



e-Learning in Teacher Education

State College of Teacher Education
Vienna, PABW



M. Grimus

Overview

- ✚ College of Teacher Education in Austria (CTE)
- ✚ PABW (Pädagogische Akademie Wien)
- ✚ eLearning at PABW

- ✚ IT associated courses in in Teacher Education at CTE in Austria
- ✚ Curriculum „Informatics“ in Secondary Schools“ *)

*) partly in German

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State College of Teacher Education

is a training institution for prospective teachers in

- ✚ Primary
 - ✚ Lower Secondary
 - ✚ Special Schools and
 - ✚ in the pre-vocational year
- Fulltime basis, three years

Also an inservice institution for people from pedagogical fields, offering opportunities for lifelong learning.



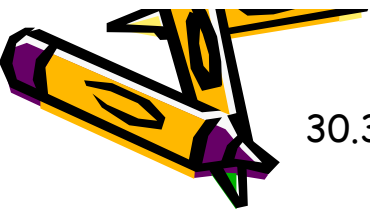
14 CTE in Austria

Teacher Education for
Primary and
Lower Secondary

E_Learning in Teacher Education



before 2007- thereafter ????????



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Computer Science and IT in CTE

- Regular Study (Diploma)
 - „Ergänzende Studien“ (Supplementary Studies), compulsory:
„Angewandte Informationstechnologien“ (Applied IT)
 - IT related subjects 2-4 SWS *) (from in total 10-30 SWS)
- Continuous (advanced/additional) Study
 - Various „Akademiestudiengänge“ (Academic Training Courses) in the different CTE

SWS = Semesterwochenstunden
weekly hours per term

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Academic Training Courses

Additional qualification (after Diploma) *)

Certificate: *Certificate of Attendance.*

In some courses additional ECTS and/or a specific certification is granted (depends on institution and SWS).

Extensive courses or a combination of selected courses can lead to a specific diploma (e.g. diploma for teaching information technology in lower secondary)

*) Legal Base: *Akademiestudiengesetz 1999*

<http://www1.pabw.at/rechtliches/akademien-studienordnung#01>



IT in Regular Study

Number of SWS is difficult to be compared

In some CTE media pedagogic is integrated in the study plan of IT, in others there are additional lessons for it.

The same is with the subject „Communication“.

The content (what are topics in IT) of the subject is not compareable. In some CTE the study plan is available in the www (short version).

The following slide shows the number of SWS used for IT related study in different CTE.



IT in Regular Study

SWS weekly hours per term

Tirol Diözese – Stams	4
Tirol – Innsbruck	4
Linz Bund	4
Kärnten -Klagenfurt	4
Wien Bund	3
Salzburg	3
Niederösterreich Diözese St. Pölten –Krems	3
Linz Diözese	3
Graz Diözese	3
Niederösterreich – Baden	2,5
Graz Bund	2
Wien Diözese	1
Vorarlberg – Feldkirch	0
Burgenland - Eisenstadt	0

Source:
Study-plan of
the specific
CTE in www.

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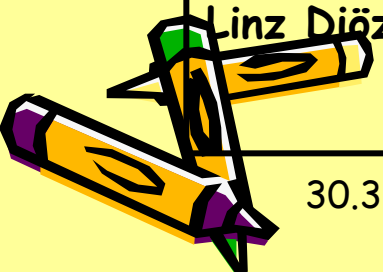
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Academic Training Courses

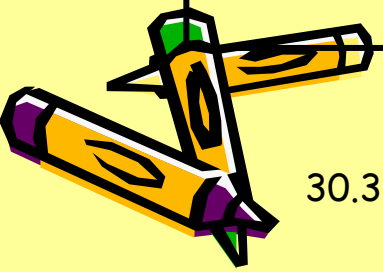
Wien Bund 	Computer - How to do ? Multimedia and Webdesign Creative Computing	2 terms, 12 SWS 2 terms, 12 SWS 2 terms., 12 SWS
Wien Diözese 	Informatics	2 terms., 12 SWS
Linz Bund 	Expert in Communication (different emphasis) Textproduction -Digital Publishing- Officemanagement Childern to the Net ECDL (European Computer Driving License)	6 terms, 32 SWS 3 terms, 16 SWS 2 terms, 10 SWS
Linz Diözese 	Didactics of Computer applications in Primary Didactics of Computer applications in Lower Secondary ECDL	2 terms, 8 SWS 2 terms, 8 SWS 2 terms, 10 SWS



Academic Training Courses






E_Learning in Teacher Education

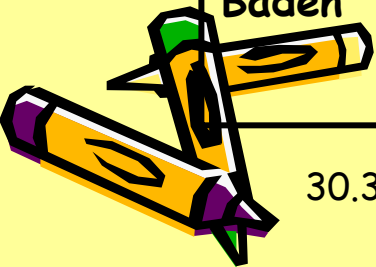
Graz Bund		E Teaching and E Learning Diploma for Secondary I	4 terms, 22 SWS 4 terms, 21 SWS
Graz Diözese		Informatics Secondary I	4 terms, 22 SWS
Tirol Bund Innsbruck		<i>Additional subject Information Technology (no Academic Training Course)</i>	
Tirol Diözese Stams		Informatics ECDL	3 terms, 14 SWS 2 terms, 6 SWS
Salzburg		Informatics in Schools (age 6-15) ECDL	4 terms, 13 SWS 4 terms, 12 SWS



Academic Training Courses



<p>Vorarlberg Feldkirch</p> 	<p>Informatics-Multimedia</p>	<p>4 terms, 16 SWS</p>
<p>Niederösterreich Diözese Krems</p> 	<p>Informatics - Basic Knowledge and Didactics Informatics</p>	<p>2 terms, 8 SWS 5 terms, 26 SWS</p>
<p>Burgenland Eisenstadt</p> 	<p>Informatics Multimedia</p>	<p>6 terms, 12 SWS 4 terms, 15 SWS</p>
<p>Kärnten Klagenfurt</p> 	<p>Informatics Webdesign-Homepage design Computers in Primary/Special Needs INTEL Teaching for the future ECDL</p>	<p>4 terms, 14 SWS 2 terms, 6 SWS 2 terms, 8 SWS 2 terms, 6 SWS 2 terms, 7 SWS</p>
<p>Niederösterreich Baden</p> 	<p>No ATC (IT related)</p>	



Curriculum Secondary School

Information Technology - voluntary

(1 hour/week in grade 7 and 8, if it is possible - number of lecture hours is limited)

Einführung in die Informatik:

Die Schülerinnen und Schüler sollen Sicherheit in der Bedienung von Computern samt Peripheriegeräten, Geläufigkeit bei der Verwendung üblicher Anwendersoftware und grundlegende Kompetenzen im Umgang mit neuen Technologien insgesamt gewinnen und interessenorientierte Arbeiten mit neuen Technologien sowohl individuell als auch im Team durchführen können.

Introduction in Information Technology: Basic Knowledge in Computer Applications.

Lower Secondary Schools with IT

There are few schools with compulsory IT lessons. Due to autonomous part of the curriculum there are 1 - 2 hours per week integrated in compulsory study.

http://www.bmbwk.gv.at/schulen/unterricht/lp/abs/Hauptschulen_HS_Lehrplan1590.xml



Summary

Information Technology

- **Voluntary study** - Due to financial restrictions there are rather few options to offer voluntary studies. In fact there are many different subjects in the pool of „voluntary studies“, finally IT lessons in Secondary Schools are reduced.
- **Further Teacher Education** - Because there is no compulsory subject IT in secondary schools there is no subject IT which can be chosen by students in regular study. To teach IT in Secondary Schools it is not necessary to have a specific certification.
- **Academic Training Courses** - IT related content of different study plans.
Study plans are autonomous (titel of the course, content, duration, certification).



PABW

- Founded in 1966 is the largest of 14 CTE in Austria
 - 180 teachers
 - 1500 students (initial teacher training courses and practising teachers on part-time)
- *Future of CTE* in 2007 University status (according the education act 1999)



Aim of Research

- Role of eLearning in further and advanced training
- **Currently** lectures and seminars - face-to-face courses
- development of virtual training concepts
- Ensure sustainability
- ☞ *What kind of competences are required as well for teachers as for students*



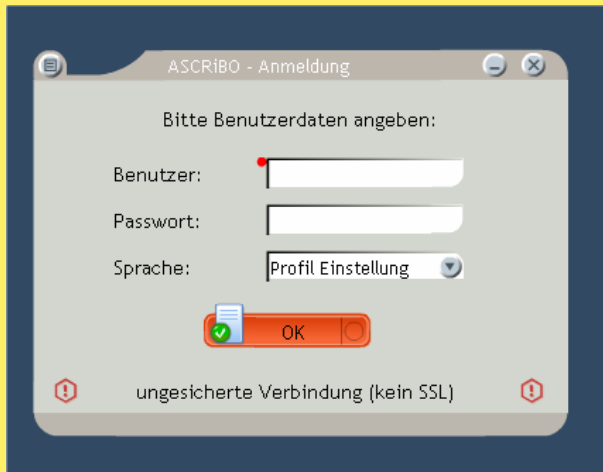
Methods

- Questionnaire
 - standardized, descriptive evaluation and explorative analysis
- Analysis of logfiles
 - number of logins, time spent in LMS (content/communication area)
- Transcription of (guided) interviews
 - teachers and students
- Analysis of rough structure and didactical concept



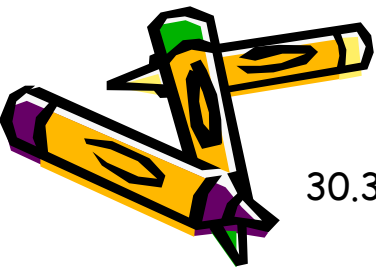
LMS

Winter term
AIVET



Summer term

Blackboard



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Basic Data (Courses)

<i>Course</i>	<i>term</i>	<i>Hours/ Week</i>	Students	Teacher
1 Geography	Winter (3.+5.)	2	16	2
	Summer (4.)	2	13	2
2 Mathematics	Winter (5.)	1	7	1
	Summer (6.)	1	7	1
3 Biology (LMS additional to traditional course)	Winter (3.+5.)	5	13	1
	Summer (2.+4.+6.)	5	14	1
4 ICT	Winter (3.)	1	22	1
5 Multimedia and Webdesign	Summer (in-service)	1	13	1
<i>total</i>			105	5



Outcome

1. Questionnaire

- The general acceptance of e-Learning as a suggestion for independent learning is highly positive, even if there are restrictions in technical support.
- Difference between *teacher students* and *in-service participants*.
Teacher students meet each other every day. There is no need of discussion inside the LMS.
In-service participants meet each other only once a week, but they feel stressed by organizing their individual schedule for participation in a virtual community.



Outcome

2. Structure of Course Material and Communication

- Course 1: Two text documents, questions integrated in the specific chapters, discussions within the platform is not intended.
- Course 2: Twelve documents are offered to be selected by the students. Discussion in the forum area is expected.
- Course 3: 48 text documents including numerous graphics and photographs. The study material is offered additionally to face to face lectures.
- Course 4 and 5: Students work together in pairs to produce interactive study material. A detailed working plan guides through three sections. All material has to be integrated in the discussion area and evaluated by other students as well. Main aspect of assessment is cooperation and communication within the LMS.



Outcome

3. Logfiles

Activities and access is defined as "hits", not the time spent.

The frequency of access differs very much in the entire courses

Students participating in course 1 and course 2 downloaded the study material and thereafter did not access LMS, no further access was necessary.

Students participating in course 3 showed a wide range in frequency of access to LMS.

In course 5 discussion in the forum was obliged, LMS was accessed very intensively



Outcome

Numbers of students and access in the different courses in summer term

	Course 1	Course 2	Course 3	Course 5
Students	13	7	14	15
Access to LMS	55	6	58	305
Total hits	1.410	87	1.500	13.936
Mean of hits per student	83	12	44	893



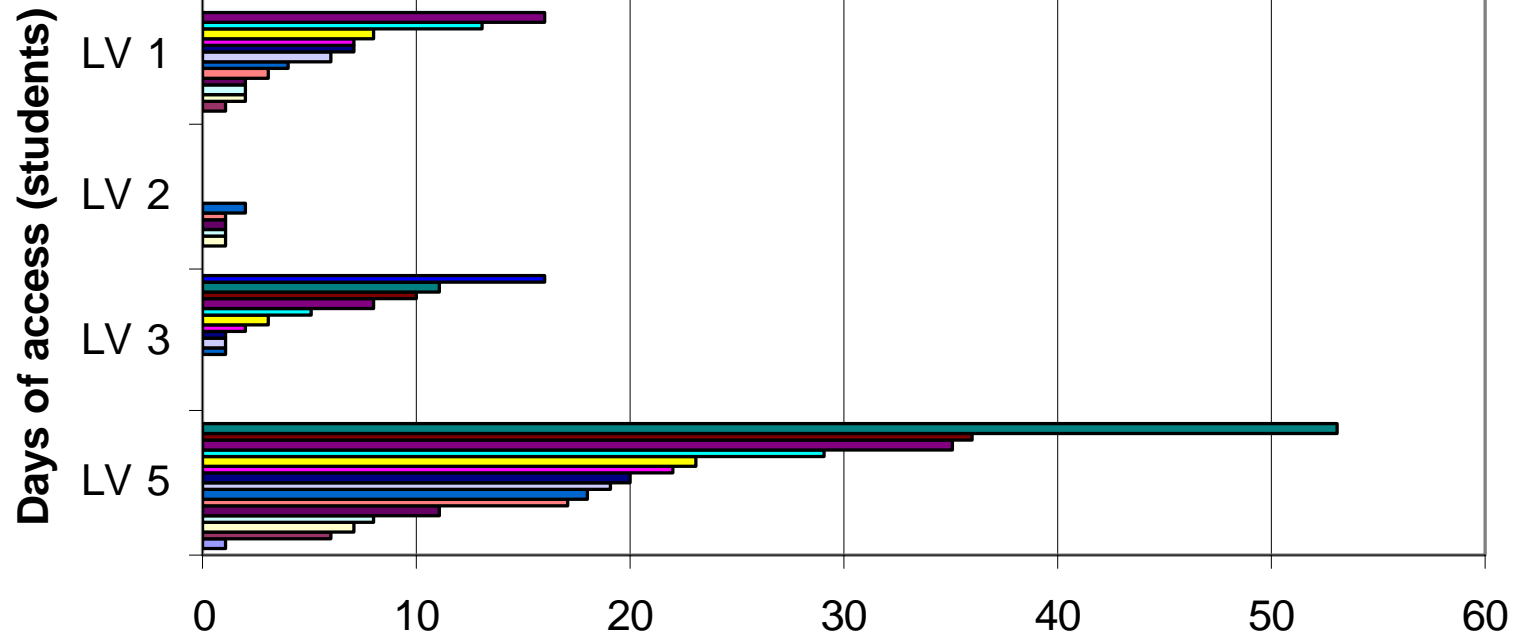
Logfiles - Acces Areas

	LV 1 (n=13)		LV 2 (n=7)		LV 3 (n=14)		LV 5 (n=15)	
	Hits		Hits		Hits		Hits	
Communication Area	360	27 %	10	12 %	44	3 %	9.129	67 %
Main Content Area	968	73 %	74	88 %	1.462	97 %	4.488	33 %
Total	1.328		84		1.506		13.617	



Logfiles

Hits in Summer Term



E_Learning in Teacher Education



Summary I

- Interest in courses using e-Learning is high, as well with teachers as with students.
- Didactical conception is to be considered fundamentally .
- Use of further virtual functions of the platform (Virtual Classroom, Chat, shared documents) would be appreciated by some of the students.



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Summary II

- Teachers (and teacher trainers) are very confident with classroom teaching, which makes it difficult to design e-Learning courses based on the traditional content with didactical regard to virtual learning groups.
- Detailed course descriptions, clear defined learning outcomes, appropriate use of settings and tasks, introductory references and recommendations should be adapted and could increase motivation and satisfaction.

