

# NUSTEM Experience Week:

Motivations, alignment with NERUPI and results

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# Who are we?



[www.nustem.uk](http://www.nustem.uk)



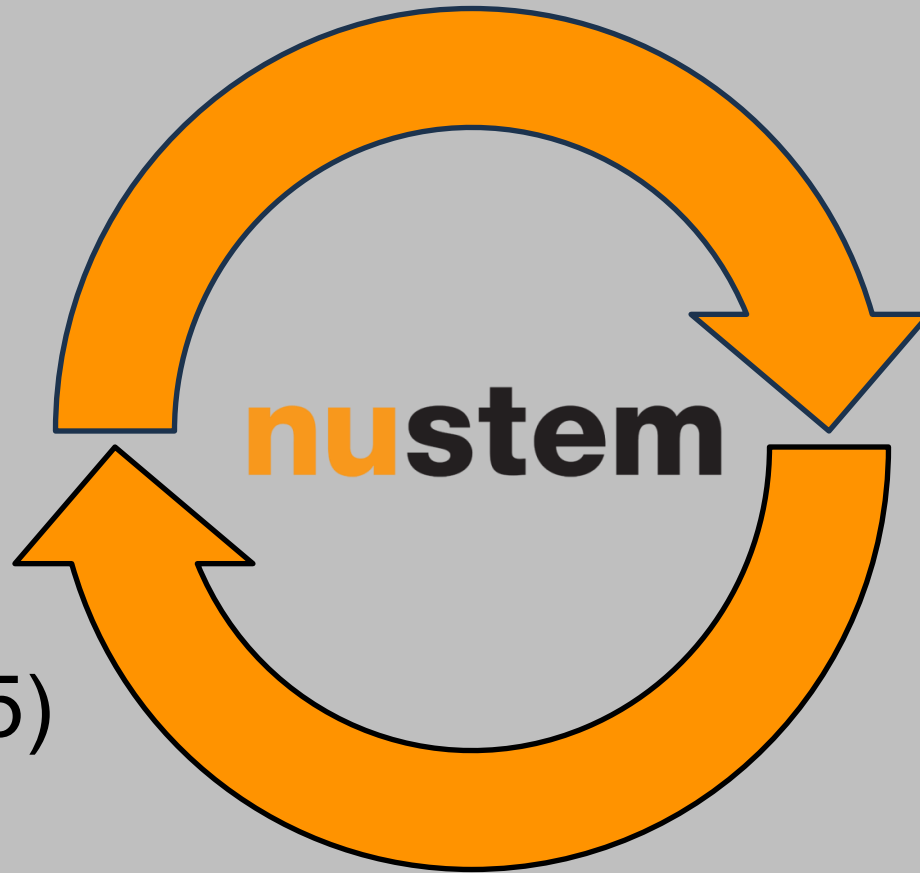
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**Who are we?**

**-led**

**Practice**

50+ schools  
(EYFF to KS5)  
Northeast



**-informed**

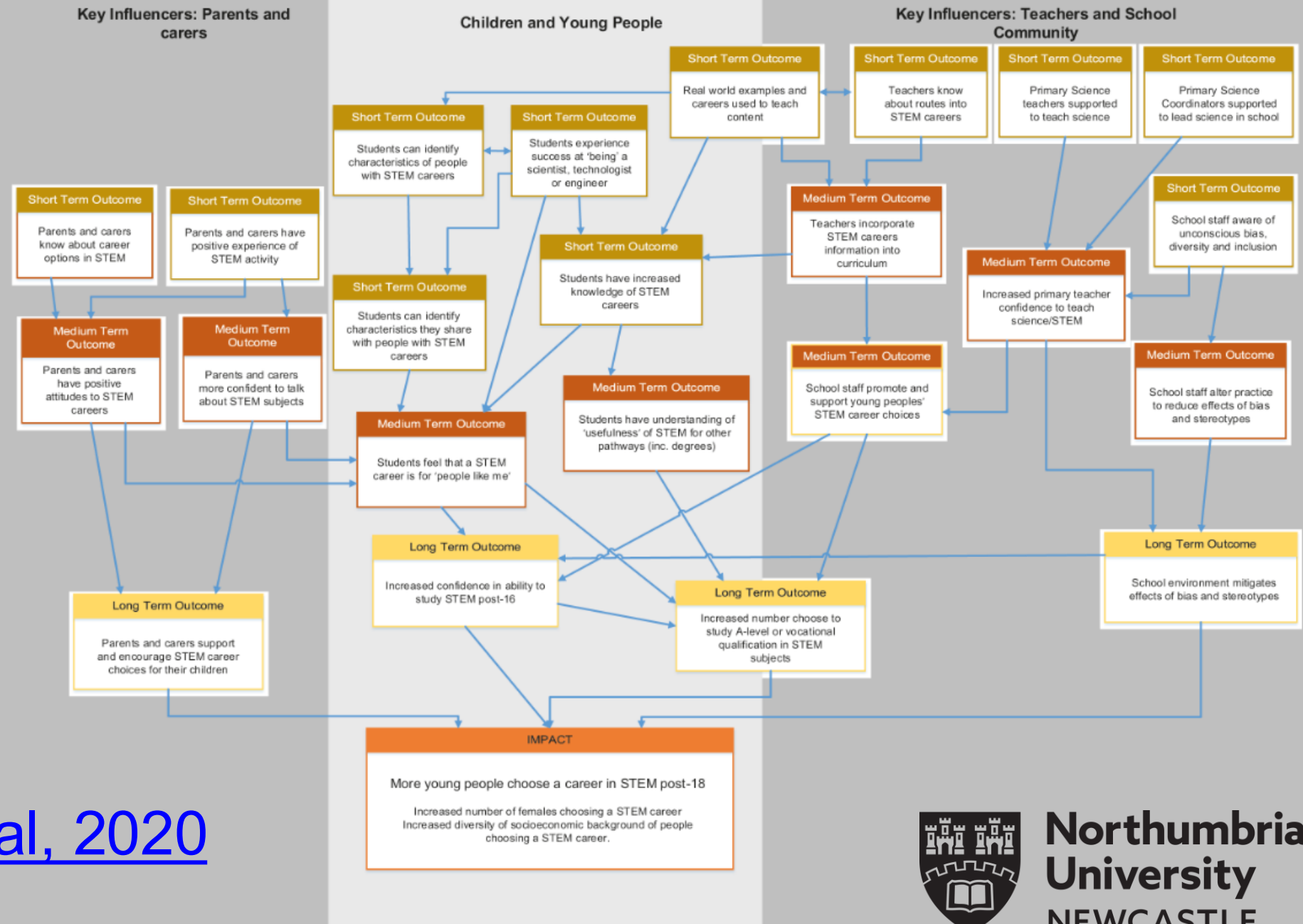
**Research**

Factors that  
determine the  
**Participation in  
STEM**



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# Our ToC



[Davenport et al, 2020](#)

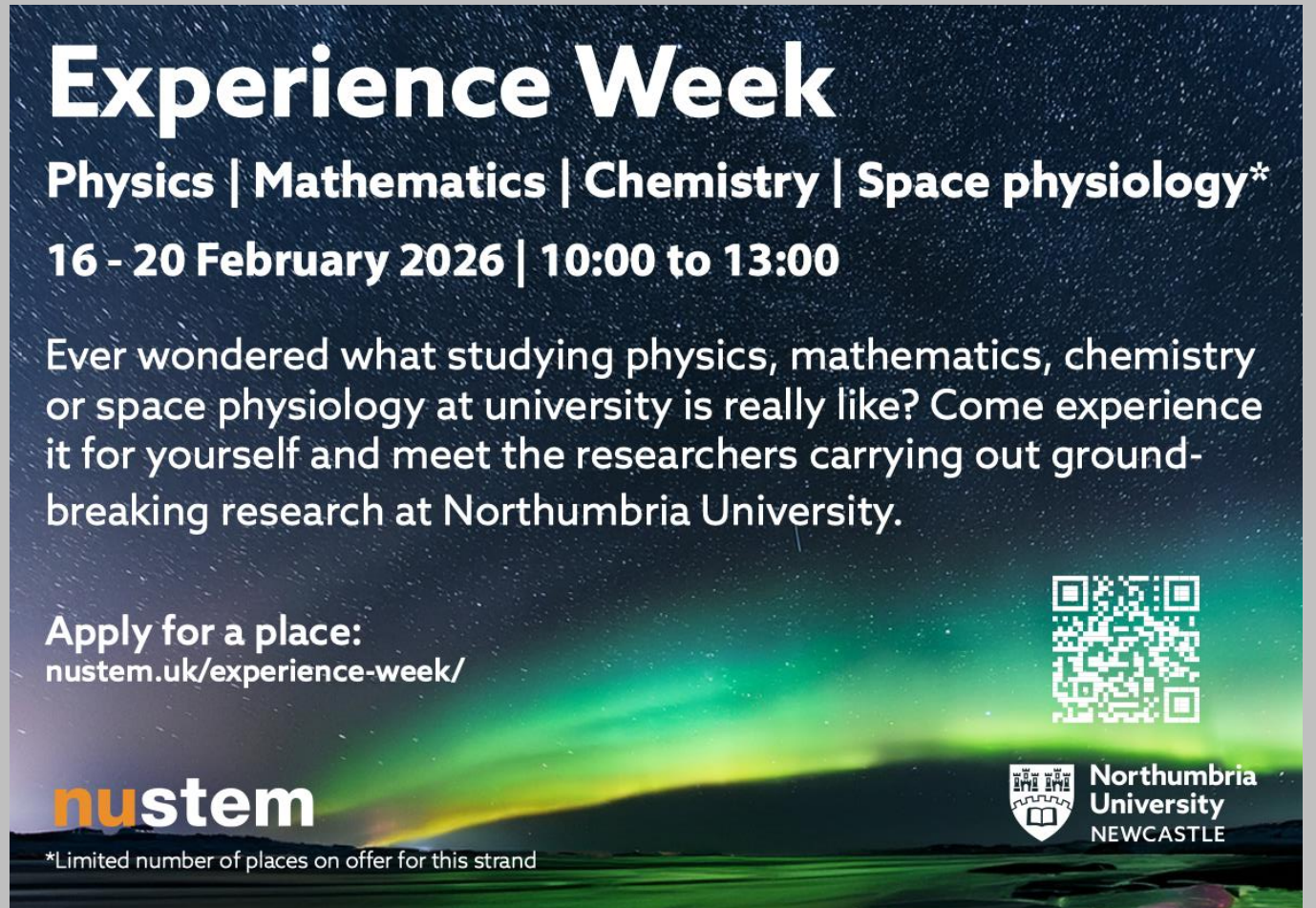


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# Overview


- 241 students in 8 years
- Authenticity
- Embedded on APP plan
- Co-organised by SR team, supported by careers, library, academic schools



**Experience Week**  
**Physics | Mathematics | Chemistry | Space physiology\***  
**16 - 20 February 2026 | 10:00 to 13:00**


Ever wondered what studying physics, mathematics, chemistry or space physiology at university is really like? Come experience it for yourself and meet the researchers carrying out ground-breaking research at Northumbria University.

Apply for a place:  
[nustem.uk/experience-week/](https://nustem.uk/experience-week/)



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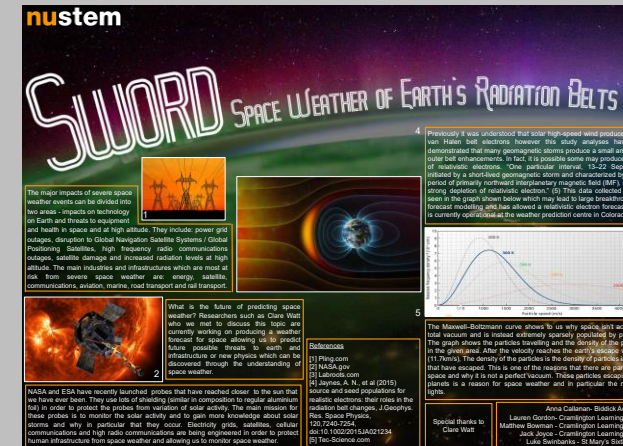
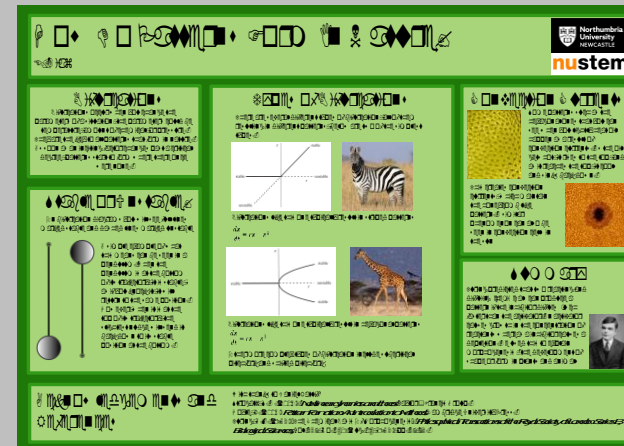
\*Limited number of places on offer for this strand



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# Elements


- First year lecture & practical
- Interview researcher + research skills sessions + poster showcase
- Campus tour + careers session




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# Experience week – ToC causal pathway

Experience success at being a  
physicist/mathematician/chemist at  
university



Feel that a STEM career is for people  
like them



Increase confidence in their ability to  
study technology, physics and  
engineering post-16



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# Outcomes (pre & post NERUPI)

Gain a positive first-hand experience of University environment & student life

Establish positive relationships, support networks with others from a variety of social, cultural and ethnic backgrounds

Build capacity for independent learning, self-directed study and enterprise

Better evaluate course and graduate opportunities and make informed choices aligned with personal interests and career aspirations

Situate existing knowledge and interests within the context of university degree programmes and academic disciplines

Discover career benefits of higher education and the employment opportunities for graduates



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# Outcomes (pre + post NERUPI)

Experiences  
student life

Connects and  
collaborates  
with others

Independent  
learning

Opportunities  
and choices  
matched to  
interests

Experiences  
programmes

Why HE and  
future careers



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# Mapping outcomes against NERUPI

Level Three (education stage: Post-16)

Theory	Curriculum	Keyword	Aims
Social and academic capital	Progression curriculum	Know	Why HE and future careers
Habitus	Student identities	Become	Experiences student life Connects and collaborates with others
Skills capital	Skills curriculum	Practise	Independent learning
Social and Academic Capital	Progression curriculum	Choose	Opportunities and choices matched to interests
Intellectual capital	Knowledge curriculum	Understand	Experiences programmes

# Adapting questions (pre & post NERUPI)

I know what it would be like  
to study Physics at university

I feel confident in  
my ability to study  
at university



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# Evaluation



12 LIKERT SCALE  
ITEMS



5 OPEN ENDED  
QUESTIONS



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# Statistics

- Analysed as **ordinal data**
- **Sign test** addressed if the median of differences in responses was different from zero
- **Paired differences** insight of changes at individual participant level

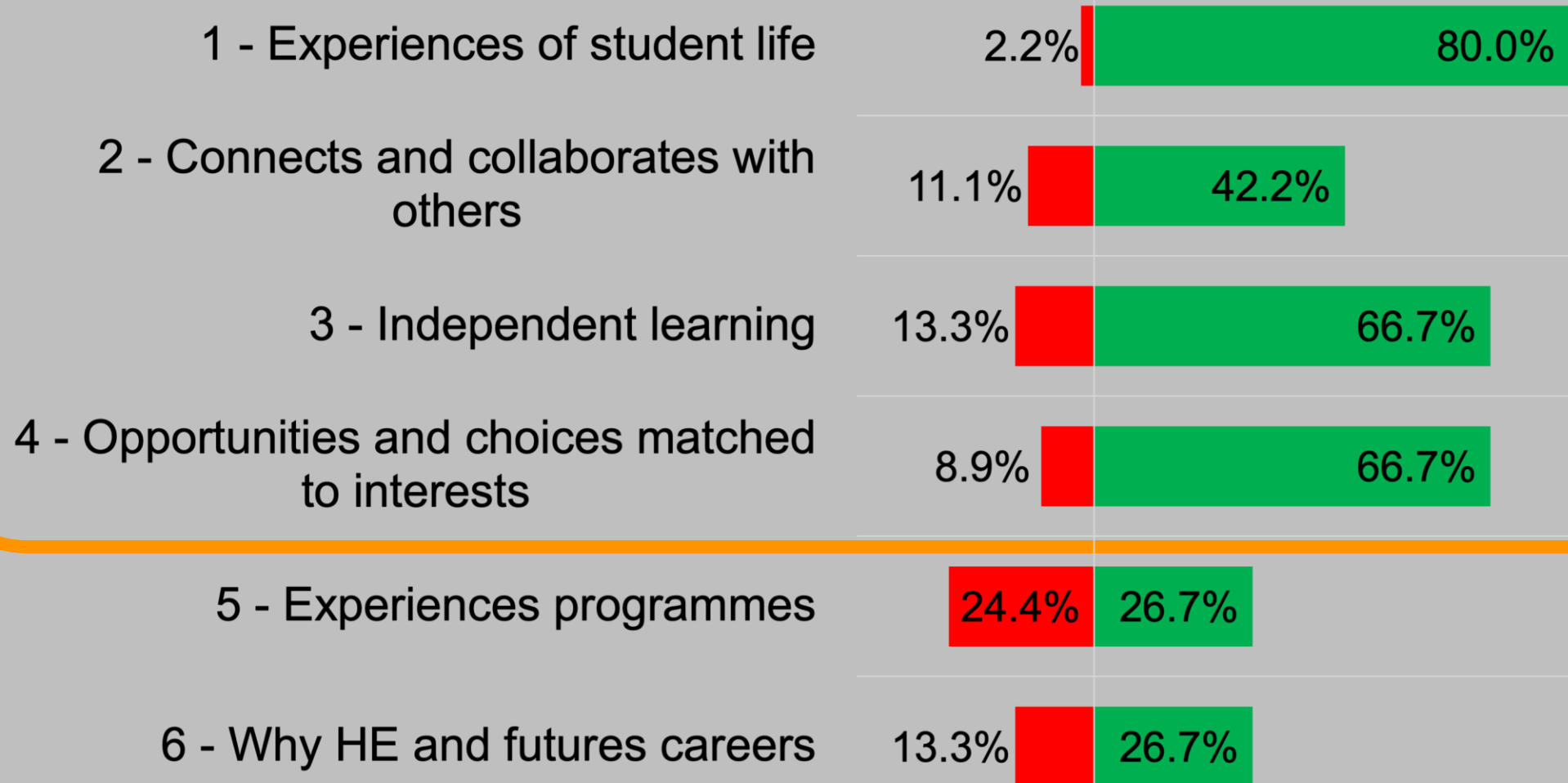


LIKERT SCALE  
ITEMS



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## Percentage of differences of pre and post responses grouped by outcome



■ Positive ■ Negative



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# Thoughts about ...

5 - Experiences programmes

24.4%

26.7%

6 - Why HE and futures careers

13.3%

26.7%

- *“I now am thinking about maths as a degree whilst before I only wanted to do computer science.”*
- *“There are multiple paths to my end goal other than just one.”*

## Preconceptions challenged & questioning

## Self select group & small changes



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# Open ended questions - Themes

Themes	Example of response
HE choices	"Made me rethink the degree I want to choose"
University life	"It made me understand and appreciate the jump to university teaching style more..."
STEM subjects	"It helped me develop more of an interest in chemistry"
Knowledge of Research	"I gained insight on the future of STEM. Especially the sustainability aspect of materials, chemistry"
Careers	It made me realise there were more careers in STEM and maths"
HE and interpersonal skills	"I think I'm more confident in talking to academics"



# Reflections on using NERUPI

- Strategic about scale and scope
- Start small
- Unpick quantitatively (Likert items) with qualitative (open ended questions)
- Framework and banks of questions will evolve with time



**Thanks for listening  
and happy to answer  
questions!**

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