# Towards bilingual expertise - evaluating translanguaging pedagogy in bilingual degrees at the university level 

Mickwitz, Åsa

2021-06-11

Mickwitz , Å, Lehtonen , H , Cvetanovic , D \& Toom , A 2021, ' Towards bilingual expertise evaluating translanguaging pedagogy in bilingual degrees at the university level ' , Language Learning in Higher Education , vol. 11, no. 1, pp. 195-217 . https://doi.org/10.1515/cercles-2021-2012
http://hdl.handle.net/10138/344538
https://doi.org/10.1515/cercles-2021-2012
publishedVersion

Downloaded from Helda, University of Helsinki institutional repository.
This is an electronic reprint of the original article.
This reprint may differ from the original in pagination and typographic detail.
Please cite the original version.

# Åsa Mickwitz*, Heini Lehtonen, Dragana Cvetanović and Auli Toom 

# Towards bilingual expertise - evaluating translanguaging pedagogy in bilingual degrees at the university level 

https://doi.org/10.1515/cercles-2021-2012
Received May 19, 2020; accepted December 30, 2020


#### Abstract

A great deal of effort has been made in recent years to promote multilingual values in academia and society. This was one reason why the University of Helsinki introduced the Bilingual Bachelor's programme (TvEx) in 2010 to guarantee a sufficient number of bilingual professionals in Finnish society. The aim of this study is to explore students' reflections on the (learning) challenges they face in becoming bilingual experts. The data consist of lecture observations and 13 semi-structured retrospective interviews with 14 students conducted during 20182019. The results show that emerging bilingual students need to build a sense of belonging with both language groups in order to develop bilingual expertise. From the students' point of view, teaching is experienced as satisfactory in terms of both language and content learning, especially in smaller teaching groups in which students feel safe to ask questions and where they are given individual support. It thus seems that learning in terms of both language and disciplinary content could be improved if teachers were to raise language awareness by explicitly addressing the language agenda of the class at the beginning of each course. They could, for example, initiate a discussion on the language situation(s) in the classroom in order to negotiate a functional set of teaching practices that would suit all students present in the class. Our findings also imply that teachers need to develop more student-centred approaches through which they can help their students to deepen content knowledge and to improve language skills.


Keywords: bilingual asymmetrical class; content expertise; higher education; linguistic expertise; multilingualism; translanguaging

[^0]
## 1 Introduction

Globalisation and student exchange have ensured that questions of internationalisation and language choice are increasingly present in higher education, even in institutions that have generally relied on the monolingual norm. At the same time, the study of translanguaging has developed in applied linguistics. Although mainly studied in basic education, there has been a need for translanguaging in higher education as well (García and Lin 2017). However, teacher beliefs and ideologies related to the dominance and importance of one language continue to challenge multilingual educational practices (cf. Alisaari et al. 2019).

Engaging in translanguaging and drawing on students' full linguistic resources (García et al. 2017) enable the teacher to teach complex content instead of oversimplifying it in the official language of instruction. García et al. (2017) also introduce the concept of "leveraging", meaning how teachers dynamically enhance the students' linguistic repertoires and practices and make the most out of them when teaching content. In spite of these developments, the institutional context continues to require a hierarchy separating the dominant language and the non-dominant languages. Thus, if full-scale translanguaging practices are to be implemented in bilingual classrooms, university management, curriculum designers and teachers will need to reposition themselves and reformulate their practices of teaching and learning (Prada and Turnbull 2018). García et al. (2016) further claim that so-called monoglossic ideology even dominates bilingual education, meaning that the two languages are seen as separate. In such situations, backgrounding monoglossic ideology could even become an obstacle to student learning. Despite the fact that the University of Helsinki is officially bilingual, and tri- or multilingual in practice, its linguistic practices could be characterised as doubly monolingual: only one language is present at a time (Dufva et al. 2011; Jørgensen 2008).

In this paper, we adopt García and Wei’s (2014: 2) argument concerning the "trans aspects" of translanguaging pedagogy to break down the categorical distinction between monolingualism and bilingualism. We also aim to develop current practice-based knowledge on how to utilise translanguaging pedagogies in multilingual university classrooms, especially in bilingual Finnish-Swedish Bachelor-level degree programmes. We argue that there is a need for more nuanced and teaching-situation-specific research on (trans)languaging pedagogical practices and tools as well as their implementation in the promotion of simultaneous language and content learning in multilingual and multi-diverse university student groups. This need applies not only to bilingual programmes, which we explore in this article, but also to a more general university setting that aims at fostering multilingual practices.

### 1.1 The aim of the study

Our aim, which is based on research carried out within the TvEx programme as part of the PEDAMO project, is to explore (1) students' perceptions of becoming bilingual experts and (2) the kind of translanguaging pedagogies (TP) they would benefit from learning situations in which the student groups are linguistically asymmetrical. We focus on classroom observations and interview data gathered among TvEx students, that is, students aiming to complete a bilingual Bachelorlevel degree at the University of Helsinki. The methodology we use in our analysis is qualitative. We endeavour to adopt a more tangible approach to translanguaging pedagogy by emphasising the student perspective and students' thoughts on the pedagogical strategies their teachers use. We also focus and give value to the pedagogical strategies students might prefer teachers to apply in order to enhance learners’ language and content skills and to guide them towards becoming academic experts in their field.

Our research questions are:

1. What kind of pedagogical practices are beneficial to students in terms of developing bilingual expertise and supporting multilingual content learning?
2. What kind of pedagogical practices, according to students, do teachers use to develop bilingual expertise and to support learning?

### 1.2 Language policy at the University of Helsinki and the Bilingual Bachelor-level Programme (TvEx)

Finland is officially a bilingual country with two national languages, Swedish and Finnish. This bilingualism is based on historical events in the country and language-policy decisions made in the past. Approximately $6 \%$ of the population is native Swedish-speaking, and the majority of this population is located along the South-west coast of Finland. Most members of the linguistic minority of Swedishspeaking Finns are born in Finland, and generally perceive themselves as Finns even though there are some socio-cultural differences between the two language groups. For example, Swedish-speaking Finns tend to have a higher socioeconomic position in society, a better education, and a higher income compared to the rest of the Finnish population (Sipilä and Martikainen 2009). On the other hand, PISA results show that Finnish-speaking students out-perform Swedish-speaking students in reading ability, for example (Harju-Luukkainen et al. 2016).

The University of Helsinki as a bilingual university has the task of educating experts in Finnish and in Swedish. To promote multilingual values in academia
and society, and to guarantee a sufficient number of bilingual professionals, the university introduced the TvEx programme in 2010. The aim in these bilingual Bachelor-level degree programmes is to educate bilingual experts in various fields such as Biology, Chemistry, Physics and Law. One third of the courses are conducted in Finnish, one third in Swedish, and one third in a language of the students' choice. During their studies the participants receive language support from teachers of Finnish and Swedish at the Language Centre. The aim of the Bilingual program is not to create symmetrical bilingualism in individuals, but to train bilingual experts that are able to work (as highly functional professionals) in both national languages, Finnish and Swedish. The students' writing and oral skills are tested before they graduate: they submit a portfolio and participate in an oral test conducted by a language teacher. These tasks are assessed on the CEFR scale and in order to receive the bilingual diploma the students need to reach the level of C1 in their weaker language (García and Li 2013: 2).

Even though globalisation has made English a lingua-franca in Finland too, the national languages are still considered important both in everyday and in professional life. The use of Finnish and Swedish, as well as English, as the languages of teaching and research is thus clearly stipulated in the Language Policy of the University of Helsinki (University of Helsinki 2014).

The idea and the implementation of the TvEx programme as a strategy is unique to the University of Helsinki, and it has generally received positive feedback from students (Schauman 2018). However, the bilingual degree programmes have faced challenges, one of the main ones concerning language skills. There are no language requirements for students who wish to join the TvEx programme, and some students miscalculate the time and effort it takes to study full-time disciplinary content in a non-native language. Some of them, especially Finnish speakers, also struggle to reach C 1 level in Swedish during their studies. A number of them (again mostly Finnish speakers) drop out due to a lack of language skills (Schauman 2018).

## 2 Data collection and methodology

The data for this study consist of lecture observations and 13 semi-structured retrospective interviews (stimulated recall, Gass and Mackey 2000; Stough 2001; Vesterinen et al. 2010) with 14 students (one interview included two students) conducted during 2018-2019. Throughout the observations the researchers focused on the classroom interaction between students and teachers, as well as language use and teaching practices. We were interested in the following aspects:

- who was responsible for the interaction
- how the students responded to the teacher and
- what kind of teaching material was or was not used during the lectures.

Our aim was to build a preliminary picture of the language and teaching situation before conducting our interview discussions with the students. We wanted to find out what teaching methods the students considered beneficial to their language and content learning.

The researchers (the authors of this article) conducted the interviews immediately after their observation of the lectures. The interviewees had given their informed consent to take part in the research project beforehand. Most of the interviews took place in cafeterias or meeting rooms on campus, and they were all recorded. Eleven of the 14 students were female and three were male, which more or less reflects the proportion of female and male students at the University of Helsinki in general. They represented various disciplines: Chemistry, Biology, Law and Environmental Sciences. Four of them were in their first year of study, four in their second year, four in their third year, one in their fourth and one in their fifth year.

All the interviews were transcribed verbatim by an outsourced professional company and then coded by the authors using Atlas.TI software. The data were then subjected to qualitative content analysis (Miles et al. 2014). The researchers shared the task of analysing the interview data, and each one preliminarily coded the text independently. Having closely read the transcriptions, the researchers discussed what directional codes should be used in the subsequent reading of the data, and agreed on how to define the extra codes. In the follow-up discussion we reviewed the first results of the coding, and then checked the reliability of the coding categories by comparing the individual analyses, and in some cases reconciling them. The reflective statements were discussed in varying amounts of detail. All coding disagreements were resolved to ensure a common interpretation of the reflective statements in question.

We analysed the content of the transcriptions by coding it according to 46 thematic and theoretical keywords, of which we chose 3 in accordance with our research questions:

1. Bilingual expertise
2. Teacher practices
3. Student practices

This paper proceeds as follows. Section 3 below introduces translanguaging as a pedagogical approach. Section 4 focuses on two ways in which becoming a bilingual expert is manifested in our interview data: in the intertwining of language learning and learning the disciplinary content (see Section 4.1); and in
connecting the pedagogical concept of social engagement with the sociolinguistic concept of language ownership (see Section 4.2), both of which relate to a sense of belonging and the ability to position oneself within a certain group - linguistic or/ and professional. In Section 5 we analyse the classroom translanguaging practices to which the students referred, specifically in terms of whether they experienced them as supportive or non-supportive of their language and content learning. We draw our conclusions and discuss our findings in Section 6.

## 3 Translanguaging as a pedagogical approach

The term languaging (Jaspers and Madsen 2018; Madsen et al. 2016) has emerged as a general concept to refer to all the linguistic practices in which people engage. The languaging approach stresses the nature of language as practice, not as lects. It further focuses on the constructed, abstract and ideological nature of languages such as Finnish or Swedish as separate linguistic entities. In terms of linguistic resources, languaging does not necessarily follow the structural or the social borders of separate languages, and thus, the theory is concerned with the ways in which linguistic resources are associated with registers (labelled e.g., Finnish, Swedish, English, Academic style) (Agha 2007; Lehtonen 2016; Madsen et al. 2016). Accordingly, an individual's language competence has been reconceptualized as a repertoire, which could be envisioned as a collage of 'bits of languages' and their contextual interpretations (Blommaert 2010; Blommaert and Backus 2013; Busch 2012). In interaction, the idea of separate languages matters as long as the participants orient to them. The social meaning, prestige or stigma of the resources at play shape the context of interaction as well as the social positioning of the participants. (cf. Jaspers and Madsen 2018)

Inspired by discussions on the multilingual turn (May 2013) and languaging (Jaspers and Madsen 2018; Madsen et al. 2016), writers have described translanguaging as a follow-on from multilingualism, especially in terms of how students' language practices are perceived: as two or more autonomous language systems or as one linguistic repertoire with features that have been societally constructed as belonging to two or more separate languages (Canagarajah 2011; García and Wei 2014: 2;). The roots of translanguaging go back to the 1980 s. Translanguaging was originally developed in Welsh schools in order to enhance the status of the minority language, Welsh, and to oppose the 'parallel monolingual mindset' by underlining the advantages of functioning bilingualism (Lewis et al. 2012). Within the last two decades, as a continuation of the discussion on multilingualism, it has become a term used to describe all sorts of multimodal communication in everyday life (Maartje et al. 2019). Thus, translanguaging is
referred to as both the complex language practices used by multilinguals, and the pedagogical approaches used in formal teaching settings to promote such practices (García et al. 2016; García and Wei 2014: 19). In this paper we adopt the concept as a pedagogical tool and as a social practice in the classroom, with a focus on linguistic equality and a non-authoritarian learning environment. Furthermore, we refer to translanguaging practices as learning and teaching practices in which teachers and students step across the borders of separate languages (García and Sylvan 2011).

## 4 Developing bilingual expertise in content- and language-learning settings

As previously mentioned, the TvEx bilingual degree programme at the University of Helsinki aims to achieve professional expertise in Finnish and Swedish, thus enabling students and future professionals to work in their own fields fluently in two languages. For example, Finnish-speaking students who are fluent in Swedish are able to find future work in the larger job market in Scandinavia. It became evident in our interviews that the explicit aim of many TvEx students is to be able to work in their future profession in both Finnish and Swedish.

Before proceeding with our analysis, we should first clarify how we understand the concept of bilingual expertise in the context of the TvEx bilingual Bachelor's programme. Having carried out a study on English-Spanish professional bilingualism in the context of a creative-writing graduate programme in the US, Achugar (2009) concluded that the participants' positionings towards bilingual practices were affected by wider socio-historical processes, as well as by the interplay between the norms and ideologies of the communities of practice of the programme and the bilingual borderland. The societal context she explored differs from the TvEx context, but mutatis mutandis similarities are to be observed. The TvEx students have their own linguistic biographies and affiliations. However, they are influenced in how they value and judge their professional bilingual expertise both by the stereotypes associated with relations between the Swedish-speaking minority and the Finnish-speaking majority, and by the expectations they assume are set in terms of their linguistic competence in their studies and in the working life to which they aspire in Finland and/or Scandinavia.

The concept of expertise suits our purposes well in that it encompasses both linguistic competence (cf. Rampton 1995) and professional proficiency. Rampton (1995) further suggests that the ideologically and normatively loaded concept of
the native speaker could be replaced with expertise, affiliation and inheritance. Expertise in this context refers to knowledge of the language or language skills. It is constantly developing and can be acquired later in life, and hence is not absolute or given, as native implies. Expertise is partial: one's repertoire is a collage of resources. Nevertheless, these resources carry different meanings: people have different affiliations to different parts of their repertoire depending on the contexts with which they are associated. In other words, languages/registers are personally meaningful in different ways. Inheritance refers to the special role of language in people's earliest relationships, and the ethnic and cultural familial contexts into which they were socialised. All these aspects play a role when TvEx students negotiate their relationship with their two languages and integrate them into their academic expertise.

Expertise, on the other hand, also refers to professional competence. The students are expected to master certain skills and to engage in a conceptual change as well as to expand their identities in order to be able to position themselves in their field of expertise (Tynjälä 1999). None of this is achieved without language: people learn, conceptualise and negotiate their positionings in and through language (cf. Lehtonen 2015; Norton 2000; Norton and Toohey 2011). Thus, becoming a professional and learning the language(s) required to achieve professional expertise are inseparably intertwined.

### 4.1 Language and content learning intertwined

Language awareness in teaching builds upon the understanding that all learning is languaging: aspiring biologists learn to express themselves as biologists do, to use the terminology that biologists use, and to interact in the registers that biologists need. Regardless of whether or not students are studying in their mother tongue, they still need to acquire skills in the 'language of Biology'. In socio-constructive terms, becoming a full member of a group of experts means being socialised into its ways of speaking and communicative practices (Lave and Wenger 1991). The fact that all languages are languages of learning is emphasised in the teaching of linguistically asymmetric groups, specifically in terms of language awareness, linguistically responsive teaching and translanguaging pedagogy. Recent research indicates that learning is more efficient and deeper when translanguaging is involved, in other words when learners are encouraged to use their whole linguistic repertoire in their learning (Rivera and Mazak 2019; Ticheloven et al. 2019).

The TvEx-students we interviewed expressed an orientation towards the linguistic skills expected in their field. Law students in particular considered the
focus on explicit language practice (terminology, linguistic style) important with regard to their future profession. Many law students work in real-life professional settings at the same time as studying, thereby acquiring knowledge about what kind of expertise might be expected from them in the future.

Awareness about the importance of the terminology or specific language needs of the field comes with an understanding of the partial nature of linguistic expertise: learning to master both formal and informal registers as well as professional terminology increases awareness of the fact that one's skills in a given language are never complete and are tied to certain practices. As one chemistry student said, the students "speak better Swedish when discussing chemistry issues than when talking about the weather". A Swedish-speaking student who assumed he/she would 'pass' as a 'native' in everyday spoken Finnish had different standards on the professional level: "I have to say... if I talk to a [Finnish-speaking ] stranger, my accent in Finnish does not reveal that my native language is Swedish. [...] I still feel a bit insecure when writing emails in Finnish. I do not want to appear like my skills in Finnish are not good enough."

Although the students might interpret professionality as including 'native' skills, our data also attests to the transformative power of translanguaging: as they gain self-confidence in their professional performance, they might come to realise that their linguistic expertise is not judged normatively in all contexts, and that they do not necessarily have to reach any abstract 'native' level (Excerpt 4.1) ${ }^{1}$.

Excerpt 4.1. (Translated from Finnish) Finnish-speaking student, Chemistry: I: What about writing, [...] did it, in which way did it develop (-)?
S: It did [develop] a lot anyhow. Maybe, it is more relaxed now. In that sense, I used to stress in high school if words would come in the right order, unnecessary energy went there. Now I can produce text which gets my message through.

This is an example of how the normative view on language has transformed it into a languaging system in which being able to communicate one’s message efficiently overrules monolingual ideologies.

Finally, our analysis emphasises the benefits of learning in several languages (Excerpt 4.2).

Excerpt 4.2. (Translated from Swedish) Swedish-speaking student, Law:
I think I learn unbelievably much when I have to search for and consider which term [in Swedish and in Finnish] is correct. I feel that I have learned so much and so efficiently by doing that, even if it takes a lot of effort. But I don't mind even if it takes more time.

1 See the quotations in the original language in Appendix.

Even if some students in the Tvex programme felt that their studies did not conform with mainstream Bachelor-level programmes in terms of the time and effort they put in, one of the main advantages was that learning professional vocabulary in two languages simultaneously enhanced content learning (Lewis et al. 2012).

### 4.2 Social engagement and language ownership

Student engagement is a broad term that refers to positioning with regard to studying, academic knowledge and the academic community. It could be generally defined as students' "behavioural, emotional and cognitive connection to their learning" (Kahu and Nelson 2018: 59). Social engagement refers to the ways in which students acquire belonging and ownership with regard to their studies (Korhonen et al. 2017). In general, students who are engaged in their learning are likely to be more successful in academic studies compared to non-engaged students (Kahu and Nelson 2018).

Our data suggest that social engagement in TvEx studies increases the sense of ownership in the second language or in bilingual situations, and thereby paves the way to bilingual linguistic expertise and professional development. Language ownership could be defined, briefly, as the sense of being a legitimate user of a language: a speaker who has the right to decide when and how to use it and has sufficient skills to do so. Acquiring ownership of the second language in TvEx studies is an aspect of both linguistic and professional expertise.

Engagement and a sense of belonging are also associated with students' selfefficacy beliefs, in other words their confidence in performing a task successfully (Bandura 1995). Strong self-efficacy beliefs enhance student engagement and success in their studies, which in turn further strengthen self-confidence (Schunk and Mullen 2012). TvEx students are generally very determined and show high motivation and strong self-efficacy beliefs even if acquiring language ownership seems to be one of the biggest challenges.

Stereotypically, the Finland-Swedish community is represented as a closeknit, closed ethnic and cultural entity that is not particularly open to outsiders. According to our interviews, Swedish-speaking students belong unproblematically to both Swedish- and Finnish-speaking communities, whereas Finnishspeaking students feel they do not belong to the Swedish community. The following excerpt (4.3) illustrates the insecurity of a Finnish-speaking student entering a Swedish-speaking group:

## Excerpt 4.3. (translated from Finnish) Finnish-speaking student, Biology:

Well, if we do group work with Finnish-speaking students we all [in the group] speak Finnish of course, even if it is a Swedish-speaking class. Not everybody dares to [speak Swedish or voluntarily joins a Swedish-speaking group] - even if they might want to. It takes a lot of social courage to approach them [Swedish-speaking students] and ask can I come and join you, even if you look like you are best friends.

In fact, it is evident in our data that mastering the terminology and the academic registers does not guarantee language ownership or the fluency associated with bilingual experts (Excerpt 4.4).

Excerpt 4.4. (translated from Finnish) Finnish-speaking student, biology:
But then, one thing that I wasn't able to imagine was that social skills, like how do you ask what do you do next, would you like to join me for lunch, what are your interests concerning biology, these phrases just did not exist [in my Swedish]. Another thing, here at the biology department, the first part of the studies is conducted in Finnish and everything else is in Swedish, and then you need to integrate into an already established group. There was no help offered in these matters.

Our informants reported that being able to use the second language in social contexts - which happens through social engagement - gave them a sense of belonging and strengthened their self-efficacy beliefs, which in turn enhanced their self-confidence in mastering the language and experiencing themselves as bilingual professionals. One student said that she realised at some point that Swedish student organisations were not just for students who "are born as Swedish-speaking Finns", and that she was actually allowed to join. However, she consciously focused on drilling social practices associated with the Swedishspeaking student culture (Excerpt 4.5).

> Excerpt 4.5. (Translated from Finnish) Finnish-speaking student, biology:
> I went to the student parties [in Swedish]. It was horrible. But like, I was stupid ['acting naïve'] and persistent and carried on and then like, I practiced schnapps songs [sing-along songs accompanied by drinking] at home and like started to work on these things consciously. Like hey now I really have to do something if I want to belong to this group. That's how I began to construct it - that helped me become a bit more visible and I got invited for lunch more often and then you sit there at the table and observe the discussion unfold and you're not able to participate yet but-

Mastering certain social practices and their discourse registers allowed this student to engage in the social life of Swedish-speaking students. Social engagement is a way of gaining ownership of the language, which also makes it easier to engage in other contexts. It is essential in translanguaging to take the language of social life and out-of-classroom contexts into consideration. This is also important for TvEx students in terms of identifying their feelings of belonging to a bilingual
student community. As our data also implies, if one wants to feel like a bilingual student or expert, one needs to feel at home among one's peers. Establishing a social identity as a member of a group and a sense of belonging in a variety of communities serving these needs are crucial for developing bilingual expertise.

## 5 (Translanguaging) practices supporting content and language learning in the classroom

The focus in this section is on the language practices in the classroom that the students brought up in the interviews. Teaching was discussed mostly from the teacher's perspective, thus the students generally talked more about the practices teachers use to support student learning than about the learning practices students use in the classroom.

All the students we interviewed described the teaching practices they experienced as supportive of their learning in some ways but non-supportive in others. With a few exceptions, almost all the lessons we observed (during the academic year 2018-2019) were teacher-led, and to a very high level of competences. Interaction between students and teachers was not very frequent during the plenary lectures in which the number of students exceeded 50, even if some teachers posed several questions as a way of initiating discussion. A number of students reported that it was "normal" for students not to answer questions from teachers addressed to the whole group, especially in the case of large groups. Small groups seem to provide a better learning environment for students, encouraging them to ask questions and making them feel safe while learning (Cartney and Rouse 2006).

Although some of the students experienced small groups as more supportive of learning, students of law preferred the plenary lectures, which they described as promoting more efficient learning in that "one learns more facts" during these lectures. Law studies at the University of Helsinki require students to study independently for the extensive exams, for which they need good self-regulation and study skills (Lindblom-Ylänne 2004). The study pace is fast - which may be one reason why the law students in our interviews said they want to avoid "useless" group work because that kind of studying often focused on something that was irrelevant for their upcoming exams. In general, it seems that teacher-led lessons are more popular among law students than among students in other disciplines, and several reported that they "don't mind attending plenary lectures".

Several students pointed out that successful teacher-led instruction required the teacher to fulfill quite basic pedagogical needs: speaking slowly and articulating clearly, pausing and allowing time for students to ask questions (Excerpt 5.1).

## Excerpt 5.1. (translated from Swedish) Swedish-speaking student, Law:

 I: Would you say that she is an exceptional teacher teaching in Finnish?R: Maybe, because she speaks slowly, and that is nice for someone who doesn't speak Finnish as her mother tongue, you have time to take notes [while listening].

The students also recognised non-verbal support from the teacher as a supportive practice. One Finnish speaker told of a teacher who always paid attention to and silently encouraged the Finnish-speaking TvEx students in the classes taught in Swedish. This could be seen as a way for the teacher to equalise cultural and linguistic relations between the students - the teacher actively acknowledges the presence of the linguistic minority in order to support and engage them. This is a basic element in translanguaging pedagogy (Flores and García 2013), although it is also good pedagogical practice for any teacher to organise classes in a more friendly and inclusive languaging way. We noted several good examples of this in our classroom observations, as well as numerous ways of formulating classroom practices.

Some students had experienced instruction that could be described as a translanguaging practice (García et al. 2016). In Excerpt 5.2 a student describes a learning practice that allows students to draw on their full linguistic resources, and in which the teacher simultaneously supports content and language learning.

> Excerpt 5.2. Finnish-speaking student, environmental sciences:
> Well, during the course the teacher organised the students in pairs, such that one native speaker and one TvEx student wrote an essay together. That was a very good idea in my opinion - the pair is linguistically asymmetric, but the individuals are able to support each other.

Many of the students we interviewed expressed the need for more individual support from the teacher, such as checking the students' understanding of the topic during the lecture by asking questions. The data also reveals that some of the students asked their peers for clarification if they did not understand the teacher, possibly because they lacked the courage to ask the teacher to explain the issues.

Several students, including the Finnish speakers, claimed to prefer the courses in Swedish because the student groups were smaller. Having a small group enables the teacher to give more individual support to the students, and the students are able to engage in active learning, which enhances their understanding (Zepke and Leach 2010). Moreover, students in smaller groups do not appear to be linguistically hampered in the same way as those in larger groups claim to be, as shown in Excerpt 5.3.

Excerpt 5.3. (translated from Finnish) Finnish-speaking student, Chemistry:
I like the Swedish courses because the student groups are small. The teacher gets to know the students well, especially if the [same] one teaches several courses. You even get individual help sometimes. And you might dare to ask questions.

Moreover, some students suggested that being pushed out of their linguistic comfort zone could be an effective language-learning strategy for them (excerpt 5.4.). In practice, translanguaging allows students to use the language(s) with which they feel most comfortable, but more importantly, if a safe learning environment beyond the monolingual norm is created, they may use the opportunity to overcome linguistic boundaries. "Forcing the students to speak" (Excerpt 5.4), despite the somewhat misleading and harsh word choice, implies that one path to bilingual expertise is to recognise translanguaging as a form of student-centred, engaging pedagogy according to which the teacher actively creates the space for students to talk and to find their own voices. This is where university pedagogy and language pedagogy intertwine.

> Excerpt 5.4. (Translated from Finnish) Finnish-speaking student, Biology:
> What kind of practices do you think would support Finnish-speaking students to engage in classroom activities in Swedish?
> Well, if you think about how you learn Swedish the best way, it is when students are engaged, at least that is how I learn and improve my language skills a lot. There [in the teacher-led classroom] I learn to listen and understand Swedish [...] But pedagogically, if the teacher really wants to support language learning, then engaging the students in discussions, even forcing them to talk, would be more effective.

Speaking a foreign language in the classroom is considered the most anxietyprovoking activity in second-language acquisition (Hashemi 2011). Our study participants appreciated it when teachers abandoned the mono-lingual classroom norm and gave students the opportunity to use both languages. In response to a question about how Swedish-speaking teachers treated Finnish-speaking students in class, one student stated: "I think that the teacher handles the situation and takes the facts into consideration. Especially at first, the teacher allows questions to be asked in Finnish, while answering them in Swedish. That is, in my opinion, a good thing, a compromise. One is not pushed to do things if one cannot do them."

The students gave a handful of examples concerning teaching practices that ignore the linguistic asymmetry in the student group. According to several of them, the basic pedagogical tools and solutions were lacking in these teaching situations, especially in the case of teacher-led instruction with scant or non-existent communication with students. They mentioned some instances: the teacher speaks too quickly; the teacher does not use the microphone; he/she asks questions
but does not wait long enough for the students to answer them; the teacher does not use PowerPoint slides; he/she does not refer to previous discussions (no "meta-talk" is used). The following excerpt (Excerpt 5.5) illustrates a classroom situation in which a Swedish-speaking student notices that she has difficulties following the Finnish-speaking teacher because he does not use PowerPoint slides.

> Excerpt 5.5. (translated from Swedish) Swedish-speaking student, Law:
> We had a professor who didn't use PowerPoint slides. He said that he didn't want to use them. And then he just stands there flapping his gums lesson after lesson and I noticed that, since he wasn't speaking my mother tongue, I needed something concrete to grasp, because otherwise there was a big risk that I wouldn't catch up. [...] The visuals are so important to me, I need to have something to go back to [while listening], but he was like "no PowerPoint". Just so nonpedagogical. He uploaded them later on Moodle, but that was too late.

According to the students, the Swedish-speaking teachers seemed to be far more aware of the language asymmetry and the presence of TvEx students on their courses than the Finnish-speaking teachers. This is no surprise, given that from the beginning the TvEx programmes have been structured to support the Finnishspeaking students and their Swedish-language skills. There are several reasons for this: first of all, Finnish is more or less a "default" language at the University of Helsinki due to its strong majority position. Secondly, Swedish-speaking students are assumed to be more or less bilingual, even if many Swedish-speaking Finns (especially from Ostrobothnia and the Åland Islands) define themselves as monolingual or bilingual Swedish-English speaking (Stenberg-Sirén 2020). Thirdly, the Swedish-speaking students might well have taken the same courses taught in Finnish regardless of the existence of the TvEx programme, given that few Bachelor-level programmes at the University of Helsinki offer all their courses in Swedish.

## 6 Discussion and conclusions

The aim of this study was to find some up-to-date solutions to ensure the better functioning of linguistically asymmetric classes in university settings. We explored how students articulated their goals in terms of becoming bilingual experts in their academic fields, and how teacher-induced pedagogical practices in particular could boost these linguistic and disciplinary aspirations

Hence, the main conclusion emerging from our data concerning the development of bilingual expertise is twofold. First, the students need to build a sense of belonging and a social identity with both language groups in order to develop bilingual expertise. According to the results of this study, this tends to come
naturally to Swedish-speaking students who, given the status of Finnish as the majority language, are integrated into both language cultures prior to their university studies. Second, the development of a sense of belonging among TvEx students is affected by stereotypes associated with the relationships between the Swedish-speaking minority and the Finnish-speaking majority, and to expectations regarding required linguistic competence in university studies and in working life in Finland and Scandinavia in general.

Another major finding from our research relates to teaching practices: it is apparent that the teachers could increase the level of support for both language and content learning with a minimal amount of effort by using teaching practices that are more or less taken for granted in modern higher-education pedagogy: speaking slowly, articulating clearly, standing up and using the microphone when necessary.

Based on our results we can also emphasise that constant attention to and encouragement of TvEx students in the class are crucial in bilingual teaching practice. From the students' perspective, teaching was experienced as satisfactory in terms of both language and content learning, especially in the smaller teaching groups where they felt secure enough to ask questions and were offered more individual support. Simple translanguaging practices, such as translation and simultaneous language usage, and including the use of word lists during lectures, were generally not considered "good teaching practice" in TvEx settings. Bilingual expertise cannot be acquired simply by attending lessons and learning from teachers and peers, it also needs a social context, just like any learning process (Säljö 2000). As Daniel et al. (2019) argue, translanguaging practices cannot be introduced suddenly, out of the blue, as they might confuse the students. Rather, the language and disciplinary-content learning could be brought to a satisfactory level by means of one simple action: at the very beginning of the course the teacher and the students should sit down and discuss the language situation(s) in the classroom with a view to negotiating a functional and realistic set of practices that would suit everyone in the class. The resulting negotiated set of rules and opportunities for future linguistic and disciplinary study should be under constant assessment, and adaptable to current needs and academic ambitions.

Finally, we would like to emphasise that translanguaging practices are associated with several learning advantages, one of which is the fact that learners are not limited to one language in their learning processes. In the case in point, it is even more important for TvEx teachers to develop more constructively aligned, student-centred and learning-centred approaches through which to help their students to acquire and deepen content knowledge as well as to improve their language skills. Careful planning and thorough preparation of teaching materials are especially important. Our data thus implies that developing more flexible ways
of using all linguistic resources available in the classroom would enhance learning and develop students' cognitive and linguistic knowledge. The interview data collected from students on the bilingual TvEx Bachelor-level programme at the University of Helsinki emphasise the need to activate student-focused pedagogical practices that "make" them speak in the weaker language. These activating methods suit TvEx programmes by default, meaning that many of the pedagogical practices with a potential to enhance bilingual expertise among students at the University of Helsinki already exist, and should be brought to the attention of content-focused teachers who are engaged in teaching linguistically asymmetrical groups of students.

Our qualitative research was conducted at the University of Helsinki in Finland, and the reported findings and all the details as such cannot be generalised to other contexts. The status of different languages as well as language ideologies affecting the policies and the practices need to be taken into account when considering applying the results elsewhere. Based on our research we can conclude that constructively aligned learning-focused teaching, careful planning and preparation of teaching materials, discussing translanguaging practices with students, sensitiveness in interactions and thus promoting students' social and academic engagement are essential when supporting higher education student learning in a multilingual context.

Our findings support the notion that it is beneficial to give (incoming) bilinguals a voice in the classroom (Flores and García 2017), and to incorporate their linguistic repertoire(s) into classroom practices. Moving from the type of content teaching that is still governed by monolingual ideologies towards up-to-date pedagogical (trans)languaging methodologies requires making pedagogical turns and thoroughly evaluating and applying translanguaging practices.

Research funding: We would like to express our gratitude to the Svenska Kulturfonden Hallå Funding Programme for three-year funding of the project on TvEx bilingual Bachelor-level degrees at the University of Helsinki.

## Appendix

## Excerpts in the original language

## Excerpt 4.1

I: Miten toi kirjoittaminen, niin siis, sä olit, onks se miten, millä tavalla se on kehittynyt (-) [0:04:48 pp]

R: On se aika paljon kuitenkin. Ehkä siinäkin on se semmonen rentous tullu. Siinä mielessä jossain lukiossa stressas siitä et tulee oikees järjestyksessä joku sana ja oikeas muodossa ja kaikki, niin siihen meni ehkä turhaa aikaa sit. Nyt taas saa tuotettuu kuitenkin tekstii millä saa sen viestin perille.

## Excerpt 4.2

R: Jag tänker att man lär sej ju helt ofattbart mycke med att du själv har fått gå, du har själv måsta överväga att vilken term är rätt här [...] Så att jag har upplevt att nog lär man sej någo ofattbart mycke, via det också och hemskt snabbt. Att det har vari jätteeffektivt, fast det är tungt [...] och kräver lite mera tid.

## Excerpt 4.3

R: Niin no siis, jos sitä ryhmätyötä tekee suomenkielisten kanssa niin totta kai se kaikki kom-, oheiskommunikaatio tapahtuu siinä suomeks. [...] ...ei kaikki välttämättä halua eikä kaikki välttämättä uskalla [puhua ruotsia]. [...]. Kaikki ei myöskään sit uskalla pyytää sitä vaik ehkä tavallaan haluaiskin. Se vaatii aika paljon sosiaalista rohkeutta mennä silleen et anteeks saaks mä tulla teijän kaa vaik te näytätte olevan parhaita kavereita. [naurahduksia]

## Excerpt 4.4

R: Mut sit, se mitä ei tavallaan ehkä ollu osannu ajatella on sit se et semmonen, sosiaaliset taidot, miten kysytään että mitä teil on seuraavaks, miten kysytään et lähet sä mun kanssa syömään, miten kysytään et hei mikä sua kiinnostaa biologiassa, niin ei vaan ollu näit fraaseja olemassa. Ja sitten semmonen, et ku tos bilsalla se menee silleen et, eka jakso on periaattees suomeks ja sen jälkeen on kaikki ruotsiks, niin sit siinä pitäis integroituu siihen valmiiseen porukkaan siinä kesken kaiken. Ja siihen ei ollu tavallaan tarjolla mitään tukee.

## Excerpt 4.5

R: Ja sit mä menin sinne sitseille. Oli ihan kamalaa. [naurua] Mutta siis, olin tyhmä ja sitkee ja jatkoin sitä hommaa ja sitten siis, harjoittelin snapsilauluja kotona ja ihan silleen hyvin määrätietoisesti rupesin sitä hommaa tekeen. Et hei et mun on nyt oikeesti tavallaan tehtävä jotain jos mä haluun olla mukana täs porukassa. Ja sillä tavalla lähin rakentamaan sitä ja, rupesin, se autto sit siihen tavallaan et tuli
vähän näkyvämmäks siinä hommassa ja sit et, otettiin paremmin mukaan just syömään ja sit sitä istuu siel lounaspöydässä ja kattelee kun, keskustelu menee eteenpäin ja ite ei siihen, pääse vielä kiinni mutta.

## Excerpt 5.1

I: Sku du säga att hon är en ovanlig föreläsare på finska då?
R: Lite kanske jo, på det sätte just när hon, och när hon talar långsamt och det är också helt roligt just för en som int, eller talar finska som modersmål så, att man hinner skriva sina anteckningar.

## Excerpt 5.2

R: Joo. Ja varsinkin sitte yhel kurssilla joka oli siis ekologian perusteet sillon fuksivuonna, niin siel oli aika paljon myös ympäristötieteiden tvexaajia, koska se on myös meille pakollinen kurssi. Niin siellä laitettiin pareittain et oli natiiviruotsinpuhuja ja sitten tvexaaja tekemään esseetä kahestaan. Mikä oli mun mielestä opettajalta tosi hyvä veto et sit tavallaan se pari on tosi epäsymmetrinen sen kielen puolesta mutta sitten ne pystyy tukee toisiaan siinä.

## Excerpt 5.3

R: Mä oon tykänny noist ruotsinkielisist siinä et on pieni ryhmä. Luennoitsija oppii aika hyvin tuntee sit kuitenkin, varsinkin jos käy samalla luennoitsijalla sattuu olee monta kurssii, niin oppii aika hyvin tuntee. Ja sit siin voi saada aika yksilöllistäkin apua välillä. Ja uskaltaa ehkä kysyä.

## Excerpt 5.4

R: No ainaki se jos ajattelee siltä kannalta et missä oppis parhaiten ruotsia, niin se on se missä osallistetaan opiskelijoita tai ainakin se oma se kielentuottaminen parantuis tosi paljon. Että tossahan mä opin kuuntelemaan tai kuulen ja ymmärrän ruotsia ja mä kirjotan mun muistiinpanot myös ruotsiks ja joitakin sanoja täydennän suomella. Mut pedagogisesti jos haluis tukee tosi paljon sitä kielen oppimista, mikä ehkä ois se ultimaattinen tavote niin, sitten se semmonen keskustelun herättely ja tavallaan vaikka vähän silleen väkisellä, se niitten vastausten irtirepiminen ois silleen toimivampi.

## Excerpt 5.5

R: Han den här jappen vår professor så han hade int PowerPoints. Han hade int dom uppe och han, sa att nej att han ska int ha uppe nå såna här PowerPoints, med slides för er på föreläsningen. [...] Och så står han där och dravlar på den här samma längd varje gång, och det var någo o-, där märkte jag liksom att som TVEX-studerande att okej det här är int mitt modersmål jag studerar på men att jag behöver nånting konkret ter-, som jag kan nappa fast i. [...] Vet du att det är så viktigt för mej att ha det här visuella konkreta som jag själv sen kan gå tillbaka till men jappen var att "nej inga PowerPoints", vilke jag tycker att är så ofattbart opedagogiskt det bara kan bli. Att det var någo helt rysligt. Och han har ju ladda upp sina PowerPoints sen senare vet du, till Moodle men det är ju föga tröst där sen mera.

## References

Achugar, Mariana. 2009. Constructing a bilingual professional identity in a graduate classroom. Journal of Language, Identity and Education 8(2). 65-87.
Agha, Asif. 2007. Language and social relations. Cambridge: Cambridge University Press.
Alisaari, Jenni, Leena Maria Heikkola, Nancy Commins \& Emmanuel O. Acquah. 2019. Monolingual ideologies confronting multilingual realities. Finnish teachers' beliefs about linguistic diversity. Teaching and Teacher Education 80. 48-58.
Bandura, Albert. 1995. Self-efficacy in changing societies. NY: Cambridge University Press.
Blommaert, Jan. 2010. The sociolinguistics of globalization. Cambridge: Cambridge University Press.
Blommaert, Jan \& Ad Backus. 2013. Superdiverse repertoires and the individual. In Ingrid de Saint-Georges and Jan-Jacques Weber (eds.), Multilingualism and multimodality. Current challenges for educational studies. 11-32. Rotterdam: Sense Publishers.
Busch, Birgitta. 2012. The linguistic repertoire revisited. Applied Linguistics 33(5). 503-523.
Canagarajah, Suresh. 2011. Translanguaging in the classroom: Emerging issues for research and pedagogy. Applied Linguistics Review 2. 1-28.
Cartney, Patricia \& Allison Rouse. 2006. The emotional impact of learning in small groups: Highlighting the impact on student progression and retention. Teaching in Higher Education 11(1). 79-91.
Daniel, Shannon, Robert M. Jiménez, Lisa Pray \& Mark B. Pacheco. 2019. Scaffolding to make translanguaging a classroom norm. TESOL Journal, 10(1). 1-14.
Dufva, Hannele, Minna Suni, Mari Aro \& Olli-Pekka Salo. 2011. Languages as objects of learning: language learning as a case of multilingualism. Apples - Journal of Applied Language Studies 5(1). 109-124.
Flores, Nelson \& Ofelia García. 2013. Linguistic third spaces in education: Teachers’ translanguaging across the bilingual continuum. In David Little, Constant Leung, \& Piet V. Avermaet (eds.), Managing diversity in education. 243-256. Clevedon: Multilingual Matters.

Flores, Nelson \& Ofelia García. 2017. A critical review of bilingual education in the United States: From basements and pride to boutiques and profit. Annual Review of Applied Linguistics 37. 14-29.
García, Ofelia \& Claire E. Sylvan. 2011. Pedagogies and practices in multilingual classrooms: singularities in pluralities. The Modern Language Journal 95 (3). 385-400.
García, Ofelia \& Li Wei. 2014. Translanguaging: Language, bilingualism and education. Houndmills, Basingstoke: Palgrave Macmillan.
García, Ofelia, Susana Ibarra Johnson \& Kate Seltzer. 2016. The translanguaging classroom: Leveraging student bilingualism for learning. Philadelphia: Caslon.
García, Ofelia \& Angel M. Y. Lin 2017. Translanguaging in bilingual education. In Ofelia García, Angel M.Y. Lin and Stephen May (eds.), 117-130. Bilingual and multilingual education, 3 edn. Cham: Springer.
Gass, Susan M. \& Alison Mackey 2000. Stimulated recall methodology in second languages research. Mahwah, New Jersey, London: Lawrence Erlbaum Associates, Publishers.
Hashemi, Masoud. 2011. Language stress and anxiety among the English language learners. Procedia-Social and Behavioral Sciences 30. 1811-1816.
Harju-Luukkainen, Heidi, Jouni Vettenranta, Najat Ouakrim-Soivio \& Venla Bernelius. 2016. Differences between students' PISA reading literacy scores and grading for mother tongue and literature at school: A geostatistical analysis of the Finnish PISA 2009 data. Education Inquiry 7(4). 463-479.
Helsingin Yliopisto. 2014. Helsingin yliopiston kieliperiaatteet: Linjauksista käytäntöön - kohti toimivaa monikielisyyttä = Helsingfors universitets språkprinciper: från riktlinjer till fungerande flerspråkighet = Language Policy of the University of Helsinki: from guidelines to practice: towards functional multilingualism. Helsinki: Helsingin yliopisto. https:// blogs.helsinki.fi/centrumcampus/files/2015/04/kieliperiaatteet.pdf (accessed 28 January 2021).
Jaspers, Jűærgen \& Madsen, Lian Malai. 2018. Critical perspectives on linguistic flexity and fluidity. London: Routledge.
Jørgensen, J. Normann. 2008. Polylingual languaging around and among children and adolescents. International Journal of Multilingualism 5(3). 161-176.
Kahu, Ella R. \& Karen Nelson. 2018. Student engagement in the educational interface: Understanding the mechanisms of student success. Higher Education Research and Development 37(1). 58-71.
Korhonen Vesa, Mikko Inkinen, Markus Mattsson \& Auli Toom. 2017. Student engagement and the transition from the first to second year in higher education. In Eva Kyndt, Vincent Donche, Keith Trigwell \& Sari Lindblom-Ylänne (eds.), Higher Education Transitions: Theory and Research, 113-134. London: Routledge.
Lave, Jean \& Etienne Wenger. 1991. Situated learning: Legitimate peripheral participation. New York: Cambridge University Press.
Lehtonen, Heini. 2016. Troping on Prejudice: Stylised 'Bad Finnish' Performances and Reflexivity Among Adolescents in Eastern Helsinki. AILA Review 29 (2016). 15-47.
Lehtonen, Heini. 2015. Tyylitellen. Nuorten kielelliset resurssit ja kielen sosiaalinen indeksisyys monietnisessä Helsingissä (Stylising. Linguistic resources of adolescents and the social indexicality of language in multi-ethnic Helsinki). Helsinki: Department of Finnish, FinnoUgrian and Scandinavian Studies, University of Helsinki. https://helda.helsinki.fi/handle/ 10138/155659 (accessed 28 January 2021).

Lewis, Gwyn, Jones, Bryn and Baker Colin 2012. Translanguaging: Origins and Development from School to Street and Beyond. Educational Research and Evaluation 18(7). 641-654.
Lindblom-Ylänne, Sari. 2004. Raising students' awareness of their approaches to study. Innovations in Education and Teaching International 41(4). 405-421.
Maartje De Meulder, Annelies Kusters, Erin Moriarty \& Joseph J. Murray. 2019. Describe, don't prescribe. The practice and politics of translanguaging in the context of deaf signers. Journal of Multilingual and Multicultural Development 40 (10). 892-906.
Madsen, Lian, Martha Malai, Sif Karrebaek \& Janus Spindler Möller (eds.). 2016. Everyday languaging. Berlin, Boston: Walter de Gruyter.
Miles, Matthew B., A. Michael Huberman \& Johnny Saldaña. 2014. Qualitative data analysis: A methods sourcebook, 3rd edn. London: Sage Publications.
May, Stephen. 2013. The multilingual turn: Implications for SLA, TESOL, and bilingual education. New York: Routledge.
Norton, Bonny and Kelleen Toohey. 2011. Identity, language learning, and social change. Language Teaching 44(4). 412-446.
Norton, Bonny. 2000. Identity and language learning: Gender, ethnicity and educational change. Harlow: Longman.
Prada, Josh \& Blake Turnbull. 2018. The role of translanguaging in the multilingual turn: Driving philosophical and conceptual renewal in language education. EuroAmerican Journal of Applied Linguistics and Languages 5(2). 8-23.
Rampton, Ben. 1995. Crossing: Language and ethnicity among adolescents. London: Longman.
Rivera, Adrian Joseph \& Catherine Mazak. 2019. Pedagogical translanguaging in a Puerto Rican university classroom: An exploratory case study of student beliefs and practices. Journal of Hispanic Higher Education 18(3). 225-239.
Schauman, Casimir. 2018. Tvåspråkiga examina - ett självklart val? Analys av tvåspråkiga examina vid Helsingfors universitet. Svenska ärenden [Swedish affairs] Unpublished report.
Schunk, Dale. H. \& Carol A. Mullen. 2012. Self-efficacy as an engaged learner. In
Sandra. L. Christenson, Amy. L. Reschly \& Cathy Wylie (eds.), Handbook of research on student engagement, 219-236. New York, NY: Springer.
Sipilä Petteri \& Pekka Martikainen. 2009. Language-group mortality differentials in Finland in 1988-2004: assessment of the contribution of cause of death, sex and age. The European Journal of Public Health 19(5). 492-498.
Stenberg-Sirén, Jenny. 2020. Svenska, finska, engelska - komplement eller alternativ? En inblick i ungas språkanvändning. [Swedish, Finnish or English - Complement or Alternative]. Helsingfors: Magma.
Stough, Laura. 2001. Using stimulated recall in classroom observation and professional development. In: Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA, April 10-14, 2001.
Säljö, Roger. 2000. Lärande i praktiken. Ett sociokulturellt perspektiv. [Learning in practice. A sociocultural perspective]. Stockholm: Prisma.
Ticheloven, Anouk, Elma Blom, Paul Leseman \& Sarah McMonagle. 2019. Translanguaging challenges in multilingual classrooms: scholar, teacher and student perspectives. International Journal of Multilingualism 1-24. https://doi.org/10.1080/14790718.2019. 1686002.

Tynjälä, Päivi. 1999. Towards expert knowledge? A comparison between a constructivist and a traditional learning environment in the university. International Journal of Educational Research 31(5). 357-442.

Vesterinen, Olli, Auli Toom \& Sanna Patrikainen. 2010. The stimulated recall method and ICTs in research on the reasoning of teachers. International Journal of Research and Method in Education 33(2). 183-197.
Zepke, Nick \& Linda Leach. 2010. Improving student engagement in post-compulsory education: A synthesis of research literature. Wellington: Teaching \& Learning Research Initiative.


[^0]:    *Corresponding author: Åsa Mickwitz, University of Helsinki, Helsinki, Finland, E-mail: asa.mickwitz@helsinki.fi. https://orcid.org/0000-0002-4063-8098
    Heini Lehtonen, Dragana Cvetanović and Auli Toom, University of Helsinki, Helsinki, Finland, E-mail: heini.lehtonen@helsinki.fi (H. Lehtonen), dragana.cvetanovic@helsinki.fi (D. Cvetanović), auli.toom@helsinki.fi (A. Toom). https://orcid.org/0000-0002-8726-0352 (H. Lehtonen). https://orcid.org/0000-0002-7366-5391 (D. Cvetanović). https://orcid.org/0000-0002-32613376 (A. Toom)

