

IT Education in Austria

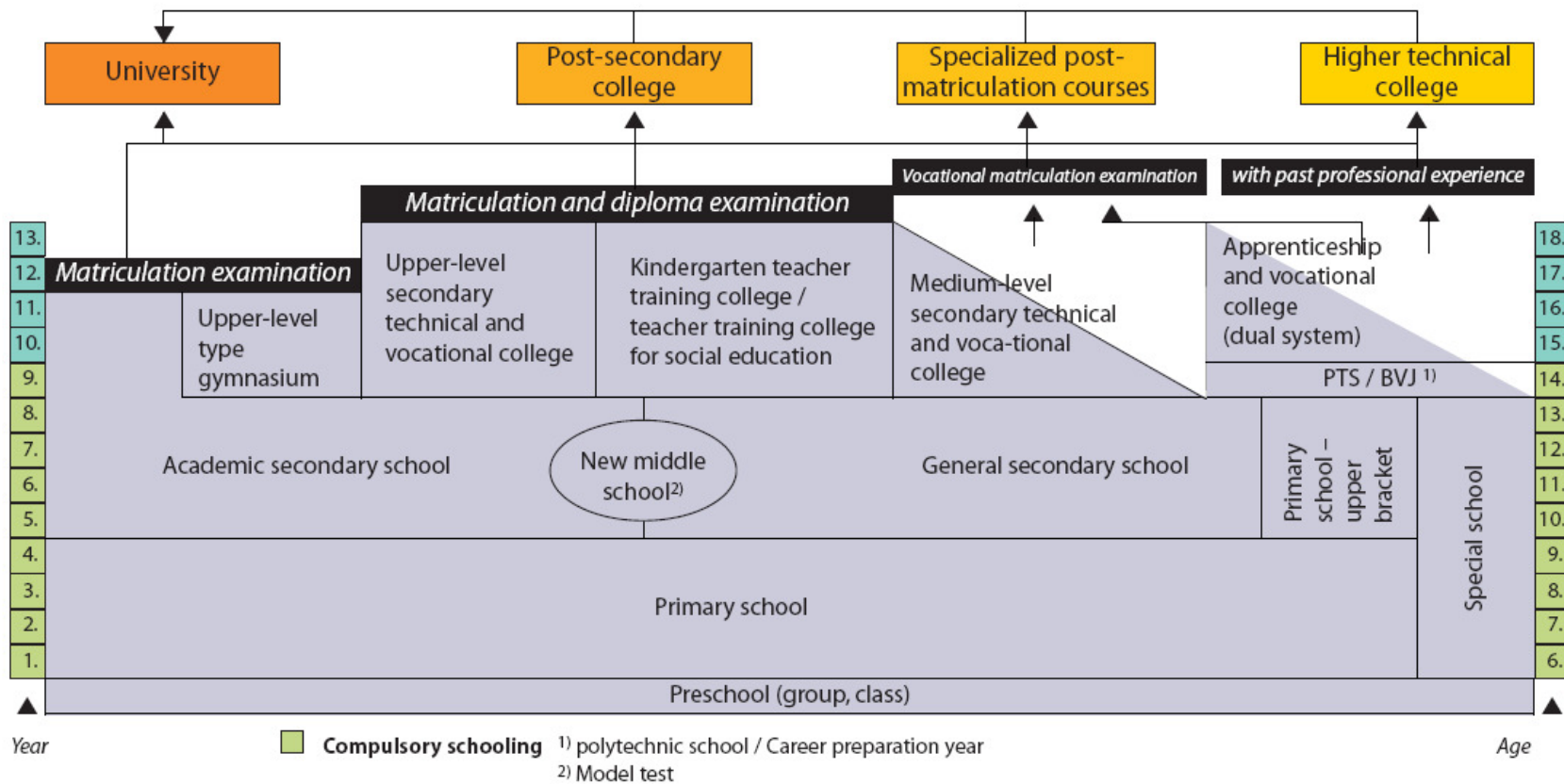
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Facts about Austrian Educational System in 2009/2010

- 8.3 million inhabitants
- 1.1 million pupils in private and public schools
- 120 000 teachers in prim. and sec. education
- 330 000 students
- 45 000 teachers on universities and higher technical colleges

Austrian Educational System



IT-Education at Austrian schools

Pre-primary education

Grade 1 to 8

- No compulsory IT subject
- IT should be involved in all subjects
- about 50 % of schools offer special IT and Informatics courses

Competence Matrix for Basic Informatics Education

Classification Scheme for Austria's Lower Secondary Level (K8 – 14 years)
Framework of Reference for Digital Competences - Competence Matrix for Basic Informatics Education

		Basic Competencies Level I	Extended Competencies Level II	Special Competencies Level III
Media Reflexion Related Topics	1. Information Technology, Human and Society			
	1.1. Benefits and Risks	Basic reflection on using the computer and its impact. Basic Knowledge in the vocational, social and historical context.	Founded risk assessment. Solid knowledge in related topics. Sustainable vocational and historical knowledge.	Foundational and coherent knowledge. Evaluation of using digital media.
	1.2. Privacy, Law and Responsibility			
	1.3. Historical and vocational aspects			
Media Knowledge	2. Informatics Systems			
	2.1. Hardware	Basic IT-knowledge and practical skills on the level of operating systems.	Detailed IT-knowledge, fluent rote skills and knowledge of relationships in the context of informatics systems.	Extended knowledge of systematic foundations. Understanding of concepts and simple models. Evaluation of informatics systems Advisory skills.
	2.2. Software, Operating System and Filemanagement			
	2.3. Networks			
Use and Production of Media	3. Software Applications			
	3.1. Documentation, Publication und Presentation	Basic knowledge and skills to accomplish standard tasks in the context of education and leisure time.	Experienced use of application software. Solving of standard tasks in school and everyday live throug selection of appropriate application software.	Extended tool competence. Conceptuel understanding of application software. Problem solving competence and dynamic capabilities.
	3.2. Spreadsheets			
	3.3. Information, Communication und Cooperation			
Principles and Computational Thinking	4. Informatics Concepts			
	4.1. Digitalization	Basic knowledge of informatics terminology and elementary connections. Execution and description of simple instructions.	Basic conceptual understanding of human-machine communication. Simple modeling of algorithmic tasks and its implementation. Simple transfers.	Foundational knowledge and basic understanding. Abstractional thinking. Creative solutions for algorithmic problems.
	4.2. Data, Relations and Structures			
	4.3. Algorithms, Programming and Automatization			

IT-Education at Austrian schools

Grade 9

Compulsory IT education since 1985 (ICT and Informatics)

Contents of curriculum

- Introduction to Software, Programming, Hardware , operating systems, Data privacy,...
- Capabilities of computers
- Computer science and association aspects
- Didactical Methods: working in groups, projects, study trips, practical experiences...

IT-Education at Austrian schools

Grade 10-12 (13)

- at least elective topic
- in most vocational schools compulsory IT
- graduation with topic informatics possible

Contents of curriculum

- Expanding the knowledge of the contents in grade 9

IT Competitions for pupils

- **Talents Austria** www.talents.at
projects dealing with social web 2.0, game based learning,...
- **Computer Contest Austria**
(www.contestsinternational.eu/ComputerContest)
given tasks to be solved, computer applications
pod casts, video competition
- **Bebras Contest** since 2007



Future of teacher education

- Flexible system: Bachelor and Master
- Basic education for all kind of teachers
- „Schools of education“

Thank you for your attention

