

Girls And Computer Science

Attitude Formation Via Practical Experience

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The Faculty Information Systems and Applied Computer Science at the University of Bamberg offers two projects which provide girls (positive) practical experiences with computing and computer science (CS) topics:

MUT – Mädchen und Technik

(girls and technology)

- three days with ca. 8 workshops
- 10 to 14 years old girls (Ø12)
- 39% of the girls revisit MUT.
- ca. 80 girls/year, who join Ø2.1 workshops
- since 2005

Girls' Day

(Future Prospects for Girls)

- one day with ca. 5 workshops
- gymnasium girls (9th-13th form)
- around 60 girls (Ø15 years old) each year
- since 2006

Workshop Topics

- robot building and programing
- algorithmic thinking
- 3D-modelling
- creating websites
- assembling computer hardware
- mobile GPS gaming
- business process simulation



Why do you join MUT?

- 25 I joint MUT in the past and liked it
- 38 I was curious, wanted to try
- 13 My parents told me to take part
- 23 CS is great
- 23 A friend told me about
- 4 Teacher thought I might be interested
- 10 Holidays would be to boring

Multiple answers allowed n = 71

What did you like most?

- 55 to make something on my own
- 49 to learn something new
- 24 to be only with girls
- 18 visit the university
- 32 doing something with technology
- 25 how the teachers dealt with us
- 17 to see what university students do
- 5 to visit the canteen

Multiple answers allowed n = 71

What do you think about Technology/CS?

Asked before and after MUT: n = 71

- 34 a: I like to deal with,
- 32 have no problems
- 32 b: sometimes difficult to deal with,
- 35 so not always fun
- 0 c: I dislike Technology/CS,
- 4 it is difficult
- 5 d: I don't know what's meant
- 3

16 of 67 girls chanced their mind:
a→b(7) b→a(4) b→c(1) d→a(2) d→b(2)
Multiple answers: 2 before (ab), 4 after (ab, ad, bc, bcd)

Would you like to have a technical job?

- 6 a: Yes, it's absolutely suitable for me.
- 11 b: More likely yes,
- 24 but I have no idea what I could do.
- 17 c: More likely no, it doesn't suit me.
- 9 d: No, that's not my business.
- 11 e: I don't know.
- 3
- 3
- 25
- 25

21 of 67 girls chanced their mind:
b→a(5) b→c(2) b→e(3) c→d(2)
c→e(2) d→c(2) e→b(3) e→c(2)

Contact

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What do you think about girls' campaigns?

- 14 one learns more without boys
- 32 one dare more easily to try something new on girls'-only-projects
- 5 it's less fun with only girls
- 20 I do not care whether boys participate, I do not notice any difference
- 3 such programs discriminate boys
- 29 there should me more such programs
- 36 would like to join more such programs
- 38 they can enthral girls for technology

Multiple answers allowed n = 71

Estimate following statements

The girls were asked whether the following statements concerning technology/IT/natural sciences (T) or social area (S) they agree, partly agree or disagree:

| | right | partly | wrong |
|---|-------|--------|-------|
| T: | 26 | 32 | 1 |
| S: | 41 | 19 | 0 |
| these jobs are varied | | | |
| T: | 3 | 21 | 36 |
| S: | 5 | 41 | 13 |
| bad employment outlook | | | |
| T: | 24 | 33 | 2 |
| S: | 2 | 46 | 12 |
| good paid | | | |
| T: | 23 | 35 | 2 |
| S: | 4 | 38 | 18 |
| you need high marks | | | |
| T: | 31 | 26 | 3 |
| S: | 4 | 39 | 17 |
| good career chances | | | |
| T: | 31 | 25 | 4 |
| S: | 48 | 12 | 0 |
| teamwork is very important | | | |
| T: | 3 | 30 | 27 |
| S: | 2 | 19 | 39 |
| such jobs are boring | | | |
| T: | 6 | 40 | 14 |
| S: | 36 | 19 | 3 |
| such jobs are compatible with children | | | |
| T: | 38 | 18 | 2 |
| few women work in technical jobs | | | |
| S: | 42 | 14 | 4 |
| few men work in social area | | | |
| T: | 20 | 29 | 11 |
| for women it's as easy as for man to get a technical job | | | |
| S: | 46 | 10 | 4 |
| it's easier for women to find a job in social area than in technical area | | | |

We state data of 2008. It confirms questionnaire results from earlier years: MUT and Girls' Day influence girls' perception of technology / CS and of their own abilities regarding computers.