

Architectural-IT and Educational Curriculumns

A European Overview

PENTTILÄ Hannu

*Helsinki University of Technology (HUT), Department of Architecture
http://www.arkit.net hannu.penttila@hut.fi*

The main objective of this on-going post-graduate study, is to describe the role of "modern digital information technology" within the educational curriculumns of European schools of architecture. Information technology understood in its widest meaning.

Essential questions of the study are:

[1] How widely the digital media, tools and methods have been adopted in the education? [the volume]

[2] In what ways information technology is utilized in architectural education of our age [the methods].

[3] What kind of changes the digital media in fact has caused to the architectural working and educational environments.

The results will be published and "weblished" in the form of searchable public web-databases. The results should contain helpful elementary information for those developing and targeting the future architectural education of "the digital age"

The research study was started in April 2002, and will [hopefully] reach the conclusion during the year 2002.

***Keywords.** Architectural education; Educational curriculumns; Information technology; CAD-integration.*

Background

Modern information technology and digital tools have been adopted to the architectural discipline and architectural profession during the 1990's: CAD has been adopted into architecture, it has become the major working environment.

CAD and digital media has also been adopted by the majority of the European architectural schools (Qaqish & Hanna; 1997). Architectural CAD (CAAD) is taught as separate courses or larger CAAD-curriculumns. Even if CAAD – cur-

rently better understood as information and communication technology (ICT) – has a major role in managing design information, the role of the digital media has probably not yet understood nor adopted to be an essential part of current architectural education. The digital tools nor methods using them, are perhaps not as widely used in education, as they are used in the practise or in architectural offices – this suspicious doubt has been an important motivation to this study.

The content of the CAAD-education given in

the European architectural schools, tends to be quite technology-oriented. Course objectives quite often seem to be rather CAD-system specific, and the education given does not necessarily respect architectural objectives nor the needs of architectural design education.

Of the mental aspects of the architectural-IT, the motivation to learn CAD and information technology seems to have been always high among the architectural schools (Glennie; 1994), hence, the IT-teaching environment in the architectural schools and the reception of new media information has been very positive.

Objectives of the study

The main objective of this research study is to describe the relation of architectural education and so-called "modern digital media" in university level architectural schools in Europe. The study seeks answers to a bunch of essential questions:

- [1] How widely modern digital media is adopted and used in the European architectural schools?
- [2] In what ways information technology is utilized in architectural education?
- [3] What kind of digital tools and media are used in the architectural education?
- [4] Are there defined strategies to use digital tools and media in the architectural education? (pedagogical basis of the architectural education)
- [5] How digital media is used in the architectural education in general – not only in CAAD-curriculumns.
- [6] What kind of changes the digital media in fact has caused to the architectural working and educational environments?

Working hypothesis

There are architectural schools with "a good CAAD-reputation" and there are a lot of well documented examples of sophisticated new media

use, for instance presented within the "digitally active" organizations of the architectural schools eCAADe, ACADIA and CAADRIA.

These examples are selected by cumulated new media experience, and they do not represent the average new media understanding within the architectural schools. The hypothesis of this study is, that the general image of new media usage and the volume of IT- and CAAD-use are too positive.

The "visible CAAD-use", though, gives good examples and "benchmarks" of active new media use to those schools, that are not that well equipped nor skilled.

One important guideline for this study is to describe the whole spectrum and variety of ICT-use in the European architectural schools – not only the most excellent or best examples nor the information technology oriented parties.

Targeting the research

Well covering European organizations EAAE (European Association for Architectural Education) and eCAADe (Education in Computer-Aided Architectural Design in Europe) offer a good and existing network to collect and distribute information concerning architectural studies.

Even if the research has been targeted to "pan-european" level, the information will naturally be available in the web also widely (for instance eCAADe's sister organizations CAADRIA, ACADIA and SIGRADI).

The conclusions of this study will summarize briefly how modern digital media has been used – and could be used in developing architectural education, but wider and deeper conclusions of the work will be solved in other research projects.

Facts to be collected

The research has started with collecting the essential and measurable facts of the schools:

- adress data of the school (trad. mail, phones,

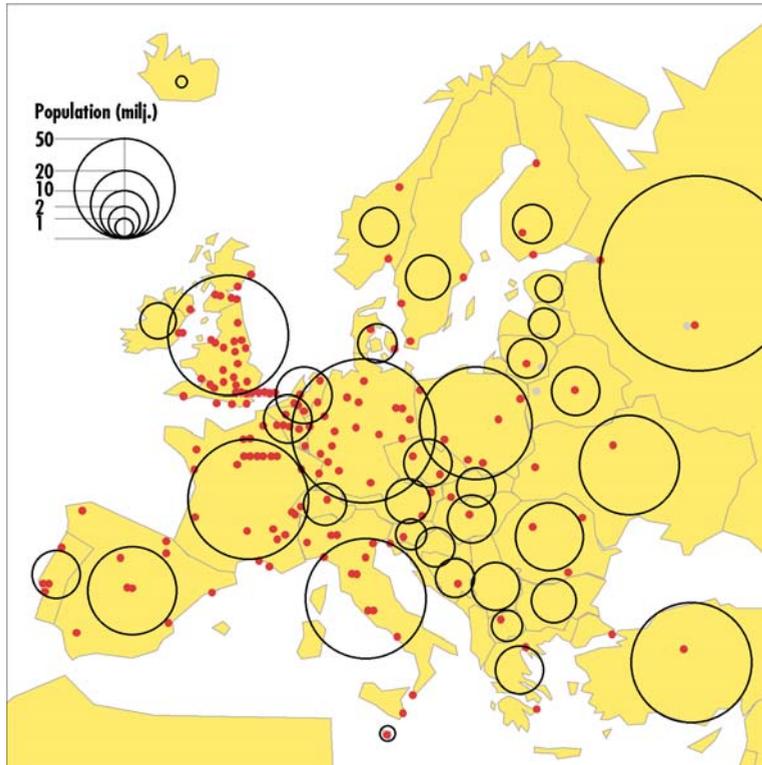


Figure. The architectural schools of Europe. The map illustrates also the population volume.

web, email)

- size of the school
- total number of the students
- yearly intake
- available international programmes
- school staff
- professors
- full-time teachers
- part-time teachers
- new media/ICT/CAAD personnell

The educational curriculumns and course structures of the European architectural schools in literal and webelished form will be the basic source information for this study:

- educational curriculumns and course struc-

tures of the school

The digital media facts will also be summarized:

- any recognized CAD-activity (eCAADe, Cumincad)
- new media/ICT/CAAD-curriculumns and course structures (if any)

The research has started with exhaustive and wide web-search, and will obviously be continued with targeted mail and postal contacts to the schools.

The most difficult information to gain, might be the level of adaptation of ICT into the more traditional kind of architectural education.

Table. Some statistical facts concerning the European schools of architecture and this study.

Volume of this study:	appr. 190 schools in 33 countries appr. 120 000 students of architecture (EAAE, 2000)
School size varies a lot:	from 50 to over 7000 students per school average school size is appr. 1025 students
Web-contact exists:	70 % of the schools have web-adresses

Analysis

The research results will be analyzed and presented with statistical tools and graphic diagrams, which describe the volume, the content and the variety of modern media use in the architectural schools.

The objective is to give an understandable and measurable overview of the state-of-the-art of the current architectural education and its relation with ICT and CAAD. As the research has just started, there is so far statistical background information about the schools available (table). Please refer to the web to get more accurate info from: <http://www.arkit.net>

The value of the results

The results of the research study will be published freely in the web (<http://www.arkit.net>) to be used by architectural education instances.

The research results will obviously lead to some pragmatic conclusions, which can be useful in targeting and redeveloping the architectural education of the "modern digital age".

Tools, methods and applicable solutions presented in this study, will also give good benchmarking examples to the schools that want to enhance their IT-skills and teaching methods.

References

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Glennie, William L.: 1994, Europe '94 – A Visitor's Report on the State of CAAD in Education, The Virtual Studio (Proceedings of the 12th European Conference on Education in Computer Aided Architectural Design / ISBN 0-9523687-0-6) Glasgow (Scotland), pp. 262

Web-resources:

<http://www.arkit.net>

Documentation of this research study
<http://www.eaae.org> European Association for Architectural Education (EAAE)
<http://www.ecaade.org> Education in Computer-Aided Architectural Design in Europe (eCAADe)

Link-lists to architecture schools:

<http://www.archinect.com/europeschoolslinks.html>
<http://site.yahoo.net/riba-links/schoolofar.html>
<http://www.archi.fr/ECOLES>
<http://www.archiworld.it/static/cna/orga/dipartimenti/dee/unieuropa.html>
http://www.atlasnet.com/home/lnk/left/education/ewd_arch.htm
<http://www.edunet.ie/links/collanduni.html>