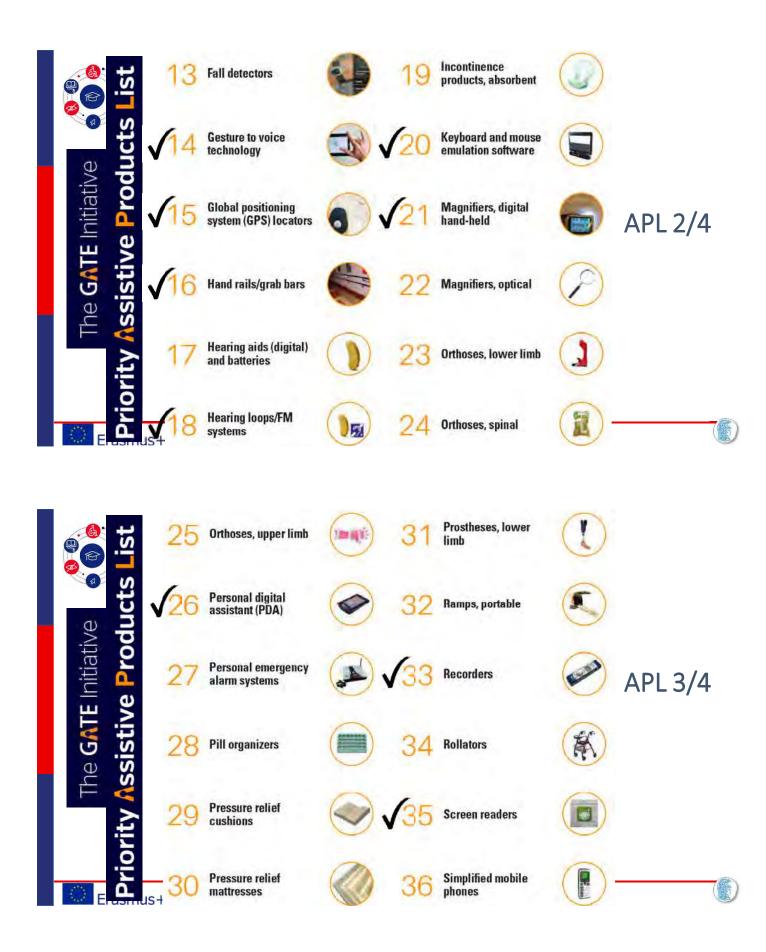
Assistive devices and technologies are those whose primary purpose is to maintain or improve an individual's functioning and independence to facilitate participation and to enhance overall well-being. They can also help prevent impairments and secondary health conditions. Examples of assistive devices and technologies include wheelchairs, prostheses, hearings aids, visual aids, and specialized computer software and hardware that increase mobility, hearing, vision, or communication capacities. In many low-income and middle-income countries, only 5-15% of people who require assistive devices and technologies have access to them.

WHO Assistive devices and technologies link



Assistive Technology – Introduction









AT products

They are designed to provide additional accessibility to people with physical, sensory and mental disabilities. We will focus on those related to our accessibility lab, and computer access.

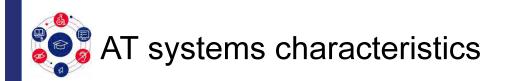






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Assistive Technology – Introduction



Personalization

- An AT system does not always come in a box
- Each SwD may need a completely different solution than another individual with the same disability
- Usually AT systems are assembled using multiple pieces of h/w and s/w like puzzles
- Even similar systems usually accommodate different personalized settings

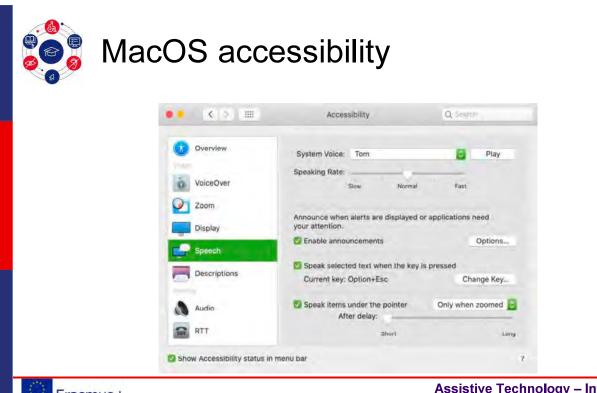
Adaptation

- Pieces of equipment and software often need customizations before applied
- Flexibility is a key, and the system must ideally adapt to the user's needs
- · Users' needs are changing
 - due to change of their health condition
 - · due to familiarization and training
 - · due to changes in their environment

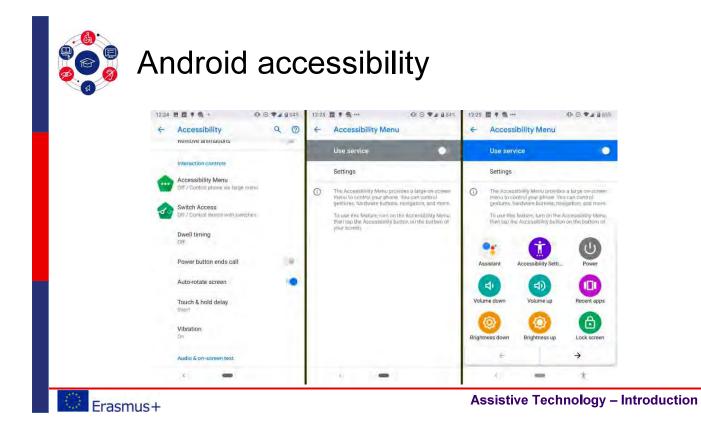
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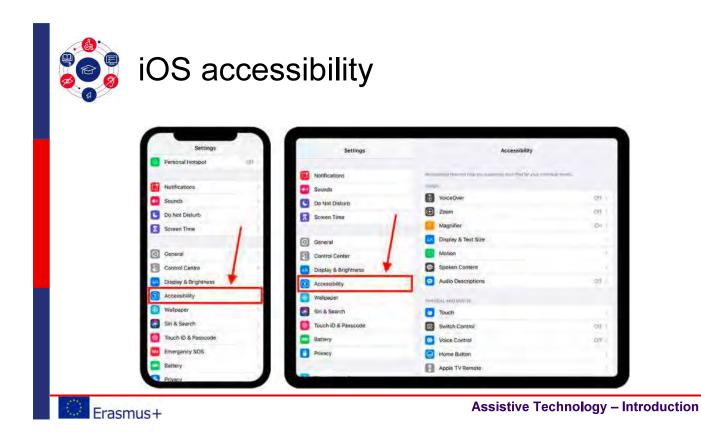
Assistive Technology – Introduction

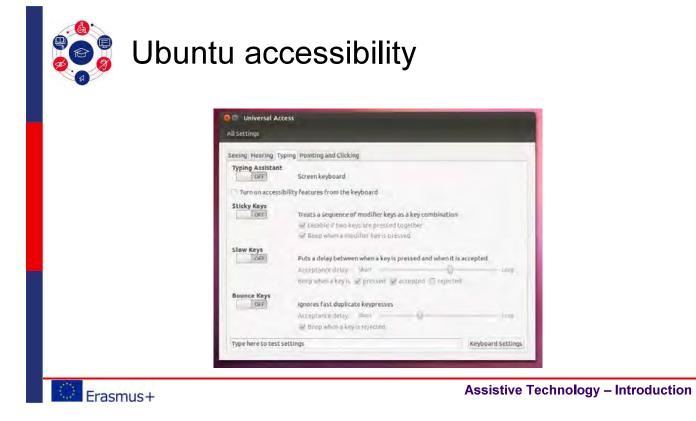




Assistive Technology – Introduction









- Computer-based AT
 - AT Software
 - AT Hardware

Mainly to facilitate access to the computer/laptop/tablet/smartphone to use it as a tool for communication, education, entertainment, information, socialization

- For disabilities that affect
 - Speech
 - Cognitive/learning functions
 - Motion
 - Vision
 - Hearing

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Assistive Technology – Introduction



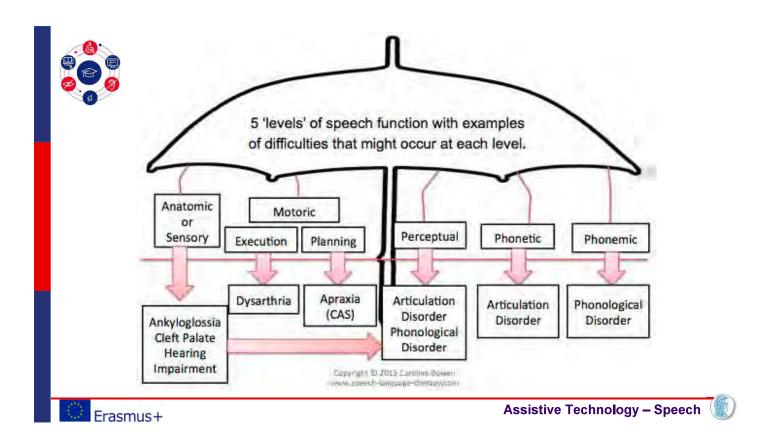




AT for speech disorders









- Autism spectrum disorders
- Cerebral palsy
- Developmental disorders
- Intellectual disabilities
- Developmental apraxia of speech
- Developmental verbal dyspraxia
- Genetic disorders

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- Strokes
- Traumatic brain injury
- Neurodegenerative diseases
 - Amyotrophic lateral sclerosis
 - Progressive supranuclear palsy
 - Primary progressive aphasia
 - Aphasia
 - Apraxia

- Disabilities after surgery
 - Glossectomy
 - Laryngectomy
 - Intubation
 - · Patients in the intensive care unit

Assistive Technology – Speech

Speech and language related

- Alalia
- Tachylalia
- Cognitive impairments
- Mental disabilities
- Down syndrome
- Rett syndrome

- Speech and language disorders
 - Developmental speech delay
 - Specific language impairment
 - Phonological disorders
 - Voice disorders
 - Laryngitis
 - Paradoxical vocal fold movement
 - Vocal cord paresis
 - Spasmodic dysphonia

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- Dysarthria
- Dysphagia
- Articular cartilage disorders
- Neurogenic dysphonia
- Ataxic dysphonia
- Spastic dysphonia
- Stuttering
- Myotonic dystrophy

- Degenerative diseases
 - Muscular dystrophy
 - ALS
 - Multiple Sclerosis
 - Parkinson's disease
 - Huntington's disease
 - Myasthenia Gravis

Assistive Technology – Speech



Combinations

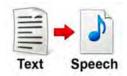
- Speech and language disorders
- Motor disabilities
- Neurological disorders
- Intellectual disabilities

Along with multiple severity degrees

>Lead to a vast variety and diversity of communication needs

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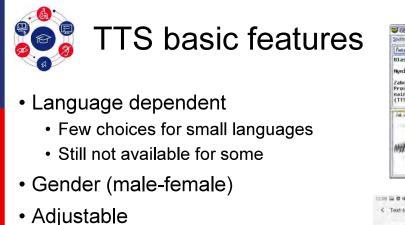
 Software that transforms digital text (characters, numbers, punctuation marks, symbols) to synthetic speech. Runs in the background, outputs humanlike speech sound to speakers.

tts process

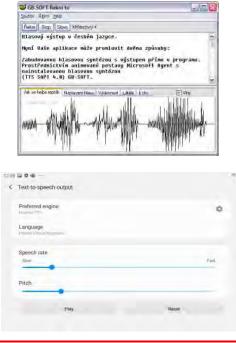


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Assistive Technology – Speech



- Speed
- Speed
- Pitch
- Volume



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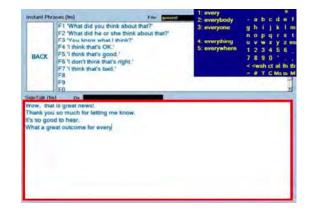
- Polyglot or multilingual
- Advanced intonation and prosody
- Localism (local dialects)
- Age (children/teenagers/adults/seniors)
- Pronunciation correction
- Advanced handling of numbers, symbols, acronyms
- Affective (sad/happy/laugh/cough/kiss)

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- May accelerate typing on a PC/laptop/tablet/smartphone
 - Word prediction
 - · Learns user's vocabulary
 - Extends to phrase prediction
 - Spell checking
 - Autocorrect
 - · Whole phrases bank
 - · Frequently used words/phrases quick selection
- TTS outputs written text to the device's speakers



Assistive Technology – Speech



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- Voice amplifiers
- Electrolarynx
- Speaking valves for people with tracheostomy or ventilators
- Vibration systems
- Morse code systems
- Braille systems





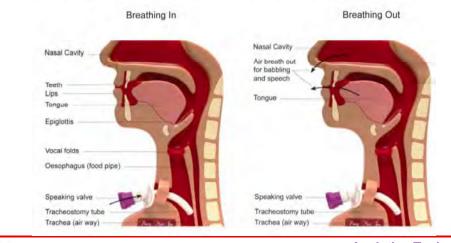


What is a speaking valve?

A speaking valve is a one way valve that fits over the tracheostomy tube. At PMH, we use Passy Muir valves.

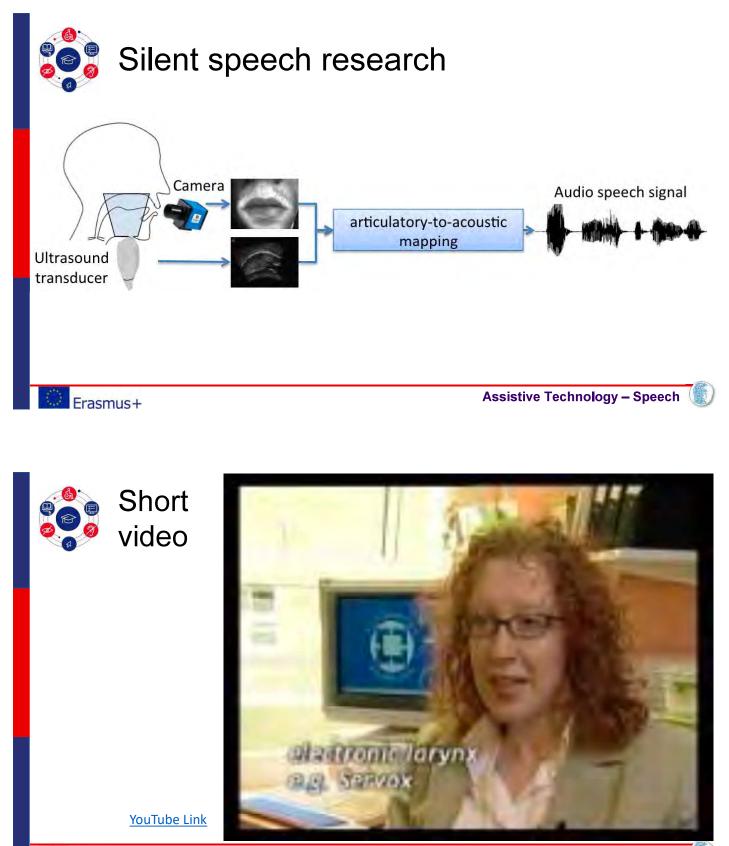
How does a speaking valve work?

The valve only opens to allow air to be breathed in via the tracheostomy. On breathing out, the valve closes and air is pushed up via the larynx (voice box) to exit via the nose and mouth. This may facilitate improvements in voice, cough, smell and taste, and secretion management (information taken from Pasy Mair website).



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Assistive Technology – Speech (



Augmentative and Alternative Communication (AAC)

- Augmentative (speech disorders): For people who can handle their natural language but cannot speak, or their speech is unintelligible. For example, use of artificial voice; the computer speaks for them.
- Alternative (language disorders): For people who can not handle their natural language. Use of alternative language. For example, use of symbols by people who cannot speak/write in natural language/alphabet.

AAC is the formal title for non-speech communication, and the difference between augmentative and alternative communication is merely the difference between partial and total dependency on non-speech communication.

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Assistive Technology – Speech





Cognitive 🗖 🕾 🗐

AT for cognitive/learning disabilities

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• Using TTS while writing allows people with learning disabilities to listen to what they type and to relate the writing to their pronunciation. Some have tools such as word prediction, talking dictionaries, spellchecker, and thesaurus.

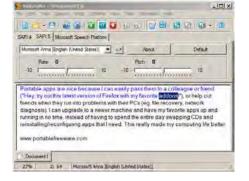


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Assistive Technology – Cognitive



- Render educational material (text) more accessible to students with reading difficulties
 - Reorder text
 - Summarize text
 - Simplify text
 - Translate text
 - Smart text navigation
 - Screen masking
 - Display adjustments
 - TTS reading aloud with simultaneous highlighting of text



Here is a link to learn more and find reading software



Assistive Technology – Cognitive



Augmentative and Alternative Communication (AAC) definition

American Speech-Language-Hearing Association (ASHA):

 AAC describes multiple ways to communicate that can supplement or compensate (either temporarily or permanently) for the impairment and disability patterns of individuals with severe expressive communication disorders



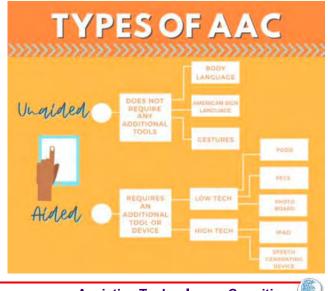
Assistive Technology – Cognitive

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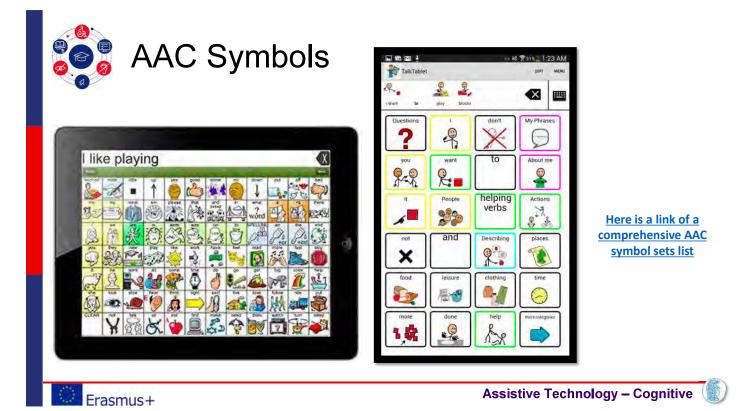
Aided and unaided ACC

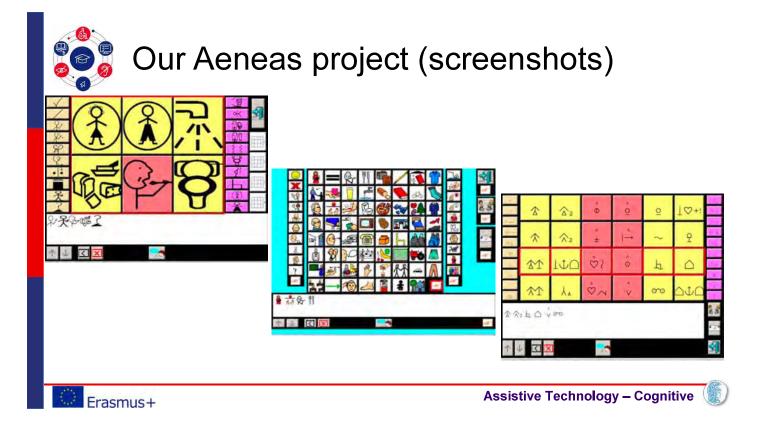
 AAC can involve unaided communication, such as facial expression, body posture, gesture, or sign language, and aided modes (e.g., communication books, tablets). The appropriate mode or modes of communication are determined by the needs of the individual with disabilities and their communication partners.

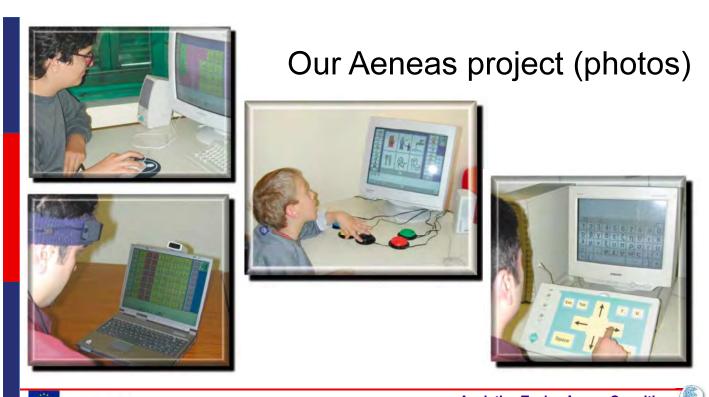


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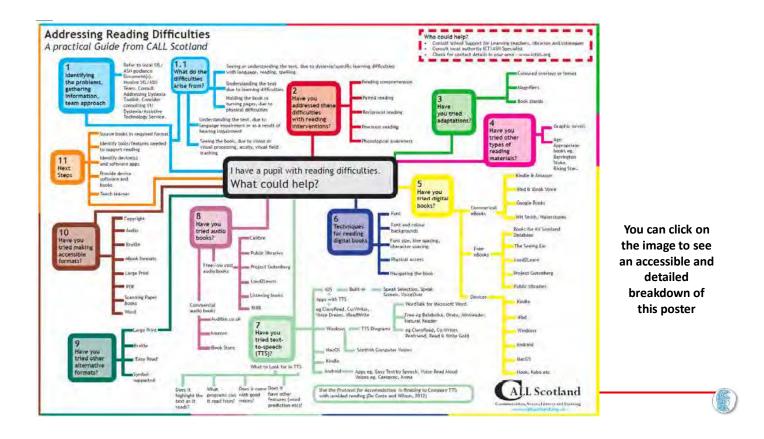
Assistive Technology – Cognitive 🔱

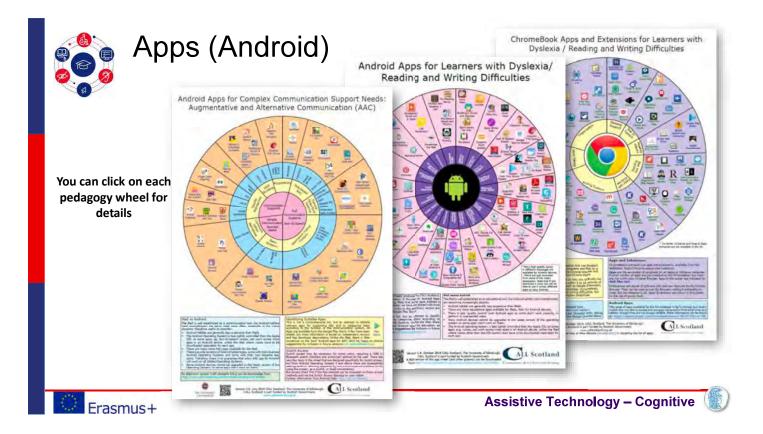


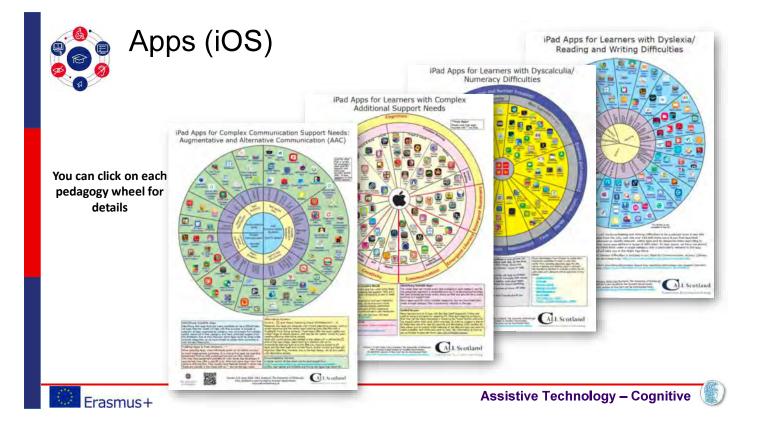




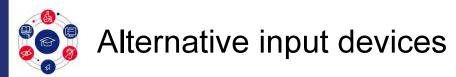
Assistive Technology – Cognitive











Allow computer/tablet/smartphone control by other means instead of the typical keyboard, mouse and touchscreen

- for typing
- for positioning the mouse pointer on a target (point)
- for selecting a target (click)
- for double click, right click, drag & drop, scrolling, swiping, zooming, rotating, etc.

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• Upper limbs impairments may relate to

- Pain
- Fatigue
- Positioning
- Limb amputation
- Coordination
- Tremor
- Control
- Movement range



Assistive Technology – Motion





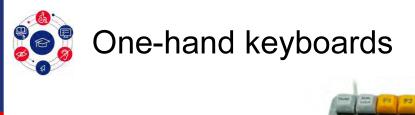


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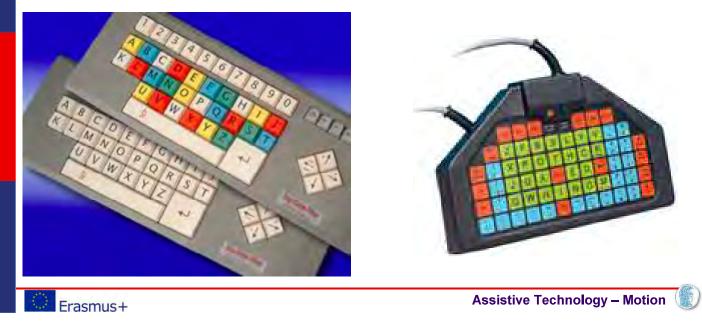


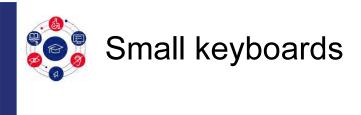
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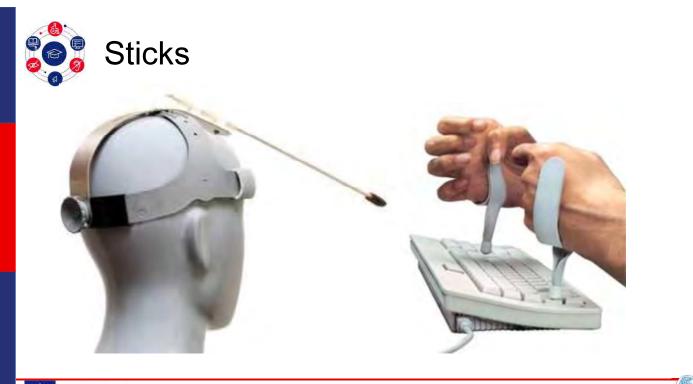


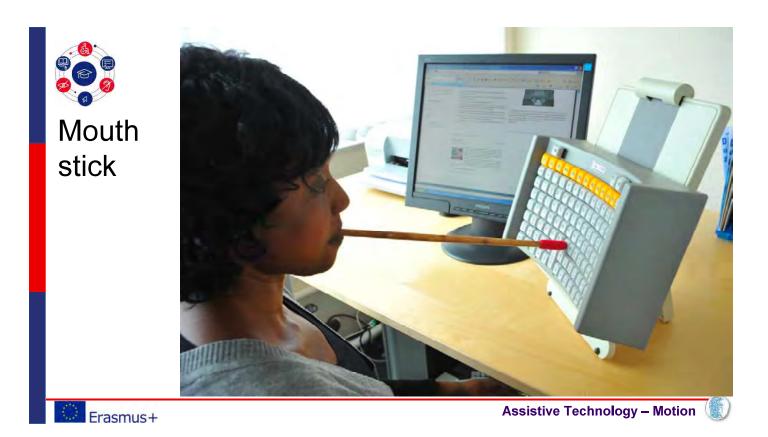




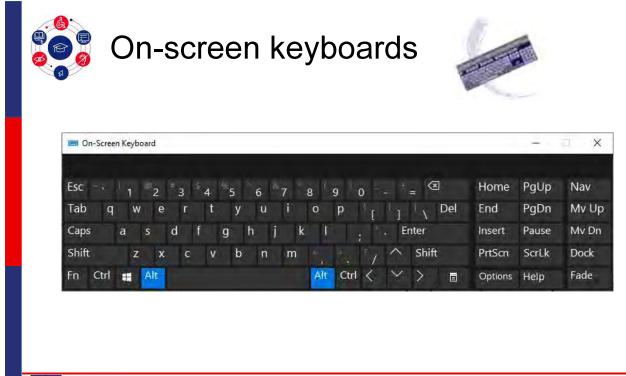












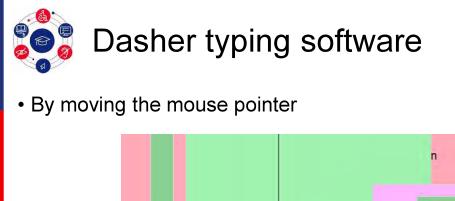


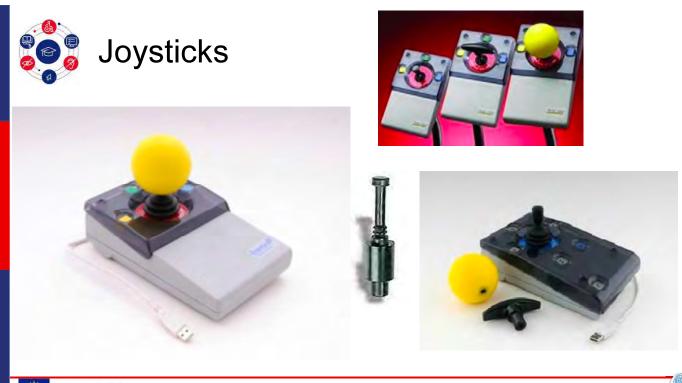
Word prediction

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Assistive Technology – Motion























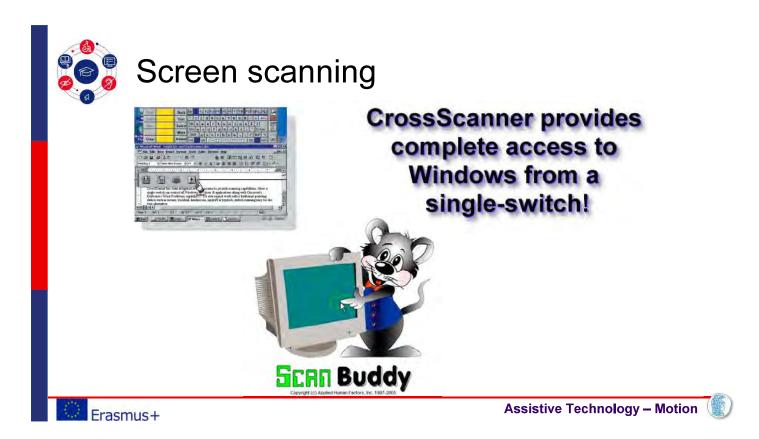
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They are used to control the mouse pointer on the screen without the use of hands.

- Infrared cameras (head control)
- Eye tracking (eye control)
- Mouth devices (tongue or lip control)
- Speech recognition (speech control)
- Brain wave devices (control with EEG, EOG, EMG)

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Mouth controlled

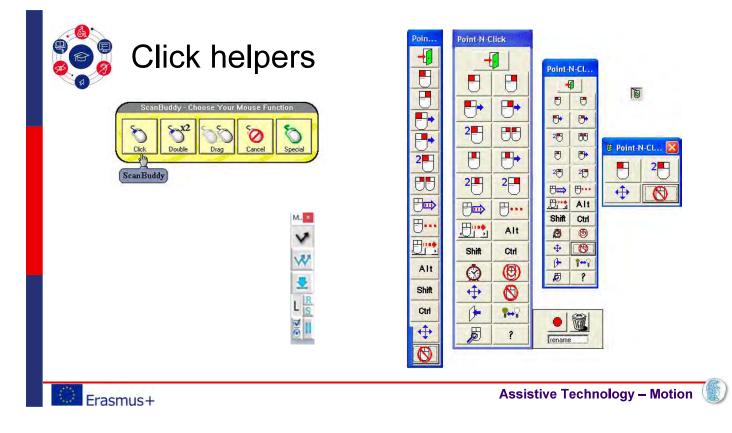


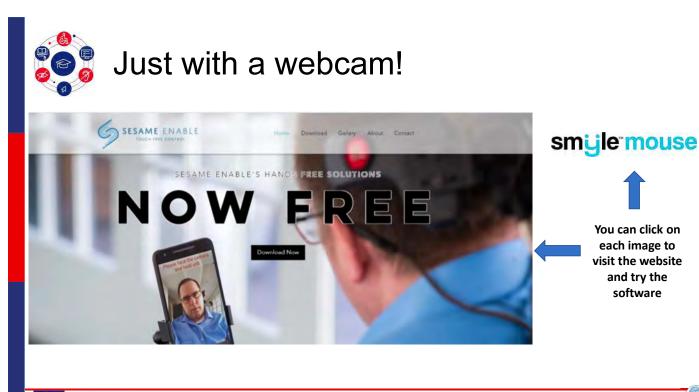
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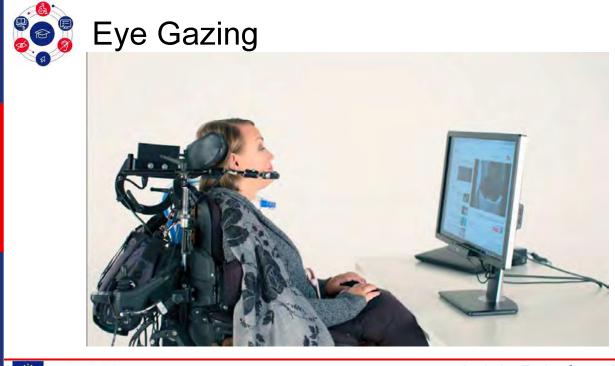
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Assistive Technology – Motion

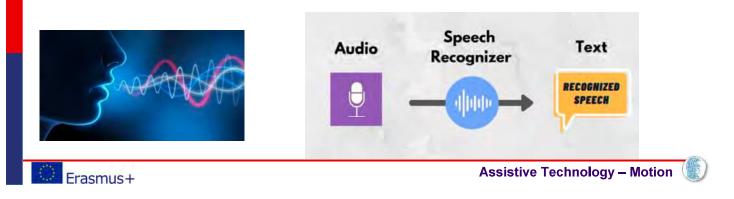


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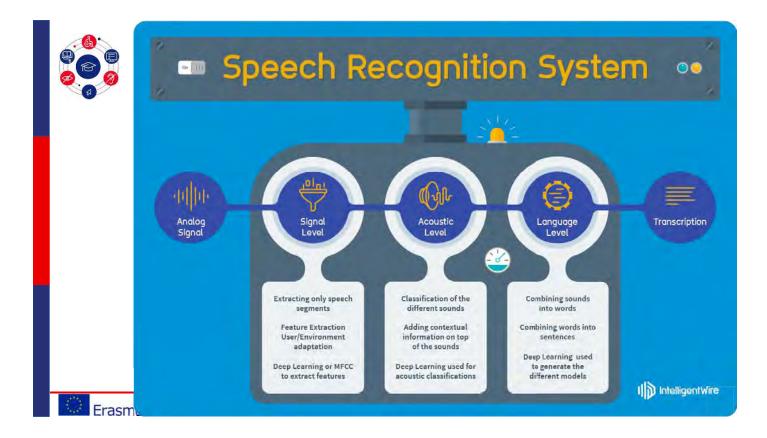


Speech Recognitic Speech

 Software that allows users to give commands and enter data using their voice. Uses a microphone connected to a PC. Facilitates the creation of texts such as letters or e-mails, browsing the Internet, but also navigating applications and menus by voice only.









- EEG ElectroEncephaloGraphy
- EMG ElectroMyoGraphy
- EOG ElectroOculoGraphy





Assistive Technology – Motion



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Click to see BRAINFINGERS BCI website

Brainfingers Hands-Free Computer Control

How It Works

Home What It Does How It Works Who Can Use It

Testimonials Purchase

Distributors Contact Us

Downloads 3rd Party Apps Research



937.767.2674 e-mail us

Brainfingers is hardware and software. The hardware includes headband, amplifier and connecting cables. The software enables training and computer access.

The headband senses and responds to surface electrical signals generated from muscle, eye movement, and brainwave activity detected at the forehead. The headband connects to the amplifier which filters, amplifies and digitizes the forehead signal.

The amplifier connects to computer through a USB port. The Brainfingers Software within the computer further amplifies the forehead signal and uses patented algorithms to decode the signal into eleven frequency bands of information. These eleven bands span the controllable frequency range of the forehead signal. The four lowest frequency bands are responsive to lateral eye movements and theta brainwaves. The middle three frequency bands are responsive to alpha brainwaves. The four highest bands are responsive to beta brainwaves and muscle activity. The eleven bands can be used in combination or individually to produce virtual controls or Brainfingers. The Brainfingers are amplified over two million times. In this way Brainfingers become responsive to the subtlest of facial muscle, eye and brainwave activity.

The <u>Brainfingers Software</u> includes a number of training windows designed to help learn to bring Brainfingers under conscious control. Included with the training windows are help windows and adjustment windows to allow a fine tune control of Brainfingers.

Once control is mastered an editor window is used to build links or "Profiles" between Brainfinger controls and computer events. You then launch onto desktop and use Brainfinger controls to control computer and third party software.

For example a user with ALS/MND who could only control a muscle or beta brainwave switch, would link their muscle or beta switch to a Left Mouse Click event. Then launch onto desktop and control an on-screen keyboard such as the Grid 2 bundle "Speedy Keys" in a switch-scanning mode.

Click to see EMOTIV website

Choose your headset

Our EEG Brainwear®devices offer a wide range of sensor counts while maintaining full portability with the help of wireless technology.





Insight

EXPLORE

sensor technology.



EPOC +

14-channel award-winning wireless EEG headset that records highresolution EEG data.

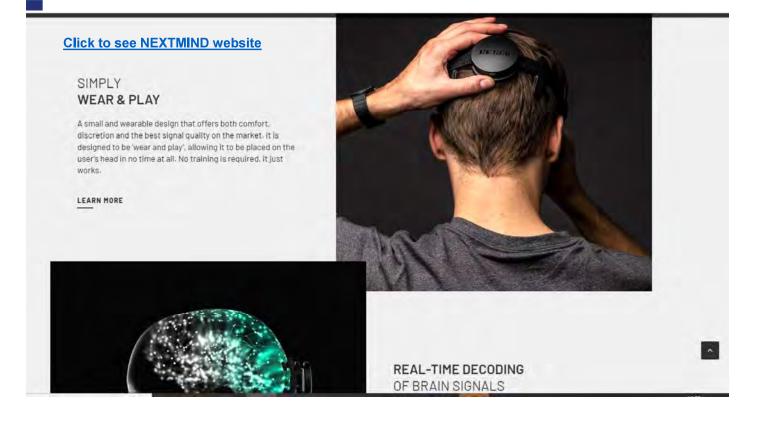
EXPLORE



MN8

MN8 is a first-of-its-kind Bluetooth stereo headset with integrated 2channel EEG buds.

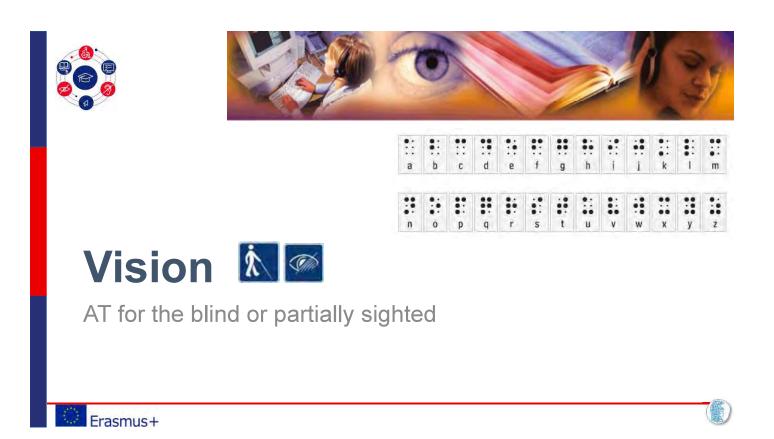
PARTNER WITH US



32-channel wireless EEG cap with 5-channel wireless easy-to-use EEG flexible electrode positioning. headset with innovative polymer Choose Saline or Gel sensors.

EXPLORE

EPOC Flex





Screen magnifiers



• They work like magnifying glasses for the PC screen by enlarging a part of the screen, increasing the readability and making it easier for the user to see the graphics on the screen.



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Assistive Technology – Vision



- They magnify natural objects
- May display the PC desktop at the same time



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Screen readers

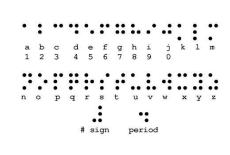


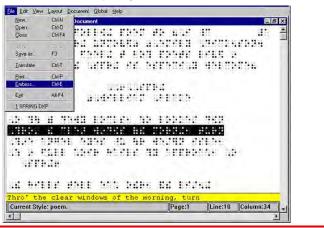
 They "speak" everything on the screen (text, graphics, control buttons and menu lists) in a synthetic voice using TTS.





• Convert electronic text to Braille code that can be printed on a Braille printer or read in real time using a Braille display.





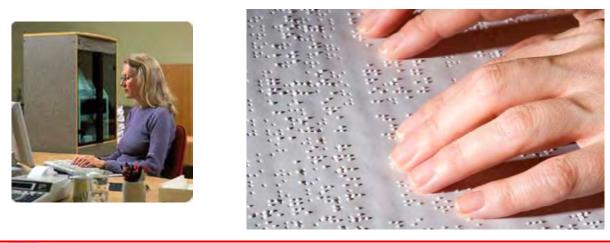
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Assistive Technology – Vision





They produce embossed "prints" of text in Braille.





Assistive Technology – Vision





• They provide tactile text output from the PC. A Braille character consists of a group of dots. The various combinations of dots are used in place of the letters.





Assistive Technology – Vision

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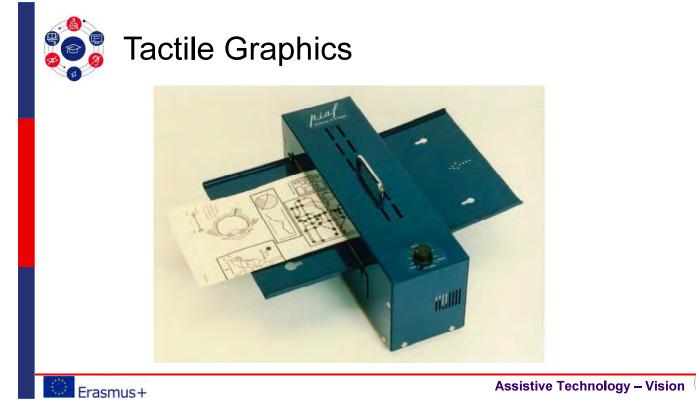


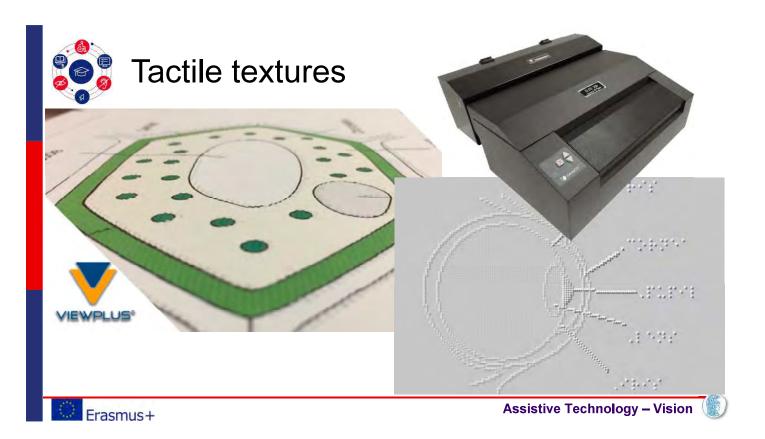
Used in the lab or at home for converting printed material into electronic form accessible to blind students.



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Assistive Technology – Vision









AT for the hearing impaired

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Useful technologies

- Fax
- Text telephone (TTY)
- Telecom devices for deaf (TDD)
- Video communication
- Relay services
- Email
- Chat
- SMS, MMS







Modems TTY/TDD



 They connect between PCs and phones and allow the user to type a message on the PC and send it to a TTY / TDD phone or other Baudot device.



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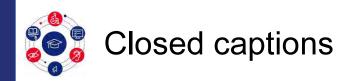
Assistive Technology – Hearing





• They monitor the sounds of the PC and alert the user with visual cues. This is useful when a user cannot hear the sounds produced by the computer. For example, a light may flash to alert the user that there are new emails or when a PC command has been completed

	Co Home Proc. 8 serving Ease of Access Homemod Q4 Audio	Audio Show audio alerts visually Select how visual alerts for notifications are displayed No Visual alerts Flash the title bar of the active window Flash the active window Flash the entire screen	
Erasmus+	EII Closed captions		Assistive Technology – Hearing



- · For existing videos/multimedia
- Are prepared offline by trained annotators
- Special transcription/annotation rules for the deaf, such as
 - Sounds/sound effects/music annotated
 - Speaker name annotated (dialogues)
- User must enable them
- YouTube supports them



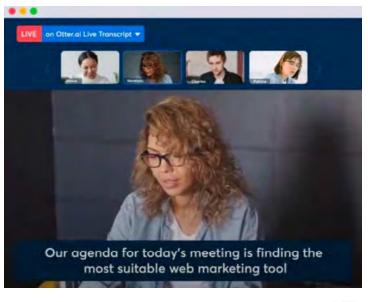
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Assistive Technology – Hearing

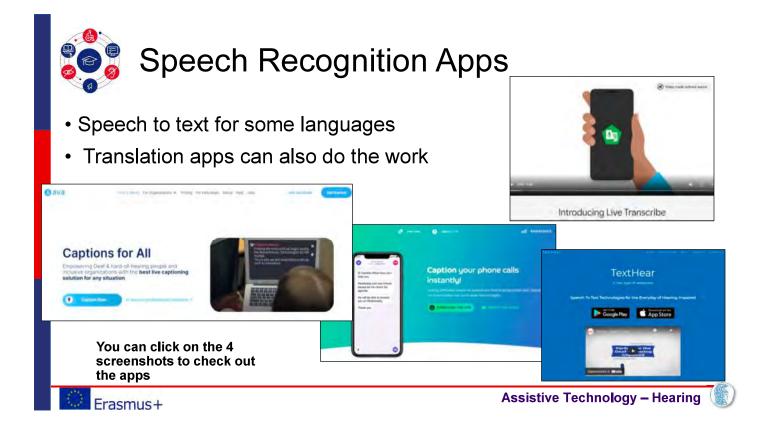


Real-time captioning

- Embedded to some teleconference apps
- Use speech recognition on the app server
- Only annotate speech
- Available for a few languages



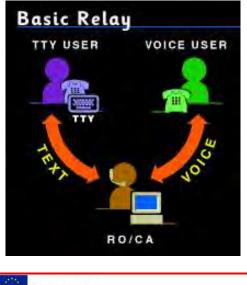
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Voice relay service

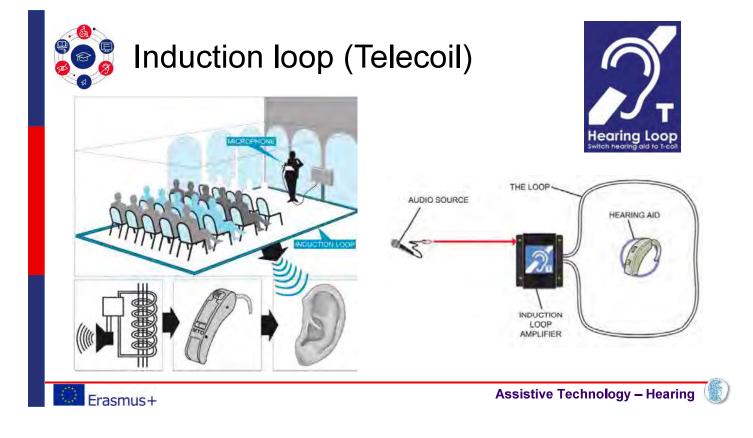




- They connect people who use a regular telephone (with their voice) to interlocutors who use either a text telephone or a special telephone for the deaf.
- Calls are routed through a communication operator who has both types of devices and acts as an intermediary between the interlocutors.

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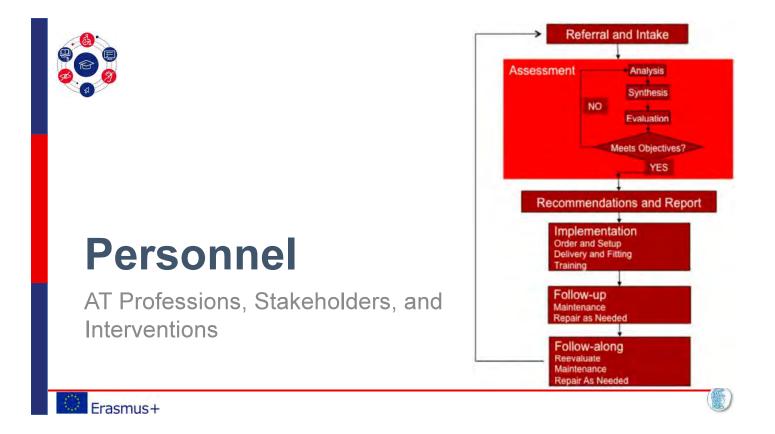






- Paula
- Hand Talk app
- <u>Microsoft/ProDeaf Speech Translation API</u>
- IBM Say it Sign it (SiSi)
- Attemp to translate to the deafs' natural language (sign language)
- Country specific

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Before an AT intervention, an assessment must take place by an team of experts. This procedure may need multiple sessions, tests and followup, with the person with disability, his/her educators, and/or his/her family. Depending on each case the team may include:

AT Professional	Cognitive therapist	Educator
Phycologist	Occupational therapist	Speech-language pathologist
Optometrist	Computer scientist	Family physician
Neurologist	Physical therapist	Physiatrist (rehabilitation physician)
Orthopedic	Psychiatrist	Sociologist

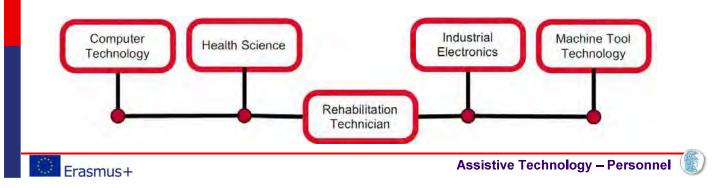
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Assistive Technology – Personnel



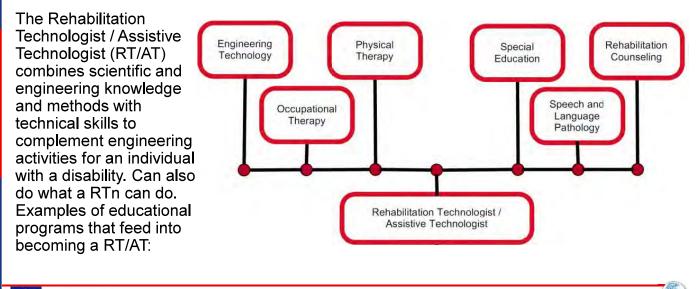
AT professionals Rehabilitation Technicians (RTn)

The Rehabilitation Technician (RTn) works with equipment, primarily assembling and testing component parts of devices or systems that have been designed by others for individuals with disabilities; usually under direct supervision of a rehabilitation engineer or rehabilitation/assistive technologist. Their specialize to assembly, repair, or evolutionary improvements to technical equipment by learning its characteristics, rather than by studying the scientific or engineering basis for its original design. Examples of educational programs that feed into becoming a RTn:





AT professionals Rehabilitation Technologists (RT/AT)



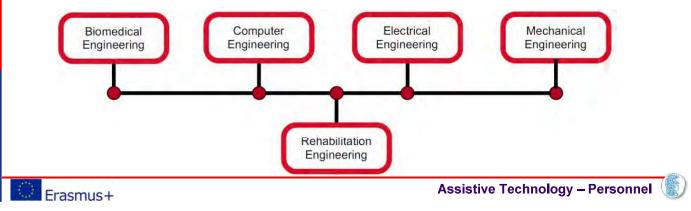
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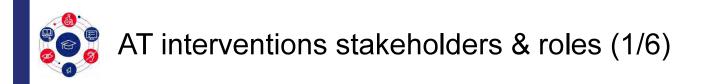
Assistive Technology – Personnel



AT professionals Rehabilitation Engineers (RE)

The Rehabilitation Engineer (RE) uses the innovative and methodical application of scientific knowledge and technology to design and develop a device, system or process, which is intended to satisfy the human needs of an individual with a disability. Can also do what a RT, and a RT/AT can do. Examples of engineering educational programs that feed into becoming a RE:





1. Students with disabilities (SwD)

- · Provide input related to
 - educational needs and decisions
 - · personal and medical care
 - · life choices and goals
 - social relationships
 - preferences
- The Doctors prescribe
- The State provides

May be students with



• Multiple combinations and severities

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Assistive Technology – Personnel



AT interventions stakeholders & roles (2/6)

2. AT facilitators

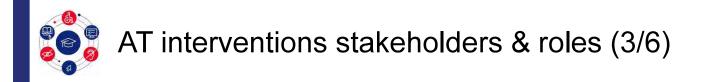
- Provide everyday assistance to SwD
- Support implementation of multimodal interventions
- Support unfamiliar communicative partners
- Maintain AT technology
- · Prepare low-technology materials
- Assist SwD to select and program settings in their AT devices
- Serve as a liaison with other educational personnel and device manufacturers

May include

- AT professionals
- Family members
- · Friends or peers
- Occupational therapists
- Speech-language pathologists
- Physiotherapists
- Computer savvies
- Teachers

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Assistive Technology – Personnel 🔇



3. AT finders

- Identify SwD with disabilities who need AT
- Are aware of current, appropriate AT options for SwD
- Prepare potential decision makers
- Organize decision-making process to seek AT assessment
- Refer to appropriate AT intervention provider(s)
- Certify AAC prescription(s) (when appropriate)

May include

- AT professionals
- · Family physicians
- Pediatricians, Orthopedics, Neurologists
- Physiatrists (i.e., rehabilitation physicians)
- Occupational therapists, Speechlanguage pathologists, Physiotherapists
- Social workers
- Teachers/professors
- AT resellers

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Assistive Technology – Personnel



AT interventions stakeholders & roles (4/6)

4. General practice clinicians or educators

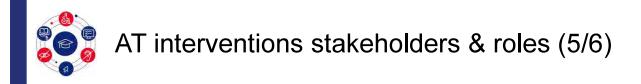
- Implement multimodal interventions
- Integrate low-tech AT materials in restorative and compensatory interventions
- · Implement appropriate low-tech AT options
- · Implement routine high-tech AT options
- · Monitor impact of individual AT interventions
- Prepare and support AT facilitators
- Instruct communication partners
- Train users on AT

May include

- AT professionals
- Generalists
- Speech-language pathologists, Occupational therapists, Physiotherapists
- Teachers
- Education paraprofessionals
- Computer scientists
- Others who work in educational and health care settings

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Assistive Technology – Personnel



5. AT Specialists

- Implement complex or unique high-tech AT options
- Monitor impact of individual AT interventions
- Obtain funding for intervention technology
- Support general practice clinicians
- Provide continuing education to AT facilitators
- · Collaborate to support technology transfer
- Collaborate to support AT research
- Support AT professional organizations and activities
- Provide expert testimony for legal and policy proceedings

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May be

- AT professionals
- Scientists
- Rehabilitation engineers
- Researchers

Assistive Technology – Personnel



AT interventions stakeholders & roles (6/6)

6. AT Experts

- Promote, sustain, and enhance AT services at program or agency level
- Provide preprofessional preparation of AT finders, intervention specialists, and experts
- Provide continuing education for AT finders for general practice clinicians, AT intervention specialists, and experts
- Develop AT policies
- · Execute AT research
- Prepare AT educational material
- Participate in the leadership and management of AT professional organizations

May be

- AT professionals
- University faculty
- Master clinician specialists
- Policy makers
- Scientists
- Researchers

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Assistive Technology – Personnel

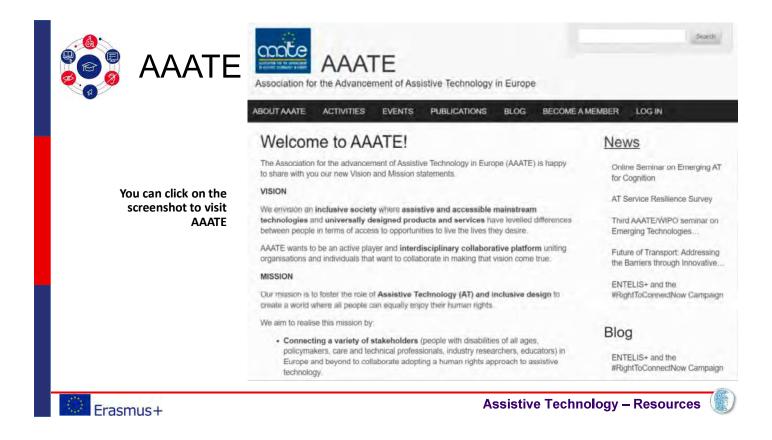




Resources

Important websites and references

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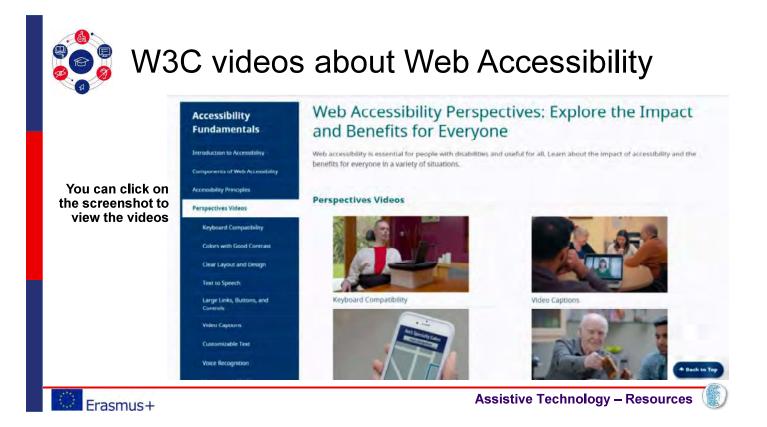






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Assistive Technology – Resources





- Assistive Technologies-University of Athens Part 1 (17:36)
- Assistive Technologies-University of Athens Part 2 (16:30)
- Assistive Technologies-University of Athens Part 3 (15:00)

These videos have subtitles translated in English (closed captions); press the cc icon when you get on the YouTube video webpage to enable them.



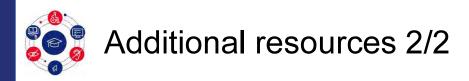
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Assistive Technology – Resources
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 - Part II: Current and emerging technologies. Retrieved from European Parliament: https://www.europarl.europa.eu/RegData/etudes/IDAN/2018/603218/EPRS_IDA(2018)603218(ANN2)_EN.pdf
 - Part III: Perspectives, needs and opportunities. Retrieved from European Parliament: https://www.europarl.europa.eu/RegData/etudes/IDAN/2018/603218/EPRS_IDA(2018)603218(ANN3)_EN.pdf
 - Part IV: Legal and socio-ethical perspectives. Retrieved from European Parliament: https://www.europarl.europa.eu/RegData/etudes/IDAN/2018/603218/EPRS_IDA(2018)603218(ANN4)_EN.pdf

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Assistive Technology – Resources



Including Students with Impairments in Distance Education www.inside-project.org

Co-funded by the Erasmus+ Programme of the European Union



This project (598763-EPP-1-2018-1-EL-EPPKA2-CBHE-JP) has been co-funded by the Erasmus+ Programme of the European Commission. This publication [communication] reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein

Thank you!

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pino@di.uoa.gr

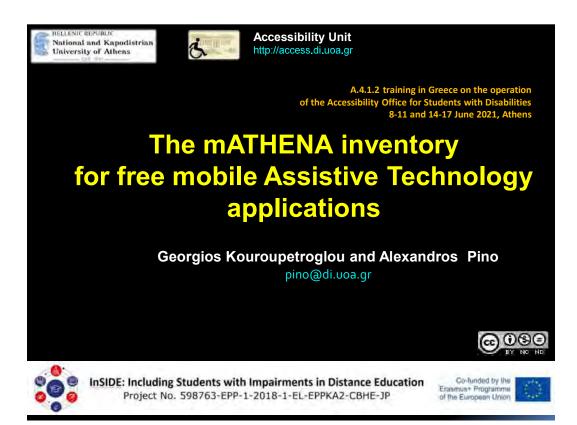


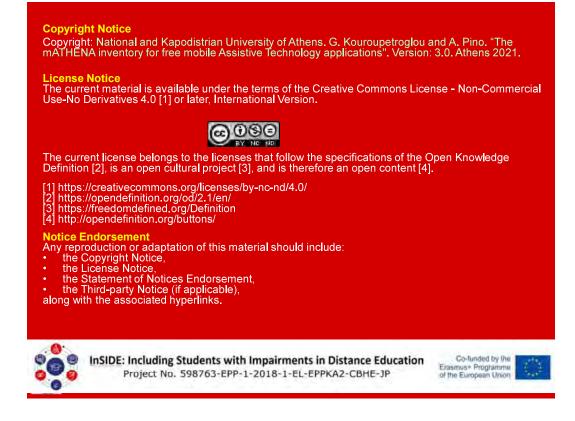
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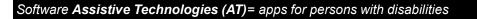
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HELLENIC REPUBLIC National and Kapodistrian University of Athens Department of Informatics and Telecommunications Division of Communications and Signal Processing Speech and Accessibility Lab

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Rationale

- mobile app stores do not include a category for AT or a classification by disability
- information for each mAT app is not consistent
- no easy way to compare available mAT apps for a specific disability
- cost of mAT apps

Online mAT software inventories or lists try to address these challenges

Existing Inventories for mAT apps

 Special Needs Apps 	http://www.friendshipcircle.org/apps/
 BridgingsApps 	http://bridgingapps.org
 AppleVis 	http://www.applevis.com
 Apps for AAC 	http://www.appsforaac.net/
 AssistIreland 	http://www.assistireland.ie/
Low Vision Bureau	http://www.lowvisionbureau.com
(A)	

Main features of existing inventories for mAT apps

	а	b	С	d	е	f
Number of apps	357	1.515	150	300	70	326
iOS	YES	YES	YES	YES	YES	YES
Android	YES	YES	NO	YES	YES	NO
Free	YES	YES	YES	YES	YES	YES
Commercial	YES	YES	NO	YES	YES	YES
Searching filters	3	9	3	3	5	1
User rating	YES	YES	NO	YES	NO	YES
User comments	YES	NO	NO	YES	NO	NO
Other				only AAC apps	only for the visual impaired	

a: SpecialNeedApps, b: BridgingApps, c: AppleVis, d: AppsforAAC, e: AssistIreland , f: LowVisionBureau

Crucial requirements for Inventories of mAT apps

- i) to be developed in a systematic way,
- ii) to include apps after a selection and evaluation process, preferable by experts in the field
- iii) provide a consistent description of all apps



Methodology for the design and development of functional and reliable inventories of mAT apps

- Search and locate mAT apps
- Download and install the apps
- Test and evaluate the installed mAT apps
- Create a consistent documentation for each app
- Design the facilities of the inventory
 - Searching: a) by disability, b) by the operating system, c) by application category, d) using keywords, and e) alphabetically
 - Rating system and user comments
 - Follow Web Content Accessibility Guidelines (WCAG) 2.0 at least for the level AA of conformance

Update and maintain the Inventory

the mATHENA Inventory of free mAT apps http://access.uoa.gr/mATHENA

- follows the above methodology
- based on the ATHENA Inventory of Open Source AT software <u>http://access.uoa.gr/ATHENA</u>
- more than 200 different forums, websites, blogs, newsletters, application stores were explored for mAT candidate apps
- all the apps included in mATHENA have been tested by AT experts of the Speech and Accessibility Lab, University of Athens

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rowse by Category Romative Communication (3) out Swatem (3) and we category (3) and we category (3) and category (3) and category (3) and (3)	Freeware), given in the The AT softwar thay have bee each free AT s category(iss), hints, downloa	estless Assistive of Free Assistive for website mATH re-applications prove installed and tesse oftware, the followin related disability (lan id links, and a scher- diness in Motor	echnology ap ENA Free Al ded in ATHEMA d in the <u>Screet</u> g information i), description,	oplications fo Software In are presented in and Accessibility of given applica-	r smärtphone wentusy for n an organizeit a tv Leboratory. O tion name, deve	es and tablet mobile devi and systematic v viversity of Ath loper, version, A
cius Henner (14) (Denn III) Conomi mann (11)	E	Disability	Tow pictoe	Meaning Loss	Desablity	
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Contrast Adjustment, Revisoard Shortouts, Voice Kein, Clock, Video Call). Show All Applications: simply lists the whole inventory's applications in an alphabetical order.

Contracting of Contracting	ATHENA: Free Assisti	speech and Acces	ssibility Lab	
Homepage All applications	<u>Credits</u> <u>Contact</u>	Search: Search	Go	
how All Applications	Subsch and Accessibility Lab > Free AT Software	<u>s</u> > All		
Show	All applications	Total aug	ber of applications: 150	
Browse by Category	This category includes the following app		ber of appreasions, 150	
Alternative Communication (9)	[Games] [Learning Activities]			
Book Readers (3) Braille Translators (3)	[Games] [Learning Activities]			
<u>Calculators (3)</u>	[Games] [Learning Activities]			
Camera Mouse (1) Chattong (2)	[Games] [Learning Activities]			
Click Helper (14)	[Games] [Learning Activities]			
Clocks (1) Concept Maps (3)	[Games] [Learning Activities]			
Contrast/Color Adjustment (10)	[Games] [Learning Activities]			
DAISY (4) Document Accessibility (25)	[Games] [Learning Activities]		1.1.1	
Entertainment (3)	2+2 math for kids (Math)		*****	
Games (11)	Accessibar [Contrast/Color Adjustment]	[Screen Magnifiers]	****	
Keyboard Shortcuts (7) Learning Activities (17)	Accessible PDF Reader [Document Acce	ssibility]	*****	
Math (5)	Accessible UML [Document Accessibility			
Mouse Emulators (4) Mouse Pointers (8)	AlphaCard [Learning Activities]			
Mouse Pointers (8) Multimedia (3)	AMIS [DAISY] [Document Accessibility]		*****	

mAT apps located, tested, and selected by applying the proposed methodology

	Number	%
Total mobile AT apps located	1.100	100,0
Applications not free of charge	380	34,5
Applications failed to run	35	3,2
Non-AT apps	190	17,3
Applications not supporting the English language	75	6,8
Applications finally selected for mATHENA	420	38,2

Comparison of mAT apps inventories

A STATISTICS

Α	В	C	D	E	F	G	
				Detai	ls for ea	ich app	lication
•	•	•	•	•	•	•	Application Name
•	•	•	•	•	•	•	Description
•	•		•		•	•	Manufacturer
•	•	•		•		•	Application Logo
			•			•	Version
•	•					•	Screenshots
						•	System Requirements for App
•	•		•	•		•	Download URL
•			•			•	Developer URL
			•			•	Add Comment
•						•	Languages
Star .							os, C: AssistIreland , D: AppleVis, , G: mATHENA
Contraction of the second							

Comparison of mATT apps inventories

Α	В	С	D	E	F	G	
				In	ventor	y featu	ures
•	•		•	•		•	Search field
•	•	•	•	•	•	•	Filter Categories
		•				•	Filter Disability
						•	Only Free of charge Apps
•	•					•	Rating System
•	•		•		•	•	Alphabetical List of all Apps
•	•				•	•	Filter Operating System

A: BridgingApps, B: SpecialNeedApps, C: AssistIreland , D: AppleVis, E: LowVisionBureau, F: AppsforAAC, G: mATHENA

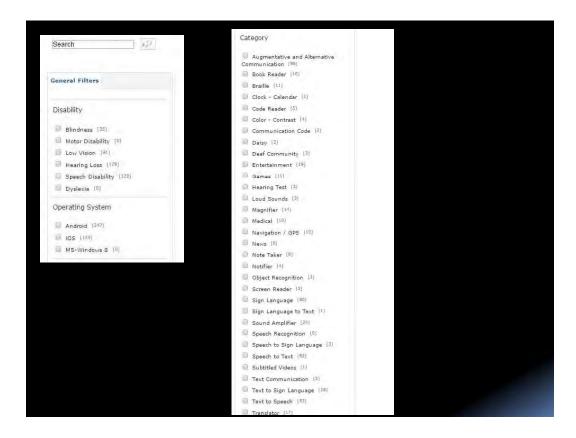
Fields for the Documention of an mAT app

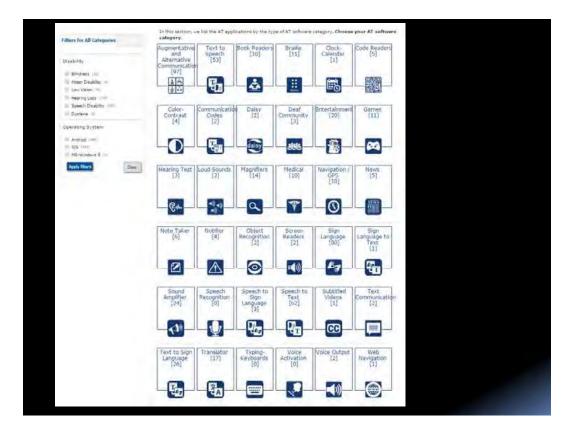
- official app name
- name and URL of the manufacturer/developer
- app's logo
- URL for downloading from the app store
- required operating system and the minimum version
- Iatest app version
- disability/ies it addresses
- classification according to its application domain or scope
- description of its functionality and its main characteristics
- languages it supports,

the specific models of mobile devices used during the tests
 along with their version of their operating system

http://access.uoa.gr/mATHENA

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And Cocessity La C			2 7 3 S De	oeech ogy Sof	and tware I	Access nventor	rsity of Athe relecommunication ibility La Y	on
ome All applications	All disabilities	All operating systems	All software categories	Credits	Contact	Login		_
ome								
Search	*P							
Disability		complimentary The AT software applicat way after they have bee of Athens. For each free developer, version, AT ca	is for mobile devices (sma y to the <u>ATHENA Free AT S</u> tions provided in mATHENA a n installed and tested in the AT software, the following in ategory(ies), related disabilit attings and hints, download li	Software re present Speech an formation y(ies), des	Inventory ed in an or d Accessibi is given: ap cription, op	for compu- ganized and lity Laborate oplication na- perating syst	i ters. systematic <u>ory</u> , University me,	
Low Vision (91)		There are three ways		inco, ditu d	Screensilo			
 Hearing Loss (179) Speech Disability (120) Dyslexia (0) 		Browse by Disability: Hearing, Motor, Blindnes	Lists the related application					
Operating System		Browse by Category:	Lists the applications by type : Lists the whole inventory's	of A1 soft	ware categ	jory.		
Android (217)		a serie dan de la contra		4.000 400 40		terated and t		
I ios (184)								
🗍 MS-Windows 8 (0)								
Category								



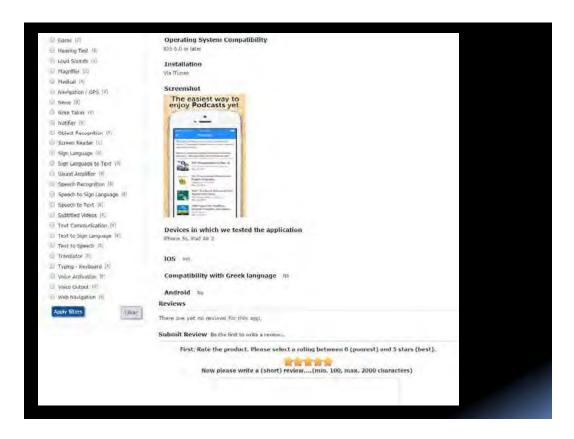




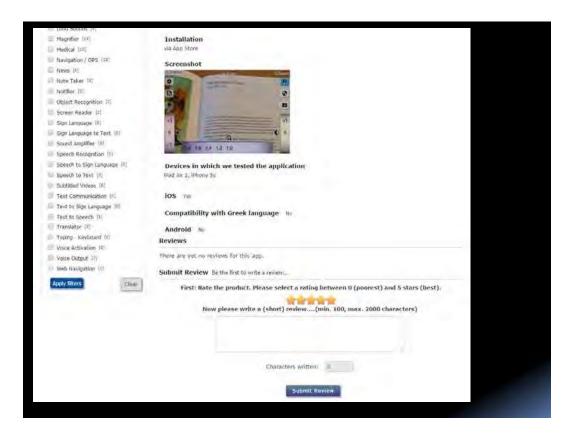
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ome All applications All disabili	ities All operating sy	stems All sof	tware categories	Credits	Contact	Login		
Search >>	In this section w	e lict the AT apr	lications by the Ope	rating Cur	tem of the	devices	in which we	ran install -
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