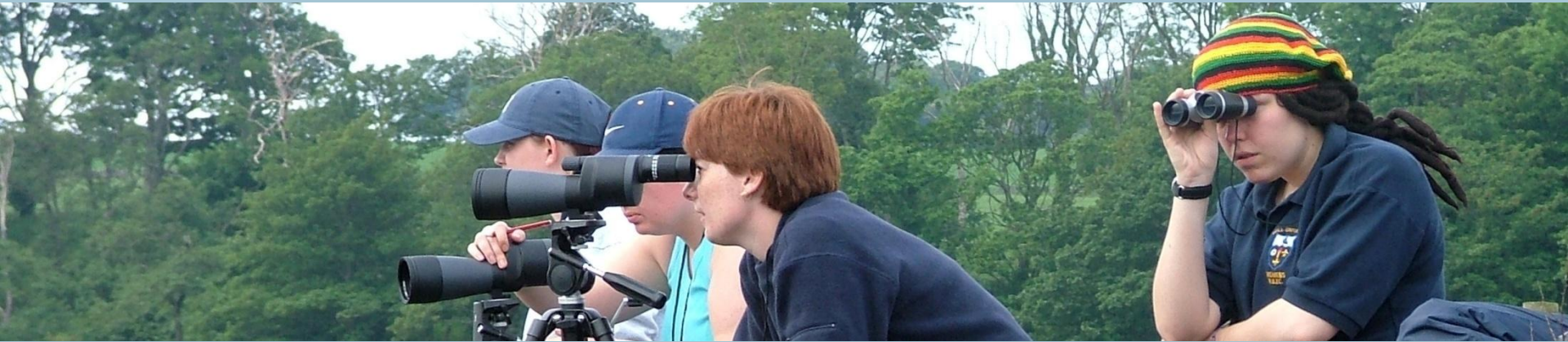


Internationalizing the science curriculum: Student and staff perceptions



Dr Graham Scott, Biological Sciences

Dr Marina Mozzon-McPherson, Modern Languages



Internationalizing the science curriculum

The wider context:

- The internationalization agenda is a high priority for Higher Education.
- The CBI emphasise the reliance of UK PLC upon export to non-English speaking countries.
- Little is done to prepare graduates to be inter-culturally competent. We believe this to be the case particularly in the sciences.



Internationalizing the science curriculum

The regional context:

- one in five businesses has lost business as a result of a lack of language and cultural skills
- the European Union export market for the 58% of all exports (£6.8bn) - North America Asia and Oceania



Internationalizing the science curriculum

The local context:

- Internationalization is key to the strategic plan of the University of Hull.
- Focus has been on support for international students whilst in the UK, study abroad options for home students and on campus cultural events.
- Our focus is the internationalization of the home student in the science disciplines.



Internationalizing the science curriculum

The Project:

- Our interdisciplinary project brings together linguists and scientists to:
 1. Explore the barriers to and potential for the internationalization of the science curriculum
 - Biological Sciences
 - Chemistry
 - Physics
 - Sports science
 2. Develop curricula specifically to promote internationalization (involving languages and science students, academics and other stakeholders)



Internationalizing the *biology* curriculum

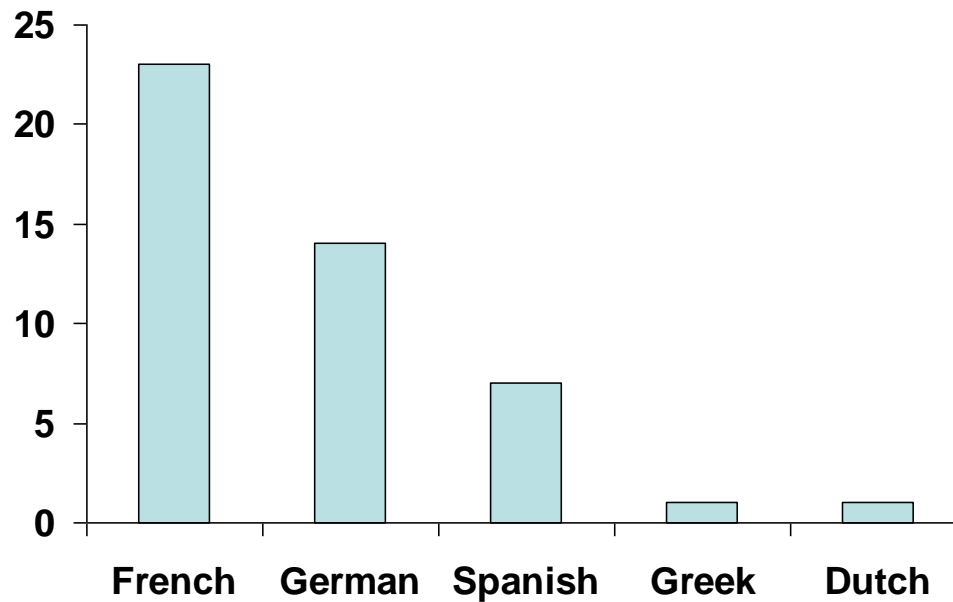
The data:

- 35 first year students reading BSc Biology, Aquatic Zoology or Marine and Freshwater Biology:
 - their previous modern language experience,
 - their previous experience of working abroad,
 - their attitudes towards internationalisation,
 - their aspirations post university.
- 7 academics (5 have English as their first language)



Internationalizing the *biology* curriculum

- 31 students had previous modern languages experience



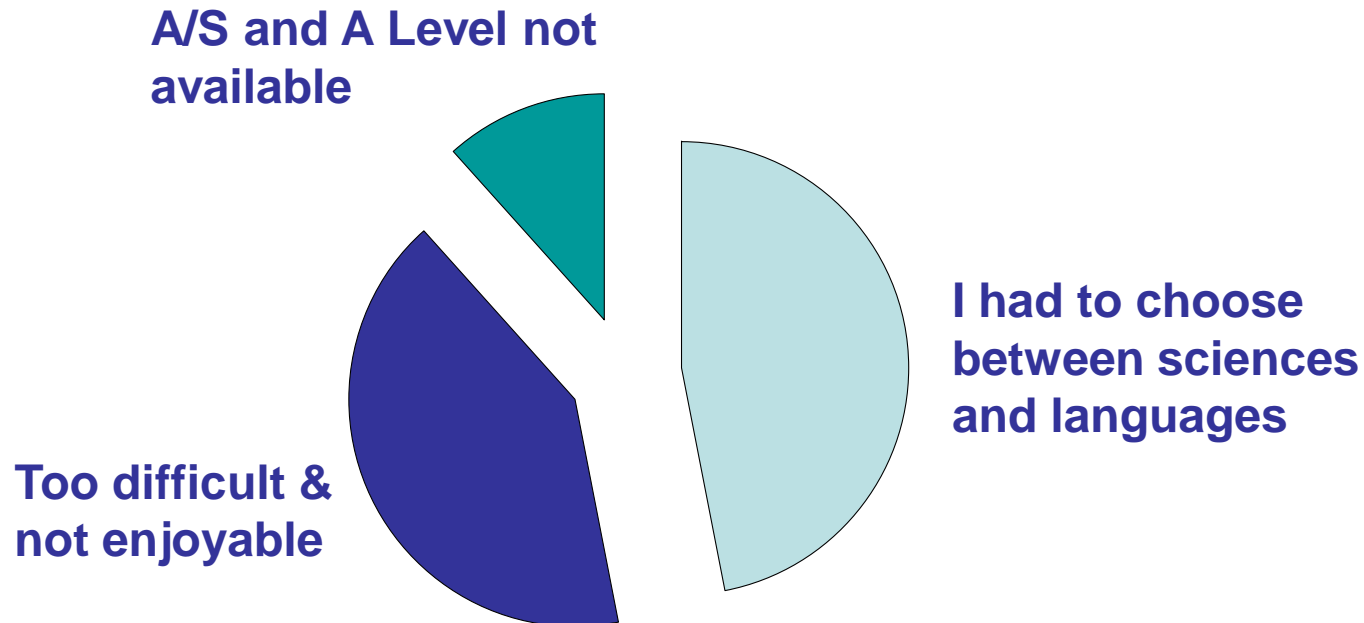
All had one or more languages to GCSE

3 to AS level, 4 to A level



Internationalizing the *biology* curriculum

- Barriers to prior learning



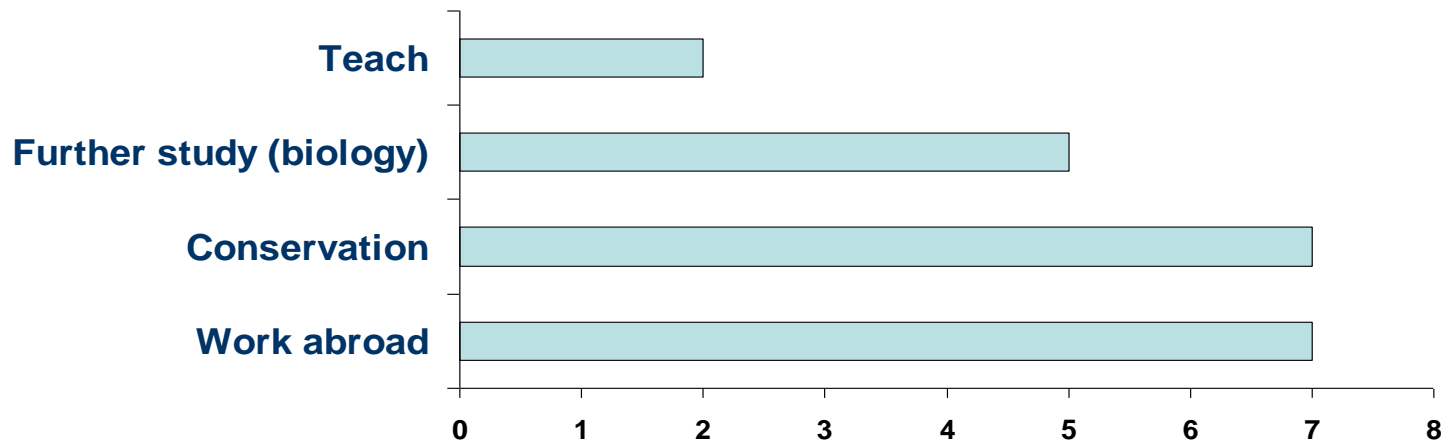
Internationalizing the *biology* curriculum

- Reflections upon prior language learning/use
 - 50% **enjoyed** learning Languages at school
 - 66% were **good** at languages at school
 - 74% **enjoy** the opportunity to speak another language on holiday
 - 72% it is a **myth** that everyone speaks English
- Languages and current studies
 - 55% Biology at HE **does not** require an international dimension
 - 62% University languages tuition **does not** meet my needs
 - 90% My tutor **does not** encourage me to study a language
 - 90% My tutor **does** encourage me to study a language



Internationalizing the *biology* curriculum

- Students, languages and employment aspirations
 - 36% **languages are irrelevant** I will work in the UK or an English speaking country
 - 39% languages are likely to be **important in my career**
 - 88% an additional language will give me **employment flexibility**



Internationalizing the *biology* curriculum

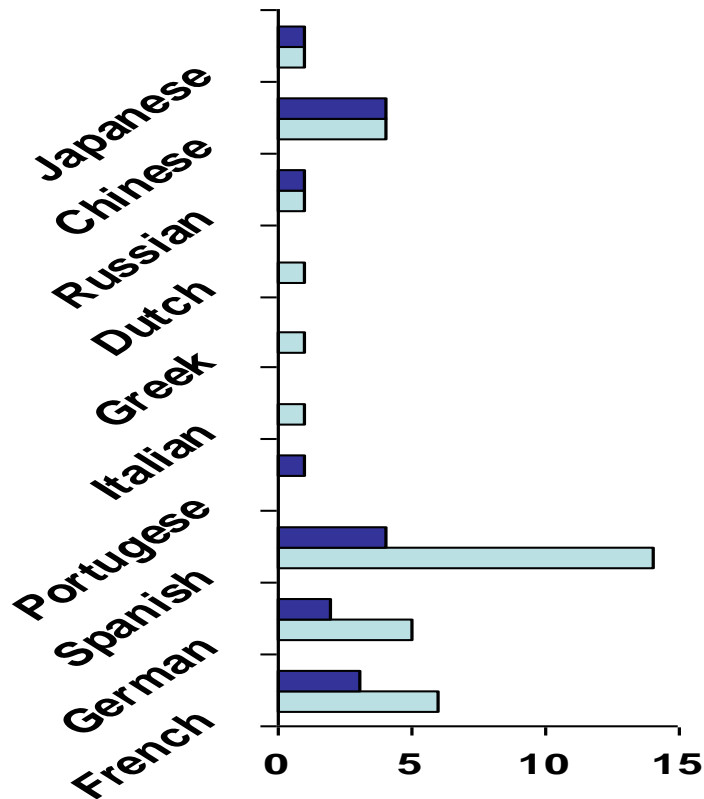
- Pre dominant views of academic staff
- Yes biology is an **international subject**
- Yes biology at u.g. level requires **an international dimension**
- No an additional language would **not be an advantage** to my students (u.g. or p.g.)
- No **I do not encourage** my tutees to learn an additional language
- Yes an additional language would **increase** student **employability**

Based on a sample of 8 colleagues 5 of whom are UK nationals



Internationalizing the *biology* curriculum

- Staff ■ and student □ future language preferences



Students want to **build on prior experience** (e.g. French, Spanish, German), or to **engage** with a global/regional market (e.g. Chinese/ Spanish)

Staff based selections on the potential for increased **employability** and **scientific collaboration**



Internationalizing the *biology* curriculum

- What students want and don't want

Do not want

rubbish phrases like how much is that bagel

topics unrelated to science

a focus on grammar

learning random vocabulary

Do want

biological/scientific words

Interaction and conversation

Vocabulary and grammar

Listening not writing

Scientific report writing in another language

VLE pages/slides in another language



Internationalizing the *biology* curriculum

- Moving forward – colleagues
 - 88% **would not like** a language module in the biology curriculum
 - **would like** to see increased student mobility (exchanges etc)
 - cultural awareness/languages for social and business use is **more important** than for the business of science *per se*
- Moving forward – students
 - 84% **would like** a language module in the biology curriculum
 - **positive attitude** to speaking foreign languages on holiday
 - see lack of language as a **barrier to mobility**
 - 85% would consider an **overseas placement** (26% English speaking)



Internationalizing the *biology* curriculum

- Concluding comments
 - Students and staff see benefits in internationalization
 - Colleagues would like to increase student mobility
 - Students are open to mobility but lack confidence
 - Negative prior experiences limit student confidence
 - Colleagues resist encroachment into “discipline space”
 - Students see scientific language as most important
 - Colleagues see social/business language as more important



Internationalising the *biology* curriculum

- Acknowledgements

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- Students and staff of the Department of Biological Sciences completed the questionnaire

