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Changing to Teaching and Learning in English

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Benefits of a second language

- Many benefits of using a second language (English)
- 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 questions:

1. Research into **student learning** when changing to English
2. Advice to **help students cope** with learning in English
3. Does **your own teaching** change in English?



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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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Three questions:

1. What happens to **student learning** when you change the teaching language to English?
2. How can you **help students cope** with learning in English?
3. Does **your own teaching** change in English?



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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

– (Airey 2010)



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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.

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

Klaassen (2001:176)



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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

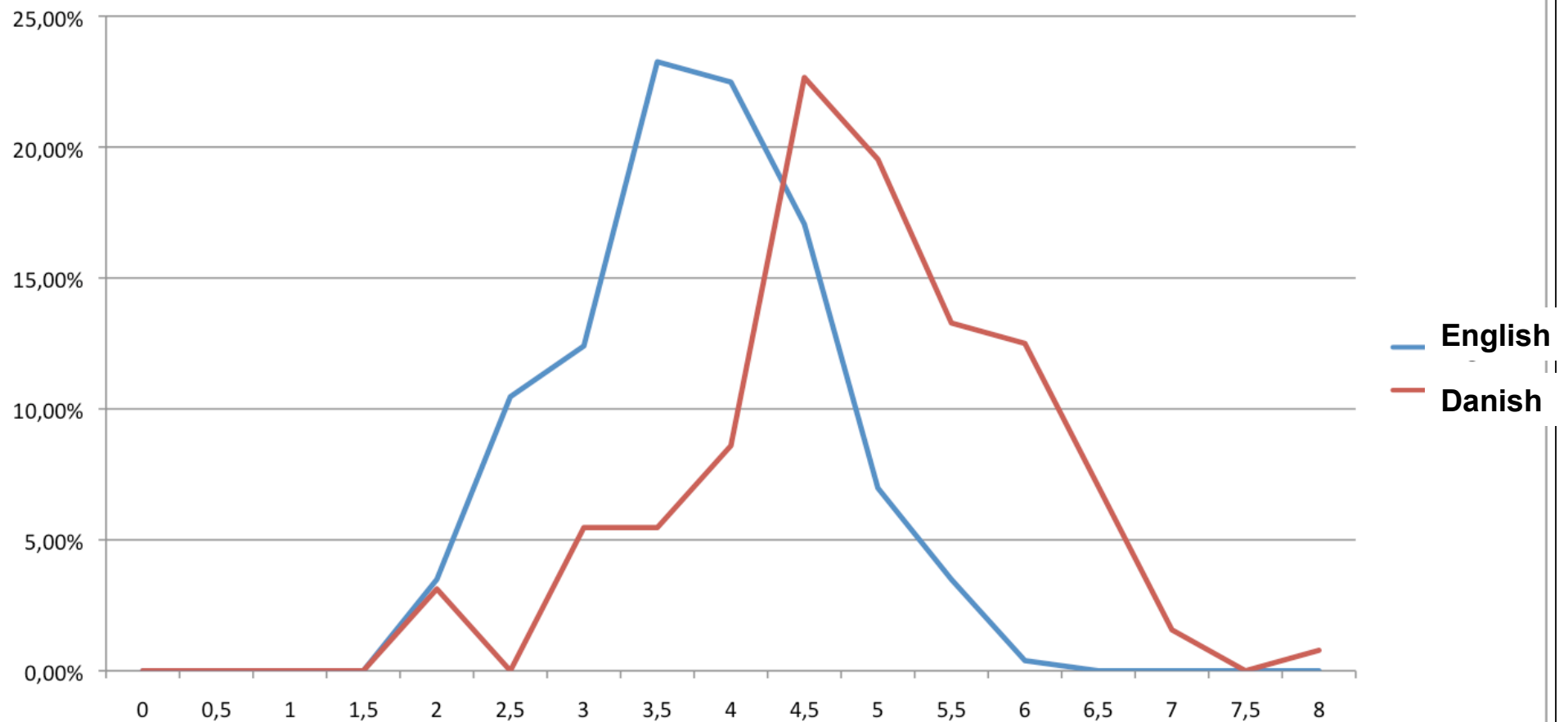
- **Thøgersen & Airey (2011)**
 - **Same lecturer gives same science lecture 5 times**
 - » **English (2)**
 - » **Danish (3)**
 - **Authentic data**
 - **Measured articulation rate (sps) and mean length of runs**



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Research Background

Articulation rate [normalised]



Adapted from Thøgersen & Airey (2011)



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How does your teaching change?

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

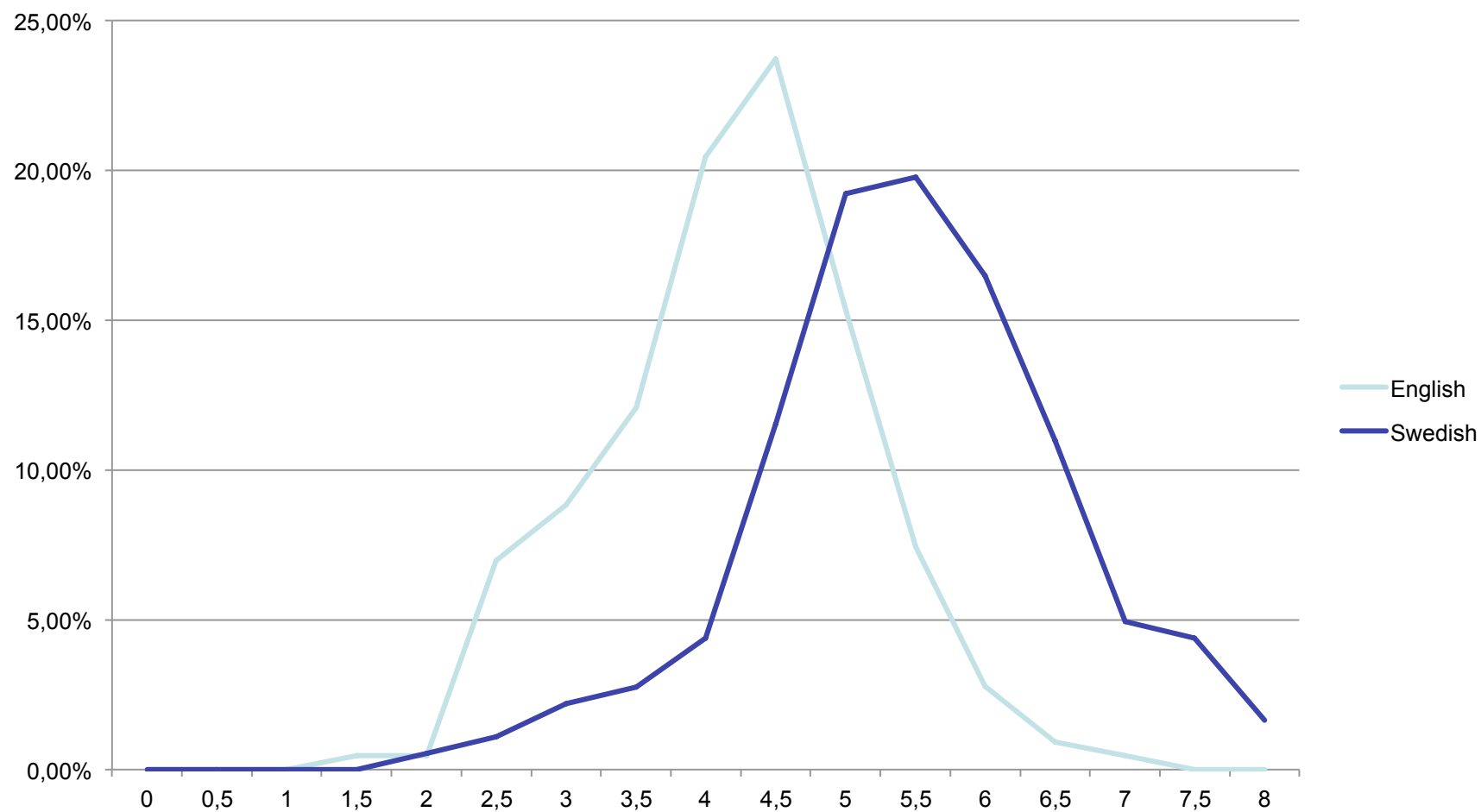
- 1. Ten-minute mini-lecture in Swedish on a subject they usually teach**
- 2. Ten-minute mini-lecture in English on the same subject**

Interviews



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Articulation rate in syllables per second [normalised]



John Airey, November 2015



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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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Lecturer reflections

Nine themes

Short notice

No training

More preparation

Less detail

Less flexibility

Less fluent

No correction

Few differences

Confidence boost

John Airey, November 2015



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What lecturers say

- **"Thrown in"**

"Why I am taking the course? Simply because I was "thrown in"! All of a sudden I was supposed to teach on English."

- **Stressful**

"The assignment to teach in English often is something you are expected to perform, so in the process of adjust the lectures to English you struggle to express your self as clear and correct as possible. Very stressful I must ad."



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What lecturers say

- **Insecure**

“I have the knowledge of the subject – but the English is “homemade”!”

- **No support**

“Today I’m stunned by the fact that you are expected to teach in English, without any support from your employer! If there are strong demands up on us to have “Högskolepedagogisk grundkurs” to teach Swedish students then why are we expected to automatically do well when we teach in English – without any training or education at all?”



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What lecturers say

- **Confidence boost**

As I never give lectures in English I'm a bit surprised that it wasn't as terrible as I thought it would be. This has clearly strengthened my self confidence – and I'm very happy and thankful for that! ”



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