usability of contemporary finnish schools

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background of the study
Finland

Population: 5.3 million
Area: 338,424 km²

Number of schools (approx.):
- Basic education: 3,200
- Upper secondary level: 400
- Mixed: 40

Number of pupils (approx.):
- Basic education: 555,000
- Upper secondary level: 122,500
- Mixed: 24,400
background

research project InnoArch – places and spaces for learning
background

PISA (Programme for International Students Assessment)

new school buildings

STAKES (research of pupils welfare in the schools)
The study
usability of contemporary Finnish schools
(in progress)
the study

questions

1. Is there any correlation between a physical learning environment, learning outcomes and comfortableness in a school?

2. How do the users of a school, children and adults, observe their physical learning environment, and are the environmental qualities consciously important at all?

3. What is the correlation between the intentions of users and designers in the school planning?
the study

aims

1. to collect data about the usability of contemporary schools for the Finnish National Board of Education to update their planning instructions

2. to collect data for InnoArch aiming to increase the knowledge of the areas where the intentions of the users and the architects meet
the study

the schools

- 18 schools in different parts of Finland
- 14 basic education schools, 2 upper secondary schools, 2 combinations of them
- the material was collected during 2008

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the study

methods

1 architectural plans
2 operational information of the schools
3 observations, photographing
4 walk-through
theoretical concept of a high quality school

seven criteria of quality
the high quality school....

...is flexible and allows several modes of working and situations of interaction.

...is a versatile culture center of the neighbourhood.

...increases psychic healthiness and safety.

...is an inspiring utility of learning.

...is correctly measured.

...is esthetic and increases psychical and social well-being.

...supports sustainability.

(Nuikkinen K. 2005)
criteria in practice

flexibility and adaptability
criteria in practice  flexibility of space

combining spaces to suit different teaching methods

dividing spaces to suit different teaching methods
criteria in practice  flexibility of space

furnishing spaces to suit different teaching methods
using spaced outside of the classroom – surface area
equipping and furnishing the basic classroom and the special classroom as a multifunctional workshop doesn`t increase the need of the surface area
criterias in practice flexibility of space

workshop
kaakkurin koulu,oulu

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criteria in practice adaptability of the building
allows to change the size or use of space in the future

- school building
- secondary school, eg grades 2-9
- preliminary + grades 1-5
- academy
- upper secondary school
- day care center
- workshop studio
- library
- youth center

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criterias in practice interaction
criteria in practice

interaction with the neighbourhood

school as a place of services and well-being in its community

- sports facilities
- auditory
- school building
- library
- day care center
- canteen
criteria in practice Interaction with the neighbourhood

The neighbourhood of the school as an informal learning environment

- School building
- Parks, sports field
- Day care center
- Residence for seniors
- Markets
- Urban spaces
- Streets
- Community services
- Commercial services
- Other schools
criteria in practice

interaction inside of the school

KIVA point = place for meeting
place for learning
place for recreation
place for ........
criteria in practice - interaction inside of the school

the KIVA point beside the circulation area

juankosken koulukeskus, juankoski

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the KIVA point
at the end
of the corridor

puuppolan koulu,
jyväskylä
the school theatre
foyer as
the KIVA point

kilonpuistom koulu,
espoo

criteria in practice -
interaction inside of the school

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the KIVA point in the library
the KIVA point

in the center of the classroom cluster
criteria in practice - interaction inside of the school

the KIVA point - transparency

allows the connection between the classroom and the KIVA

ymmerstan koulu, espoo

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criteria in practice

a school of high quality

• is esthetically pleasant
• creates identity
• prevents bullying
• creates sense of togetherness
• allows possibility to privacy

ymmerstan koulu, espoo

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esthetic

colours, light, art…

jokelan koulu,
jyväskylä
esthetic

materials, smells...

kaakkurin koulu, oulu
esthetic

= comfortableness
findings

from the study -

a few points
findings 1 the neighbourhood

a school in a suburban area and in a village

center as a school  
school as a center
findings 2

trend of the schemes

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findings

the future of the library

kaakkurin koulu, oulu
findings

the intentions of architects
&
the intentions of pedagogues

intentions

variations

1. the intentions of pedagogues goes over the intentions of architects
2. users don´t take advantage of the possibilities of the architecture
## Findings

### Intentions - Two Cases

<table>
<thead>
<tr>
<th></th>
<th>Case 1</th>
<th>Case 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tot building area:</td>
<td>6973</td>
<td>7250</td>
</tr>
<tr>
<td>Pupils</td>
<td>600</td>
<td>400</td>
</tr>
<tr>
<td>Grades</td>
<td>3-9</td>
<td>7-9</td>
</tr>
</tbody>
</table>

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the intentions of pedagogues goes over the intentions of architects

kotimäen koulu
kaarina

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findings

intentions – case 1

the KIVA point beside the circulation area

kotimäen koulu,
kaarina

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findings intentions –case 1

the circulation areas as learning places

kotimäen koulu, kaarina

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findings 4

intentions – case 1

transparency

kotimäen koulu,
kaarina

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findings

intentions – case 1

multifunctional furniture

kotimäen koulu,
kaarina

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findings

the school and the neighbourhood - the youth centre in the school building

kotimäen koulu, kaarina

intentions – case 1
findings 4 intentions – case 1

the school and the neighbourhood - the public library in the school building
findings

users don’t take full advantage of the possibilities of the architecture

intentions – case 2

pitkäjärven koulu kangasala
findings 4

library atheneum and the potential place for KIVA

pitkäjärven koulu, kangasala

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findings

intentions –

the KIVA – points?

the lack of the places for recreation, learning....

pitkäjärven koulu,
kangasala
findings

circulation areas - the lack of informal places for learning

pitkäjärven koulu, kangasala
findings 4 intentions – case 2
the school and the neighbourhood –
places for sports, adult studying, assembly….
preliminary

conclusions
conclusion

children

as the evaluators of the environment!
conclusion

• between the intentions of users and designers in the school planning

• between a physical learning environment and comfortableness
conclusion

importance

of the environmental qualities
thank you