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Linnéuniversitetet

Changing to Teaching and Learning in English

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Benefits of a second language

- **Many benefits of using a second language (English) in higher education**



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Benefits of a second language

- **Language of academic publication**
 - **Many textbooks are in English**
 - **Develops local teachers' competence**
 - **Can use visiting lecturers in teaching**
 - **Prepares local students for study abroad**
 - **Overseas students can participate**
 - **Job market**
- (Airey 2003:12)



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Benefits of a second language

- **But are there any negative effects?**
- **What happens to **physics teaching and learning** when Swedish students are taught in English?**



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Overview

Three topics:

- 1. Learning in English**
- 2. Teaching in English**
- 3. Disciplinary differences**



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Research background

- **Very few international studies have examined content learning outcomes of learning in L2 at university level.**
- **E.g. Klaassen (2001), Neville-Barton & Barton (2005), Gerber *et al* (2005).**
- **All find negative correlations.**



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Research background

- **Klaassen's (2001) study of Dutch engineering masters students perhaps most interesting.**

- **Found a negative correlation**

But:

- **Disappeared after a year**

- **Klaassen suggests that students had **adapted** to English-medium instruction**



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Research background

Quote:

“My achievements in the English-medium masters programme are entirely my own credit and are unrelated to the performance of the lecturers in this programme”

Klaassen (2001:182)



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Research background

Leads to new questions:

- What is it specifically that students initially find problematic?**
- How do the students compensate for the language switch?**



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Research background

- Do all students have this strategic ability or are certain groups disadvantaged by second-language teaching?**
- Can the lecturers do anything to help their students cope with the language shift?**
- Etc, etc.**



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Bilingual learning outcomes

The study:

- Parallel courses in English and Swedish
- Videoed two lectures – one in each language
- In total 22 students at two universities
- Each student interviewed individually ~ 1.5 hrs
- Selected video clips used to **stimulate recall**



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Learning patterns

- Students report **no difference** in their learning when taught in Swedish or English
- However, during stimulated recall students do report a number of **important differences**



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Results – learning patterns

When taught in English

- Students **ask and answer fewer questions**
- Students **who take notes** have difficulty following the lecture
- The success of these students appears to depend on doing **extra work outside class**



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Results – descriptions of learning

Students adapted their study habits...

- Only asked questions after the lecture
- Stopped taking notes in class
- Read sections of work before class
- Simply used the lecture for mechanical note-taking

Airey and Linder (2006; 2007)



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Recommendations

The following are **seven recommendations** for lecturers based on my results and my own experience:

- 1. Discuss the fact that there are differences when lectures are in a second language.**
- 2. Create more opportunities for students to ask and answer questions in lectures.**
- 3. Allow time after the lecture for students to ask questions.**



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Recommendations

- 4. Ask students to read material before the lecture.**
- 5. Exercise caution when introducing new material in lectures**
- 6. Give out lecture notes in advance or follow a book**
- 7. Give as much multi-representational support as possible.**



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One extra recommendation

8. Consider using other teaching methods than lectures.

Use seminars/problem solving sessions

Group work

Clickers

Flip the classroom, with lectures online



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Overview

1. Learning in English
- 2. Teaching in English**
3. Disciplinary differences



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Research Background

Studies of lecturing in English

Vinke (1995)

Questionnaire to 131 lecturers

**Recorded 16 engineering lecturers when they
taught in both English and Dutch**



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Research Background

Lecturers noticed very little difference

**Reduced redundancy, lower speech rate, less expressiveness, clarity and accuracy of expression
(Vinke, Snippe, & Jochems, 1998:393)**

Lecturers report an **increase in preparation time needed for English-medium teaching**



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Research Background

Klaassen (2001)

Examined the relationship between lecture intelligibility, language competency and pedagogical approach.

Findings

Student-centred lecturing much more important than the lecturer's language competence.

Suggests a threshold level of TOEFL 580 (approximately equal to level C1 on the Common European Framework)

Below this level language training may be necessary.

Klaassen (2001:176)

John Airey, Copenhagen 29 April 2016



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Research Background

Lehtonen and Lönnfors (2001)

Questionnaire (n=43)

Interviews with university teaching staff (n=9)

Findings

Similar to Vinke (1995).

Problems of pronunciation.

Uncomfortable correcting students' English.



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Research Background

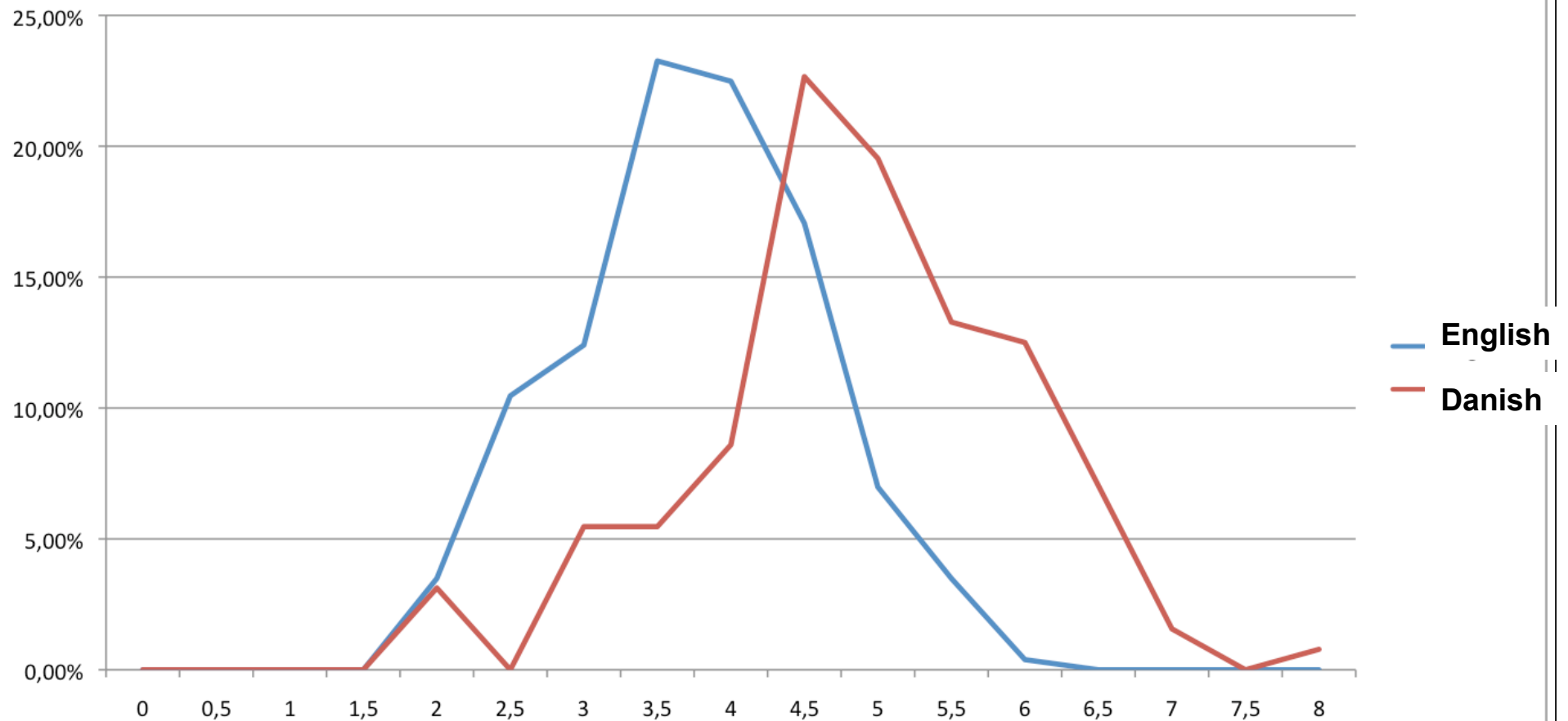
- **Thøgersen & Airey (2011)**
 - **Same lecturer gives same science lecture 5 times**
 - » **English (2)**
 - » **Danish (3)**
 - **Authentic data**
 - **Measured articulation rate (sps) and mean length of runs**



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Research Background

Articulation rate [normalised]



Adapted from Thøgersen & Airey (2011)



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Research Background

Results:

- The same lecture section **takes longer (21.5%)**
- Lecturer **speaks more slowly** in English

However:

- **Disciplinary content is very similar**
- **Similar pattern to the students**



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Swedish study

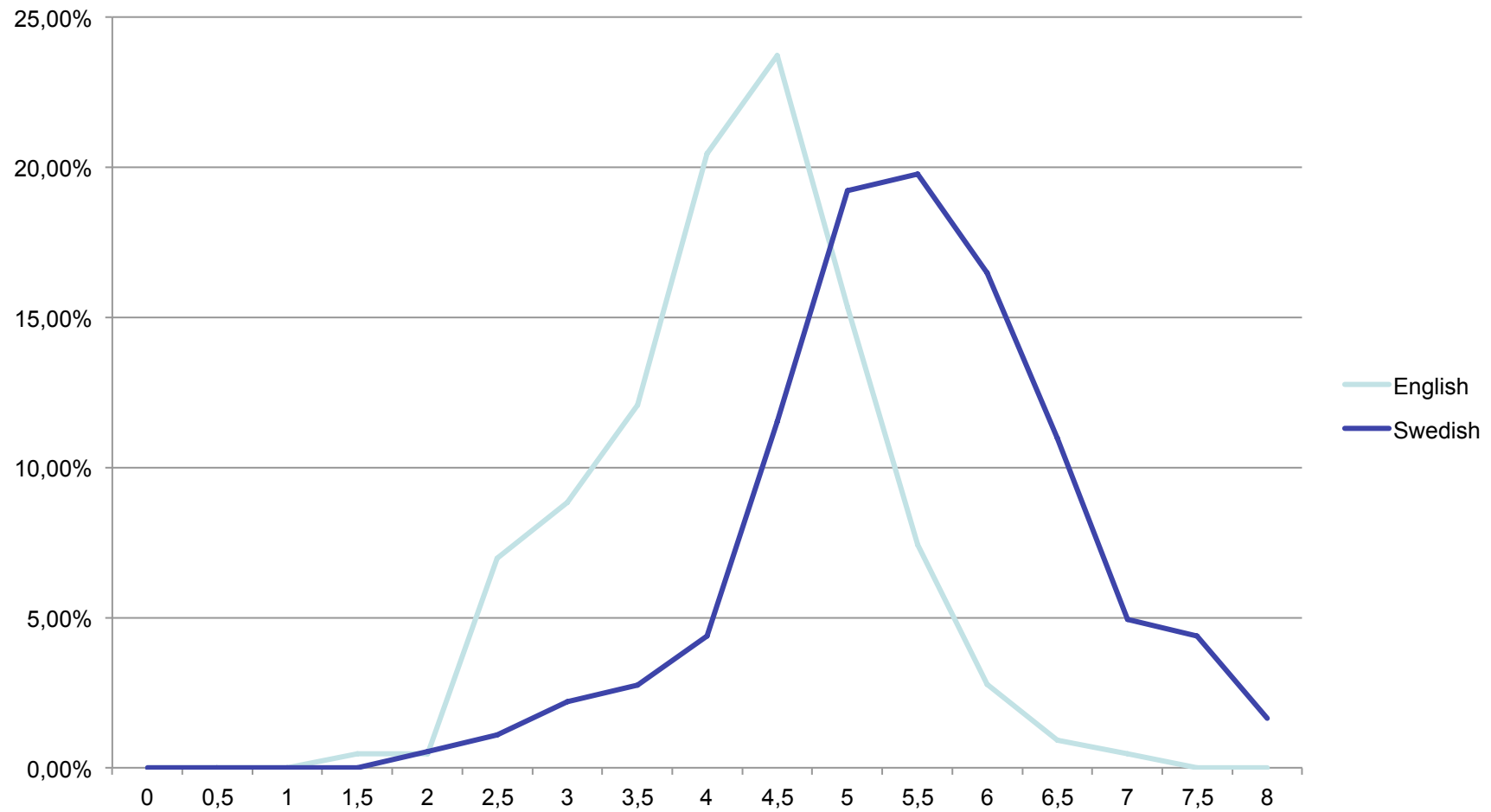
- 1. Ten-minute mini-lecture in Swedish on a subject they usually teach**
- 2. Ten-minute mini-lecture in English on the same subject**

Interviews



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Articulation rate in syllables per second [normalised]





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Three types of lecturer

1. Structured no change in English

Two options:

- lecture is longer
- the end of the lecture is cut off

2. Structured works differently in English

Three options:

- Choose to miss out some content
- Cover all content but have less redundancy
- Cover all content but in less depth

3. Free structure

- presents different information (but probably would in L1)
- shorter



Tentative conclusions

1. Lecturers probably **need more time** to do the same job in English
2. Most lecturers can probably rationalize and 'work more effectively' (Pedagogical effects?)
3. Lecturers who tend to be less structured (more student centred?) may have problems changing to English. (cf Klaassen 2001)
 - Places greater demands on language ability.
 - May be pragmatic to change style to a more structured approach.



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Overview

1. Learning in English
2. Teaching in English
- 3. Disciplinary differences**



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Disciplinary differences and language

Kuteeva & Airey (2014)

Show a disciplinary bias in attitudes to **English language use** based on Bernstein's knowledge structures

**Least objection
to English**

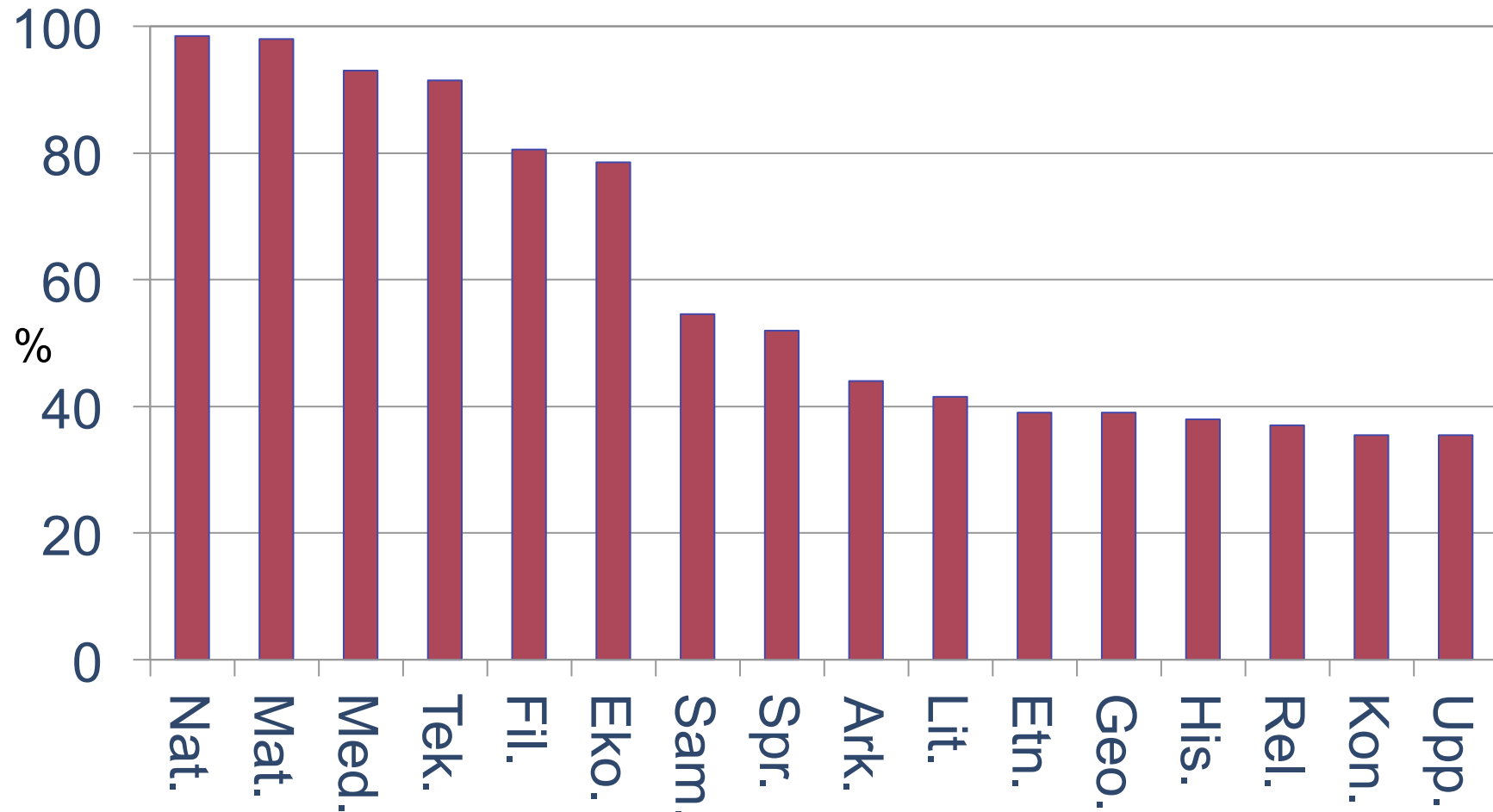
**Most objection
to English**

← Natural sciences Social sciences Humanities and Arts →



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English language PhD theses

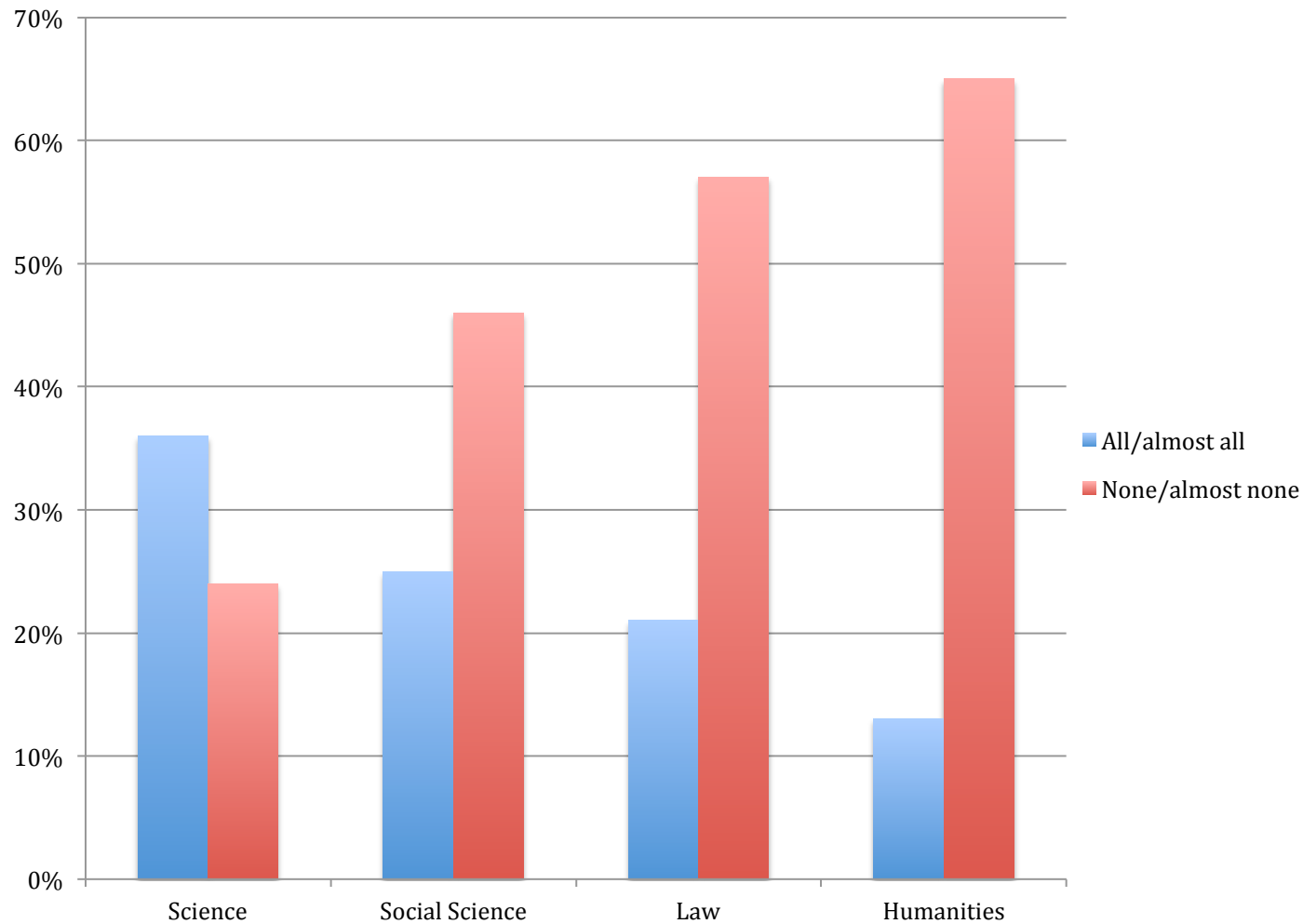


Salö (2010:24)



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Teaching in English



Adapted from Bolton & Kuteeva (2012)

John Airey, Copenhagen 29 April 2016



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Summary

Nordic students and teachers appear to cope with English medium instruction.

Issues with:

Reduced interaction

A language threshold (mostly lecturers)

These findings may be very different for other language groups

Different disciplines view language differently



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Summary

Different disciplines view language use differently.

English language use may be seen as deeply problematic by some disciplines.



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Choosing the medium of Instruction

Depends on learning goals—why is English being used?

- 1. Language learning goals**
- 2. Pragmatic choice to deal with diversity**
- 3. Other reasons**

**If #2 then diversity brings its own problems
Level, type of language, expectations etc.**



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