

The STEM Apprentice

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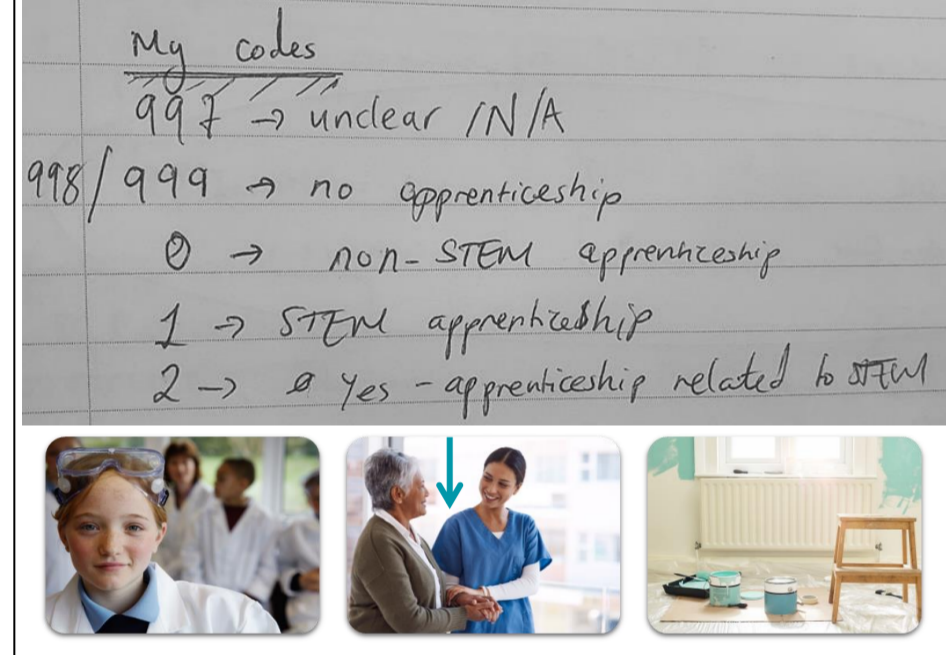
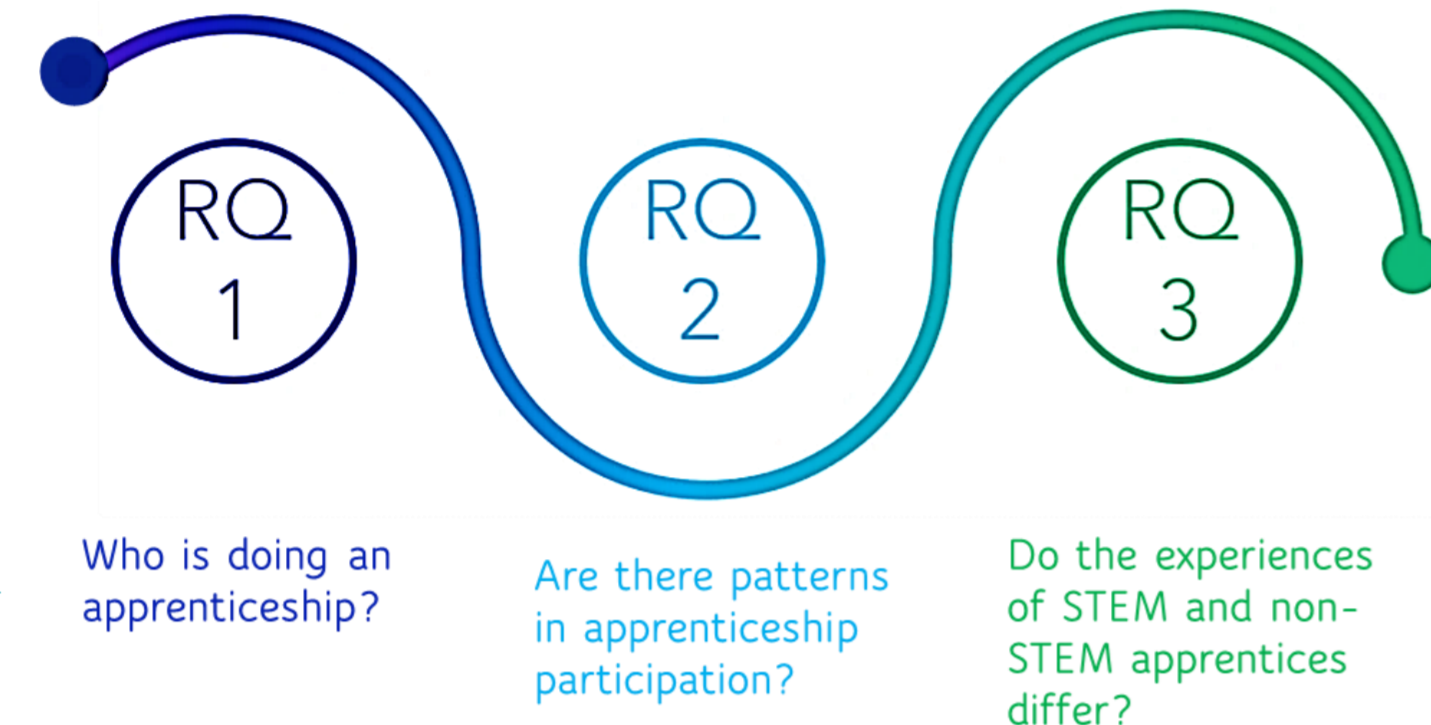
Context and methods

What is ASPIRES?

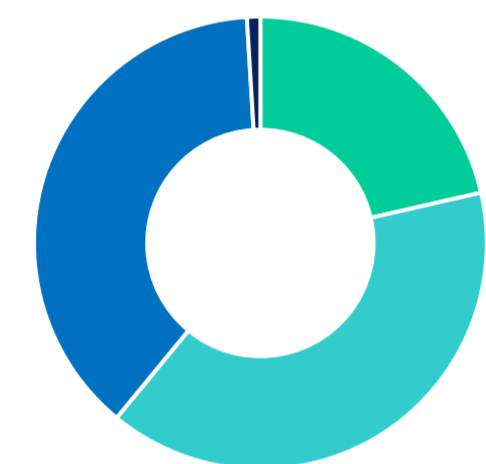


- ASPIRES is a longitudinal research project studying the career aspirations of young people aged 10-23 in Science, Technology, Engineering and Mathematics (STEM).
- ASPIRES raises awareness about the factors that support and hinder young people's STEM trajectories and what students think about this.
- Inequities undeniably influence the UK's STEM skills gap because of unequal access to STEM education, which is why the data from ASPIRES is vital to tackling this issue.¹

- ASPIRES3 (third phase) builds on the data from previous phases, focusing on the aspirations of 20 to 23-year-olds in the study.
- With the team, I analysed data on young apprentices, aiming to understand what factors impact their STEM trajectories. To investigate this, **three** research questions were chosen.



Are you doing an apprenticeship? (N=210)

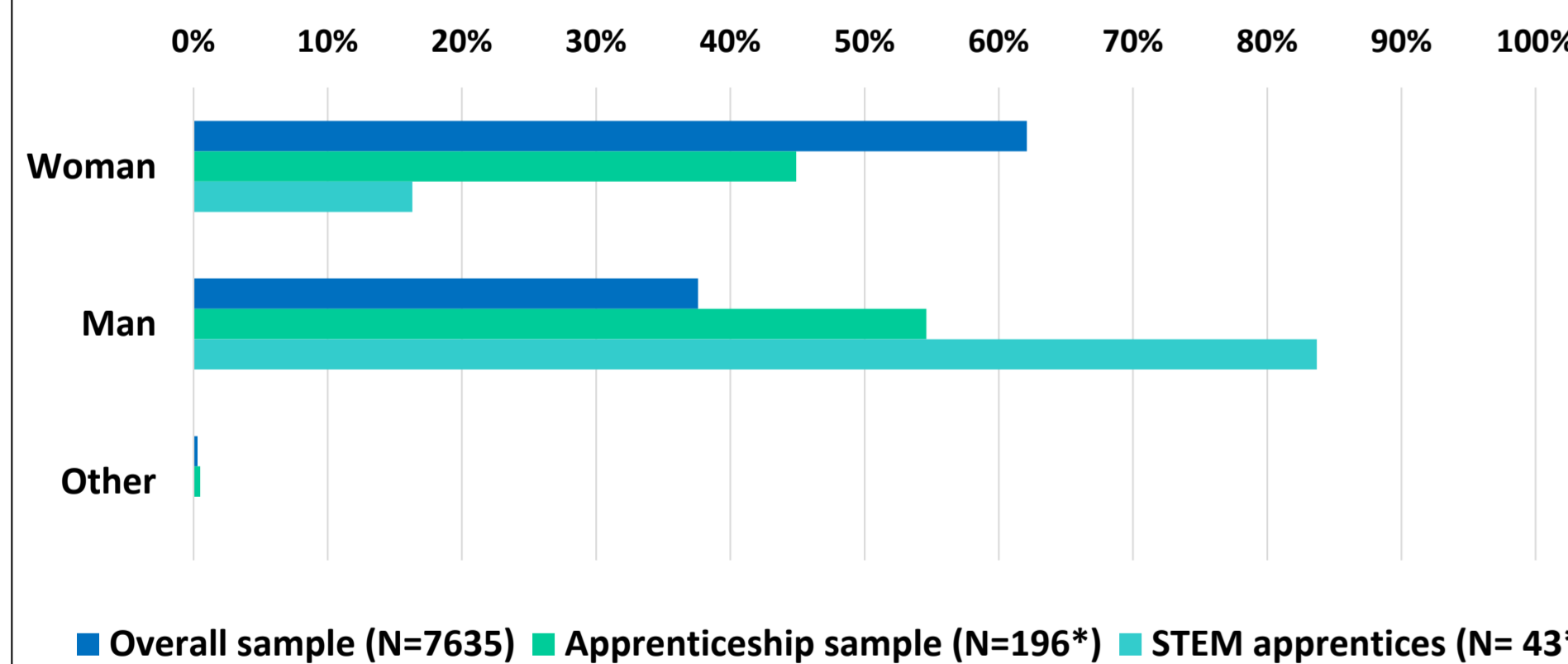


- Using SPSS software, I manually coded data on apprenticeship courses into 3 categories: **STEM** (e.g., aerospace engineering, data analytics); **STEM-allied** (e.g., Accountancy, Health and Social Care); **Non-STEM** (e.g., Solicitor (Law), plastering).
- Associations were drawn between apprenticeship data and other variables using statistical functions, and significance was calculated using Fisher's exact tests.

Demographic findings

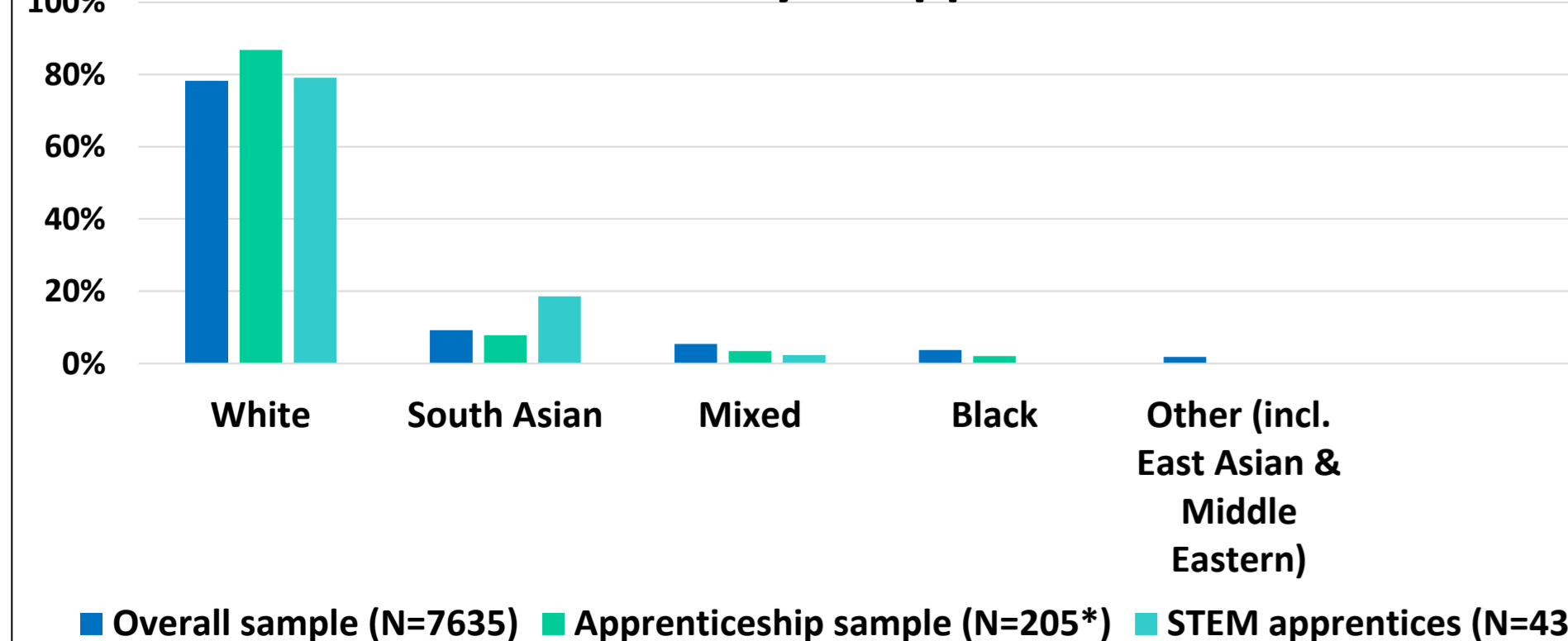
Who are the apprentices?

Gender identity of apprentices



- Overall, **women were significantly under-represented** compared with men across the **overall sample** and apprenticeship sample ($p < 0.05$).
- This relationship was especially acute in the case of **STEM apprenticeships**.

Ethnic identity of apprentices

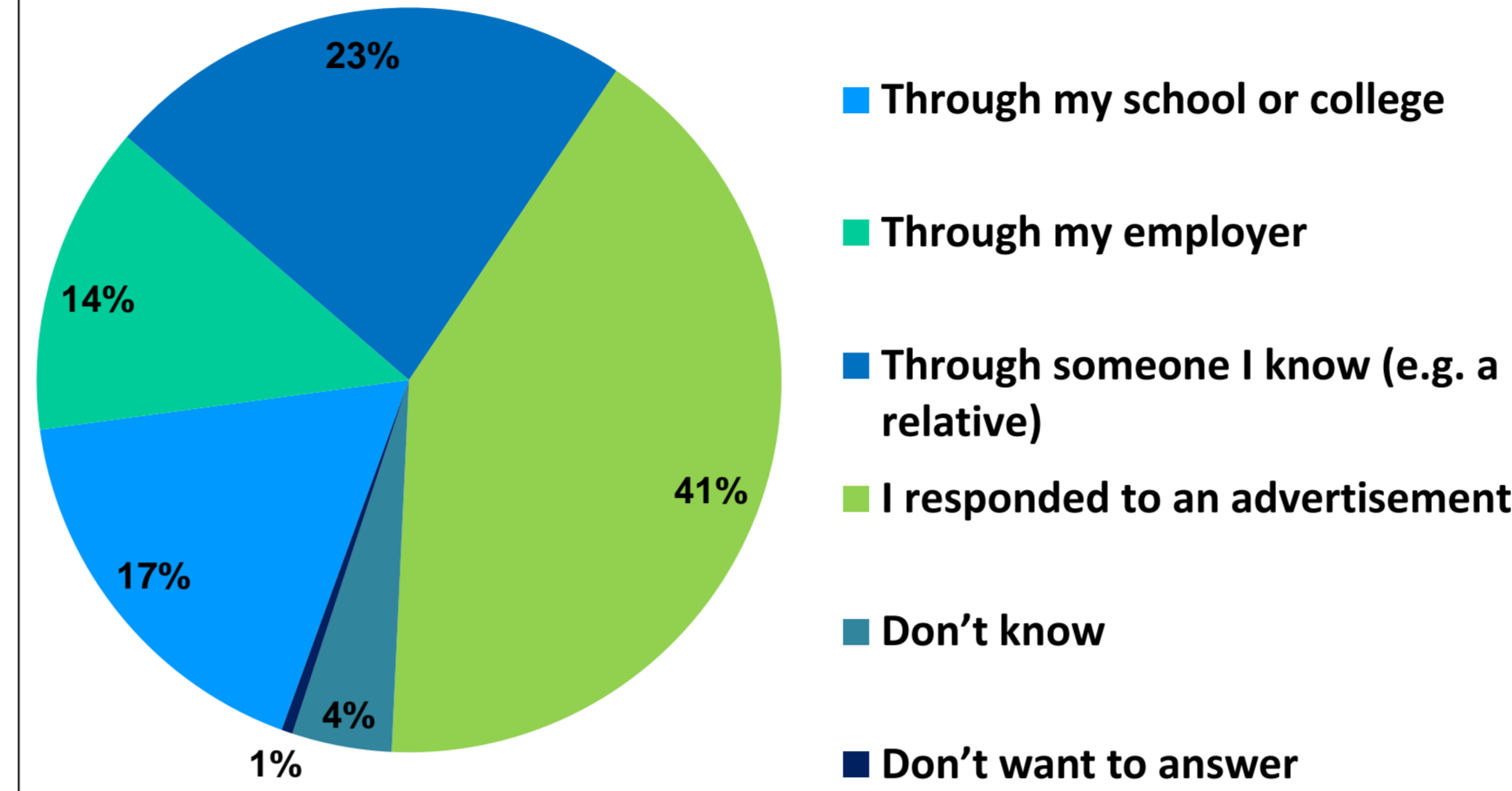


- Racially minoritised** young people were **significantly under-represented** compared with white youth across the **overall sample** and apprenticeship sample ($p < 0.05$).
- This relationship was particularly acute in **STEM apprenticeships**.
- There were **no Black** apprentices in the entire sample.
- South Asian** young people were under-represented in the overall sample but over-represented in STEM.

Patterns in apprenticeship participation

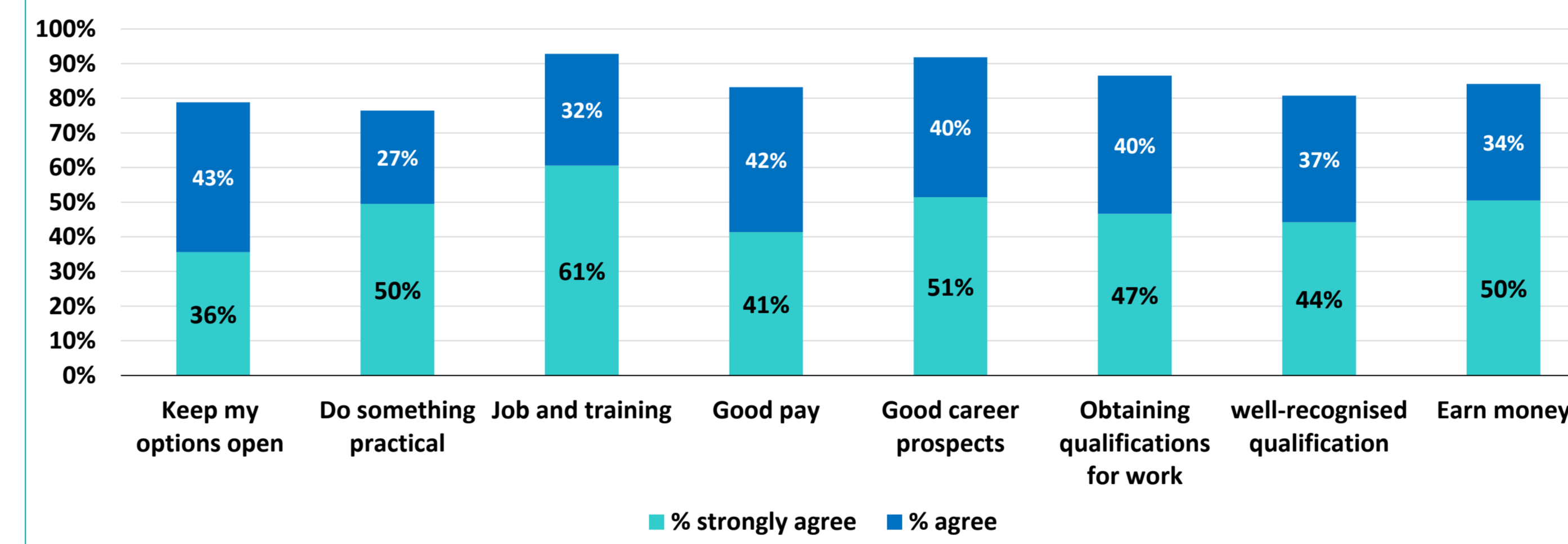
Are there patterns in apprenticeship participation? Why?

How did you find your apprenticeship?

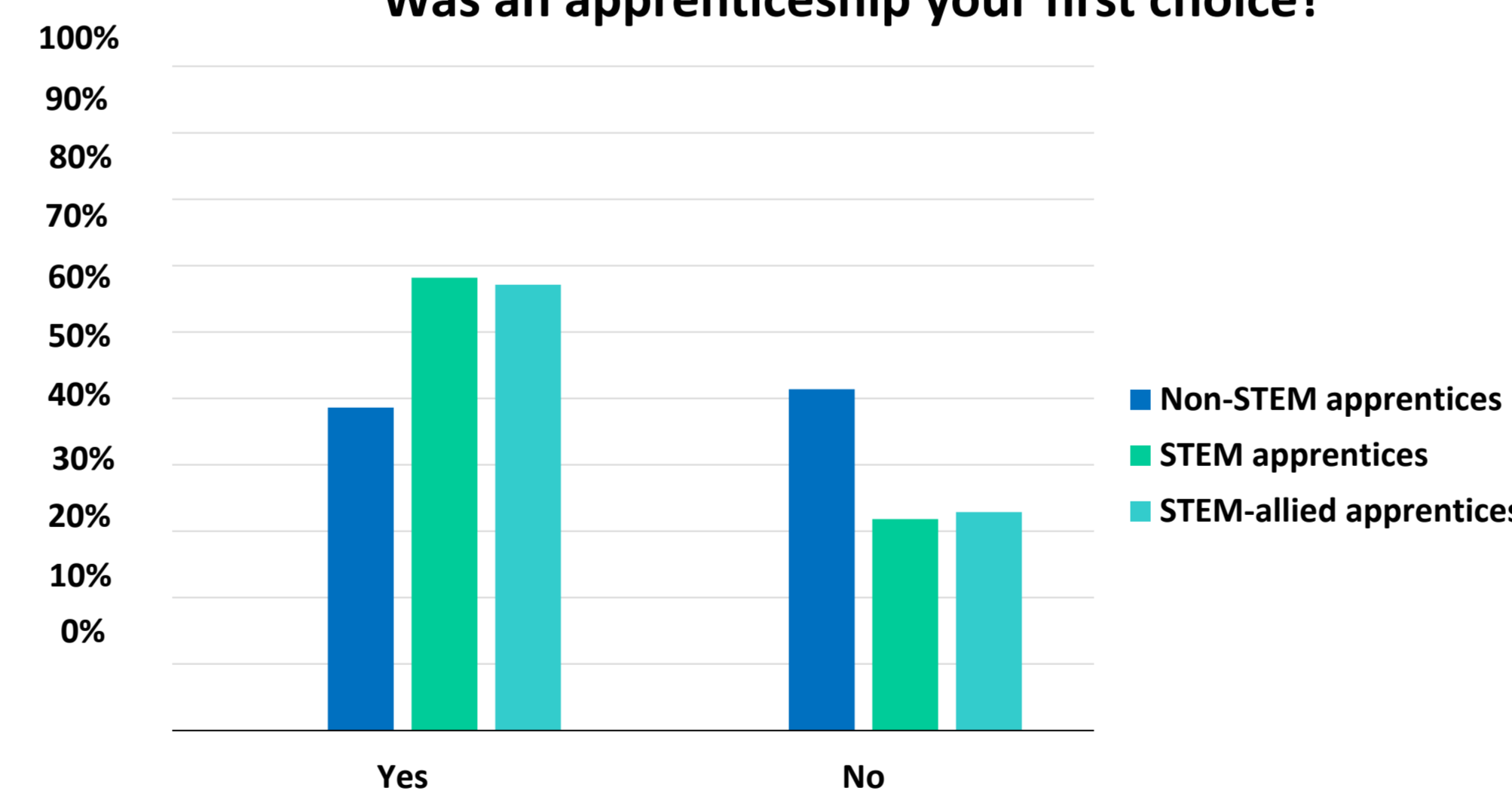


- Overall, **41% (N=86)** of apprentices found their apprenticeship through an **advertisement** whilst **17% (N=36)** discovered it through **school/college**.

Reasons for doing an apprenticeship

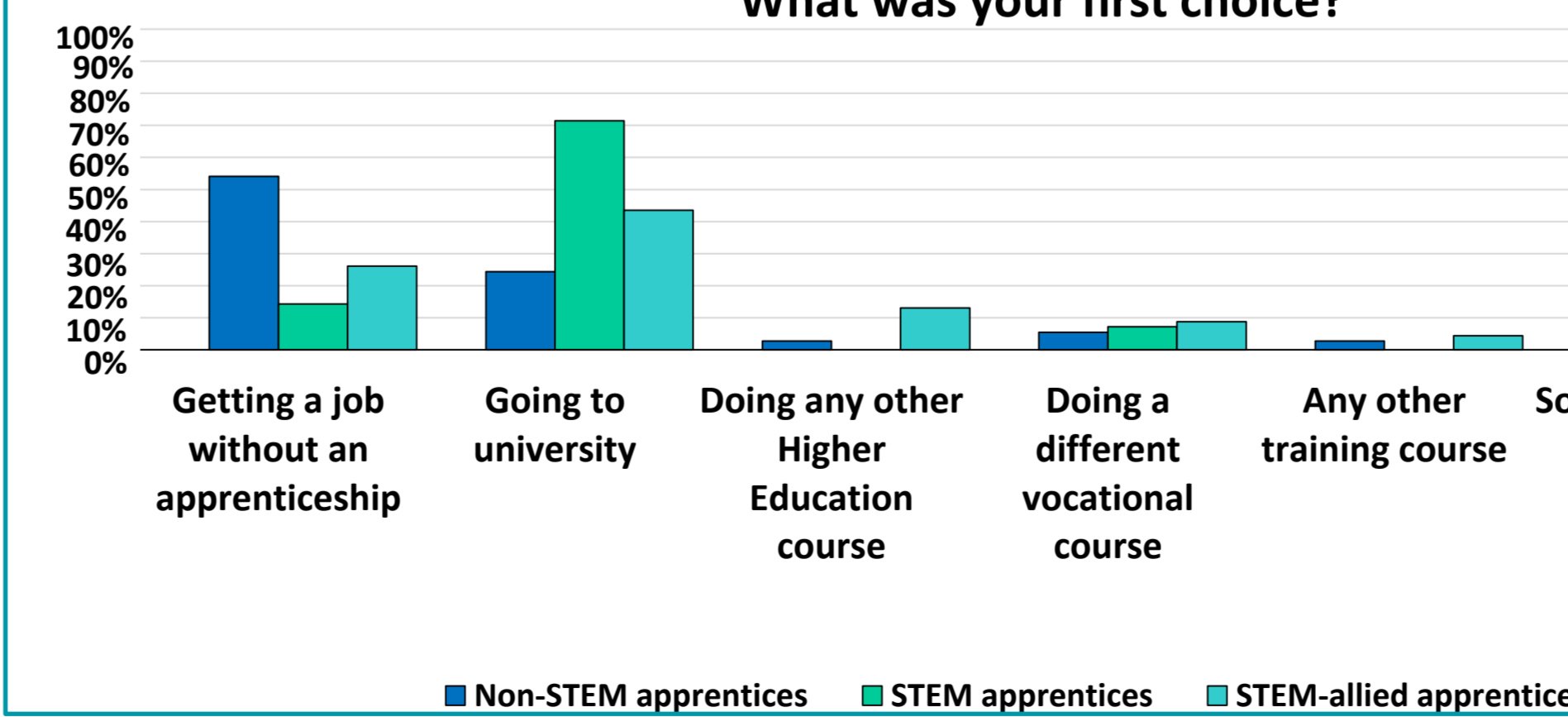


Was an apprenticeship your first choice?



- Apprentices were asked, 'Was an apprenticeship your first choice?'
 - 134 (64.4%) answered 'Yes'.
- Overall, STEM and STEM-allied apprentices were more likely to have chosen an apprenticeship as their first choice ($p < 0.05$).

What was your first choice?

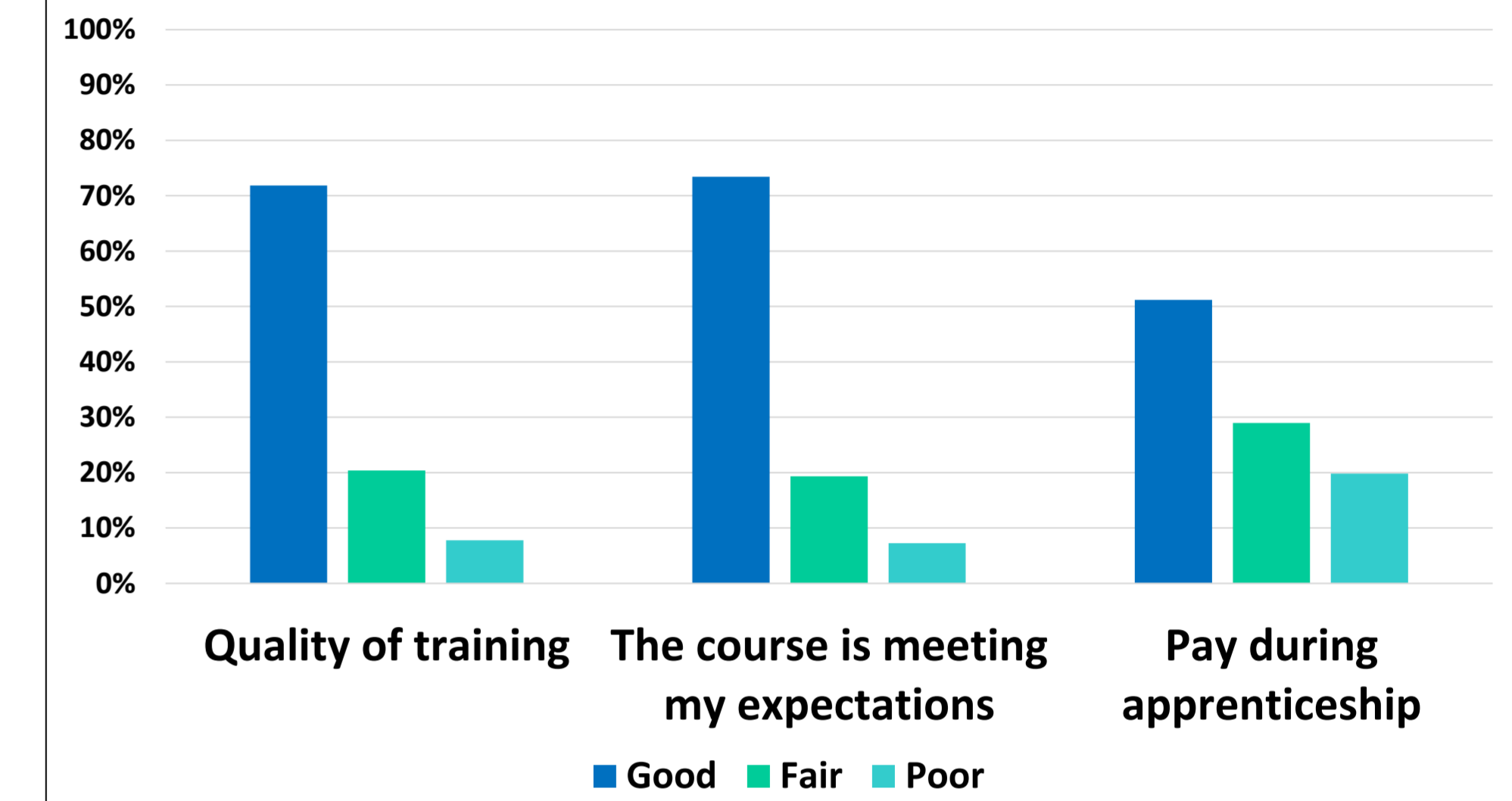


- Those who did not choose an apprenticeship as their first choice, were asked 'What was your first choice?'
 - Overall, most initially chose to attend university (39.2%) or work (37.8%).
- Significantly, 71.4% of STEM apprentices chose university as their first choice ($p < 0.05$).
- For non-STEM, 54.1% chose employment without study ($p < 0.05$).

Apprenticeship experiences

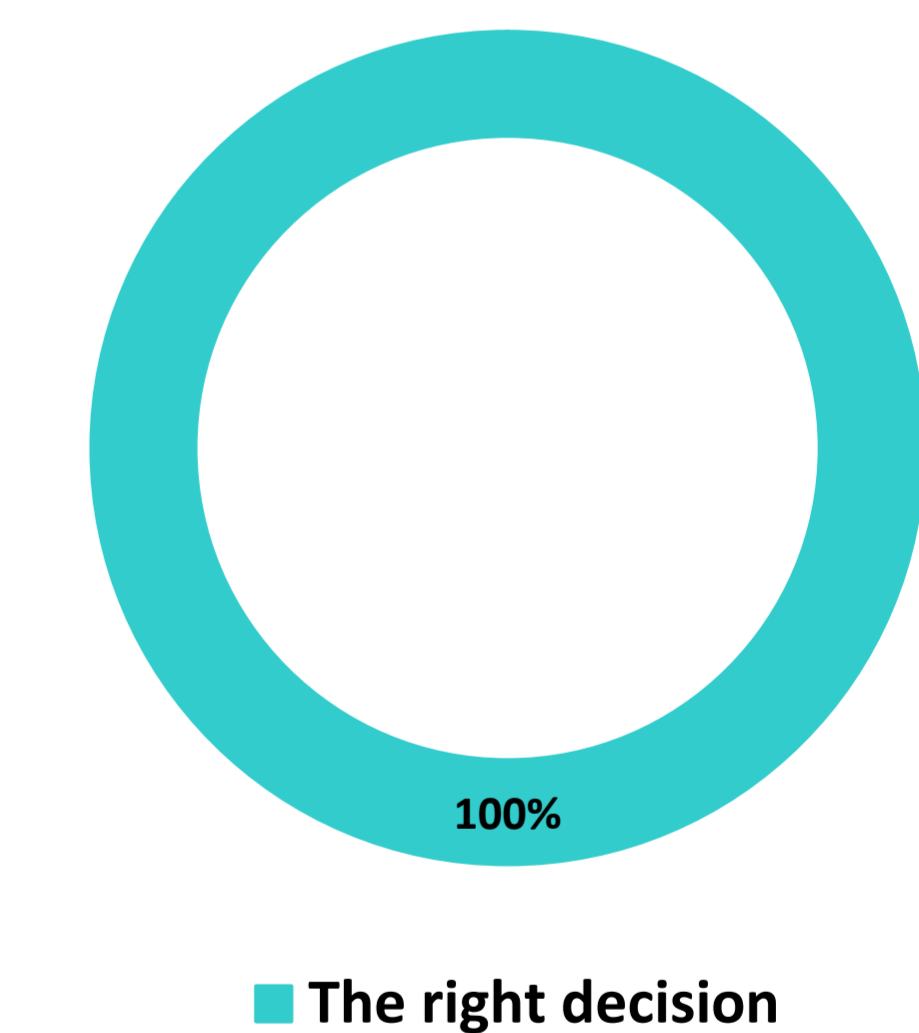
Do the experiences of STEM and non-STEM apprentices differ?

Apprenticeship satisfaction



- Overall, apprentices across all types were similarly satisfied with their apprenticeships.
- The data suggests that apprenticeship **pay can be improved**.

Reflecting on the last year, do you think choosing a STEM apprenticeship was the right or wrong decision?



Personal Reflections

- Be adaptable**
 - Things will not always go to plan but learn from it.
- Ask for help**
 - This makes taking risks more manageable.
- Make it fun!**
 - Be creative with the research project.

