

It's Useful But Not Interesting: Girls on Computing in School

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Sue Sentence



BACKGROUND

- Gender balance in CS remains an issue [1], [2].
- In early 2024 conducted a teacher-led, small-scale research project in one school to answer the research question:

What are the factors that influence girls' decisions to choose or not to choose to study GCSE CS in the context of this school?

CONTEXT

- A mixed non-selective state-funded 11-18 school in England, in an urban area with moderate social deprivation (FSM – 17.9%)
- One hour per week of Computing in years 7 and 8; no lessons in year 9
- In the last five years girls comprised 14% of GCSE CS cohort on average

METHODS

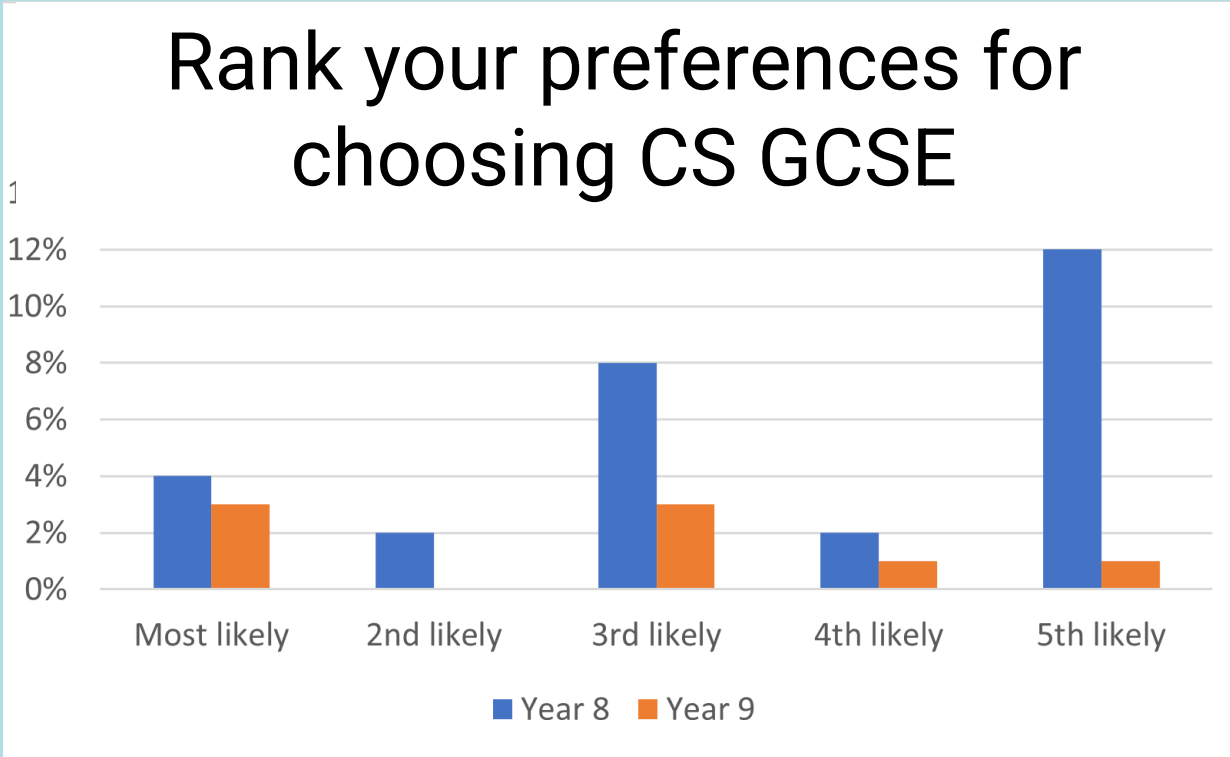
- Qualitative data was gathered to explore girls' own perspectives in two stages: a **survey** and **focus groups**.
- A questionnaire was created and piloted with three female Year 12 Sociology students.
- Two **open-ended questions** required to list all the reasons for picking or not picking GCSE CS.
- The third question asked students to rank their top five preferences for elective subjects.

Stage 1 - 52 Year 8 girls and 71 Year 9 girls responded to the questionnaire

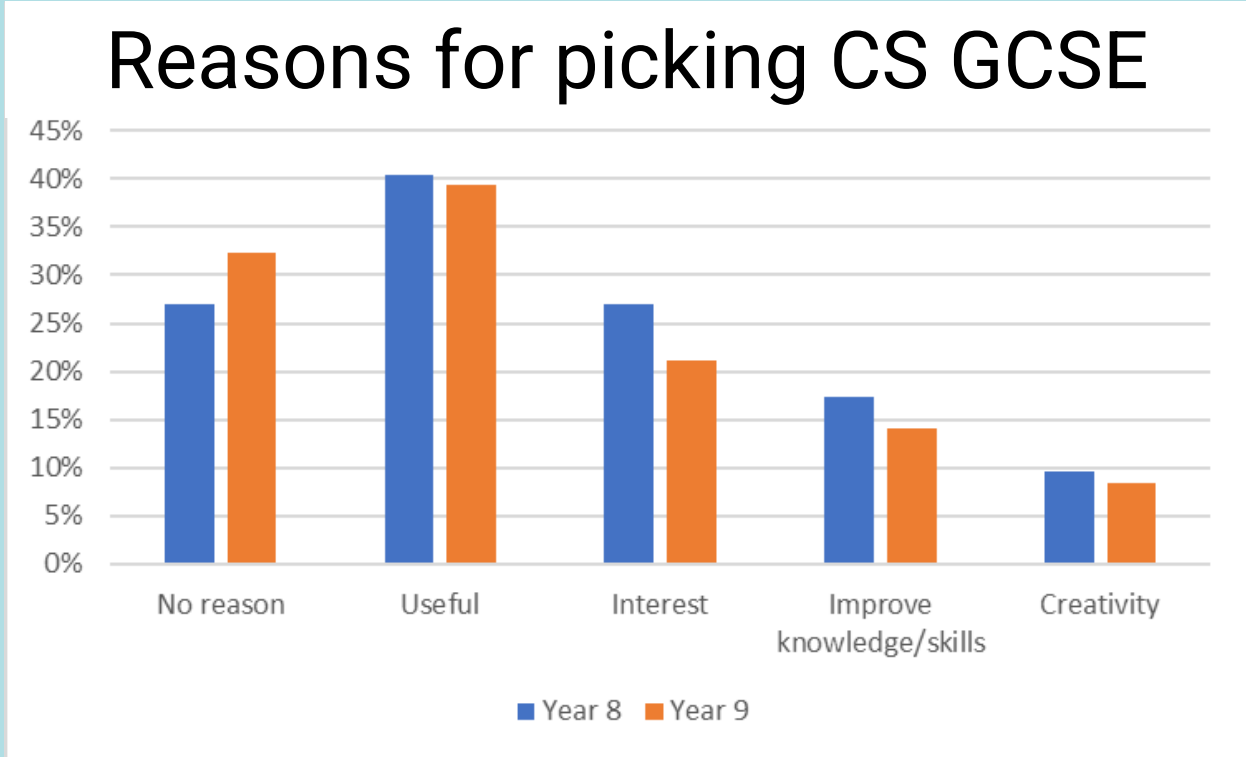
Stage 2 – Two focus groups were held, each consisting of five Year 9 girls

Analysis – open-ended survey responses and focus groups' transcripts were coded to identify the relevant themes.

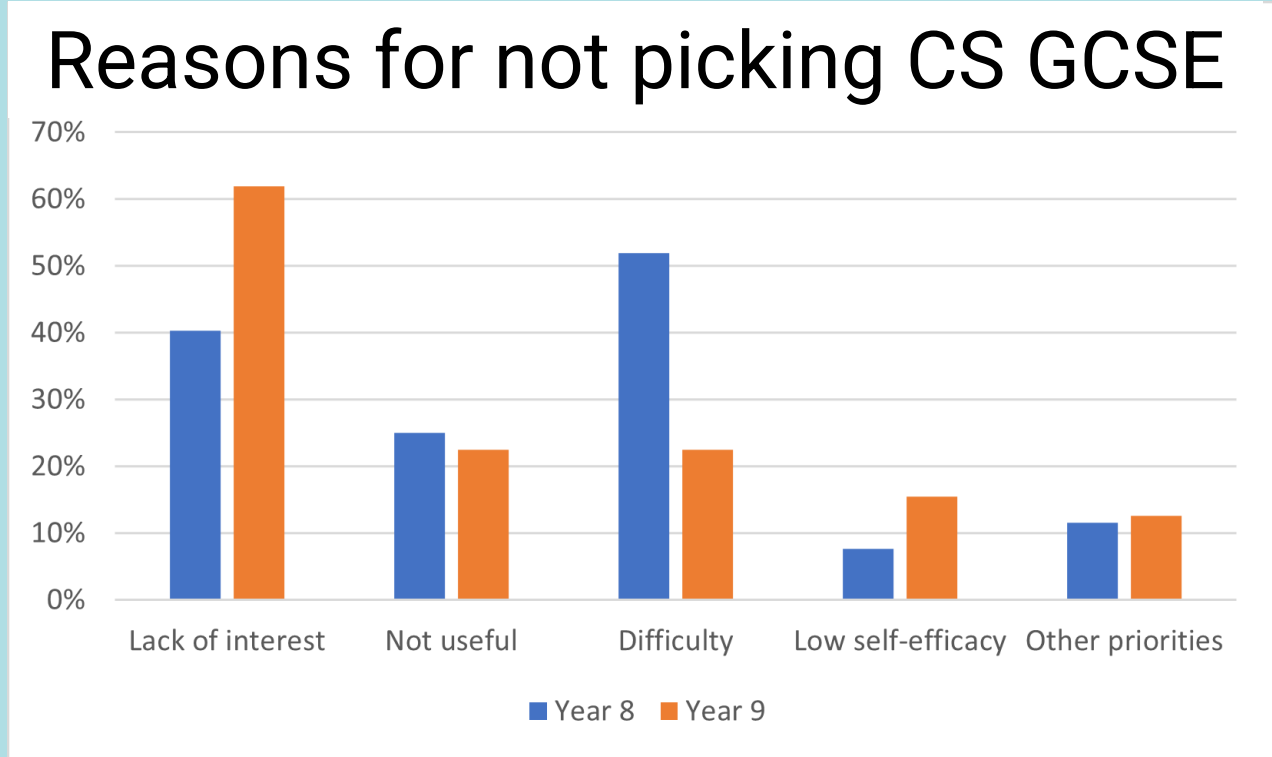
SURVEY RESULTS



Likely to pick GCSE CS as their 1st or 2nd choice: **6%** of year 8 girls and **3%** of year 9 girls



The main reason for picking GCSE CS is Useful (jobs/income): **40%** (Y8 girls), **39%** (Y9 girls)



Difficulty: **52%** (Y8), **23%** (Y9)
Low interest: **40%** (Y8), **62%** (Y9)
Not useful: **25%** (Y8), **23%** (Y9)

FOCUS GROUPS AND SURVEY ANALYSIS – 3 THEMES

USEFULNESS

- CS is useful in general, but not important for their own career
- Countered usefulness with lack of enjoyment and interest

'It would be more suitable if you had like an IT involved job.'

'It's not interesting, that's all, it's useful, but it's not interesting.'

INTEREST

- Depended on a topic, learning activities and understanding
- Affected by other priorities, options process, no Y9 lessons

'Python that was a bit boring, but ... Scratch and stuff it's really fun.'

'if you understand it, you can see some fun in it but like not everyone can experience that.'

DIFFICULTY

- Girls saw CS as a hard subject
- The perception of difficulty depended on the topic and the individual ability

'It's a bit too complex for my liking.'

'For people that don't understand as much as the others, they do find it like really difficult.'

DISCUSSION

- The findings highlight the complexity of the relationships between the factors affecting girls' choices [1] and the need to design interventions that address this.
- The same survey could be used in other contexts to contribute to wider understanding of the issues involved.

References

[1] Louise Archer, Jen DeWitt, Spela Godec, Morag Henderson, Henriette Holmegaard, Qian Liu, Emily Macleod, Heather Mendick, Julie Moote, and Emma Watson. 2023. ASPIRES3 summary report: Computing. Technical Report.
[2] Lara Perez-Felkner, Kristen Erichsen, Yang Li, Jinjushang Chen, Shouping Hu, Ladanya Ramirez Surmeier, and Chelsea Shore. 2024. Computing Education Interventions to Increase Gender Equity from 2000 to 2020: A Systematic Literature Review. Review of Educational Research (2024). <https://doi.org/10.3102/00346543241241536>

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