International Mentoring – a new opportunity for physics undergraduates

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The basic idea:

- Physics undergraduates in the UK mentor groups of high school students overseas
- Typically 6×1 hour sessions delivered via Skype or alternative
The level:

- 3rd year BSc or Msci in Bristol
- 1st or 2nd year A-level (or equivalent) overseas
Our partners:

• English-language Schools in Pakistan
• Schools recruited either via personal contacts or with help of University representative
Our partners:

- Currently 7 schools in 4 cities
- More partners keen to join
Our partners:

- Schools are a mixture of for-profit and independent
- Students take A-levels or Aga Khan University Examination Board Higher Secondary School Certificate
The motivation for our students:

- To gain teaching experience
- To improve their communication skills
- To make a difference
The motivation for our students:

“I remember thinking teaching was a simple task when I was an A-level student but it is quite the opposite.”
The benefits for overseas students:

- Deeper insight into curriculum
- Discussion beyond curriculum
- Exposure to a different society
The benefits for overseas students:

“The fact that we were being mentored by a university student ... helped us overcome any hesitation that a student usually feels to discuss ... with a teacher.”
The benefits for overseas students:

“It was an enlightening experience overall ...
The benefits for overseas students:

“It was an enlightening experience overall ... Extra points for showing us snowfall :P We don't get that here.”
A typical session:

- Organized via WhatsApp (time, topic)
- Delivered via Skype
- Examples etc. prepared in advance
A typical session:

- Mentoring ≠ tutoring
- The best mentors show imagination
A typical session:

“My final example allowed them to find how fast a car would need to travel for a passenger’s head to break their window when it swung around a corner (with many simplifications).”
Assessment:

- Students keep journal describing mentoring sessions
- Unit mark derives from journal and final interview
Staff input:

- Initial interview
- Present at first meeting between mentor and mentees
- Formative feedback after 2-3 sessions
- Final assessment
Conclusion:

“I think this program has been extremely beneficial to me. Before embarking on this project, I did not realize how much impact I would have on the students or the impact they would have on me. The role of a mentor is not only to guide the students academic life but also take interest in other parts of their lives. On New Year’s Eve, I was very touched that some of the students messaged me to wish me a Happy New Year although we had not had a session for a while.

I was also very grateful to be able to teach physics to a group of female students as I wanted help inspire them and be an example of a woman studying physics. I hope that I showed them that there are many high achieving women in physics through my case studies.”