

# PEDAGOGICAL CONTENT KNOWLEDGE

A comparative study of Greek heritage language teachers in  
Sweden

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### Abstract

Instructional quality is essential for student learning. Pedagogical Content Knowledge, which is considered the interim between knowledge and pedagogy has been found to have a positive impact on instructional quality and subsequently student achievement. Studies in Pedagogical Content Knowledge have been mainly targeted on mathematics and science, leaving the language education domain underrepresented. From a comparative perspective, this study investigated Greek heritage language teachers' Pedagogical Content Knowledge, taking into consideration their teaching experience. Data collected by interviews, undertaken by nine participants, showed that teachers employ their Pedagogical Content Knowledge mostly by adapting the material, instruction, and assessment to the individual needs of the students. The analysis also suggested differences between more and less experienced teachers. More experienced teachers were found to be more comfortable and autonomous in the classroom, while less experienced teachers mentioned feeling insecure and fearing unexpected situations. More experienced teachers also established more advanced Pedagogical Content Knowledge, because of their ability to connect the new information with previous knowledge of the students as well as using personalized assessment for students. The data also showed that heritage language teachers in Sweden face many challenges in their teaching, with heterogeneity in language proficiency being the most persistent. The implications suggested in this study aim to improve heritage language learning and developing a supportive system for teachers and students in order to avoid the language shift that is present threatens the vitality of heritage languages.

### **Keywords**

Pedagogical Content Knowledge, Heritage languages, Teaching, Heritage Language Education

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# Abbreviations

CK Content Knowledge  
GPK General Pedagogical Knowledge  
PCK Pedagogical Content Knowledge

# 1. INTRODUCTION

In the era of globalization, human mobility is one of the main characteristics of today's society and it has resulted in linguistically diverse countries. Especially in Europe, linguistically homogenous states are not a reality anymore (Schmidt, 2008). Even though the phenomenon has been called human mobility, it does not solemnly include people but also their culture and language, that are often considered generous assets to the host country (Cummings, 2014). This diversity has resulted in specific educational needs, because of the necessity and desire of migrant people to maintain their culture and language (Panagiotopoulou & Rosen, 2019).

According to Schmidt (2008), languages can be categorized based on the terms that are used to describe them. The categories are mother tongue, minority languages, heritage languages and foreign languages. The term heritage language has not been frequently used by the Greek diaspora, where the common terminology used for referring to learning Greek is: native, second or foreign language education (Aravossitas & Oikonomakou, 2018). However, internationally, the term heritage language has been used to the languages that are not dominant in the wider social environment but are used at mostly at home (Valdés, 2014). The distinction between the different types of languages is not just for the sake of terminology. Heritage languages have different characteristics in learning than foreign languages (Kagan & Dillon, 2008), which should be acknowledged and kept in mind when researching languages in such contexts. Highlighting the distinctive characteristics of heritage languages is important to understand the results of a research in the field of heritage language, such as this one. Contrary to learning foreign languages, heritage language students tend to understand better the different practical uses of the language and in time their listening comprehension is much more advanced than other language skills (Aravossitas & Oikonomakou, 2018). Additionally, because these students have the chance to use the language in authentic communication environments, they acquire a wider and more advanced vocabulary, compared to students that learn a second language who practice in artificial environments such as a school classroom (Carreira & Kagan, 2011). A reality about heritage language speakers is that they differ greatly regarding their language abilities and some of them can reach language proficiency that is close to natural speakers while others have limited ability and a hard time communicating (Carreira & Kagan, 2011).

In the case of the Greek diaspora, ethnic communities across the globe have been trying to create and utilize opportunities to strengthen their heritage language by practicing and learning Greek in community schools. This is also the reality in Sweden, where there are Greek community language schools organized by the Greek community. Heritage language education in Sweden has been part of the mainstream education system for the past 50 years and aims to foster the integration of immigrants. (Loona & Wennerholm, 2017). From 1960 to 1998 there was a political consensus regarding migration issues in Sweden and one of them was language maintenance for immigrants because there was a common understanding that heritage language maintenance is hugely beneficial for the students and their involvement in their community (Loona & Wennerholm, 2017). It was as early as 1962 that the Swedish state recognized the right of immigrant children to maintain and develop their mother tongue, which is the term most commonly used to refer to heritage language in Sweden, and in 1966 the municipalities received funding to create a programme for immigrant children to undergo instruction in their mother tongue (Loona & Wennerholm, 2017). Even though the municipalities were not forced by law to implement these programs, they embraced this opportunity, because according to the curriculum of 1969, municipalities were responsible for providing immigrant students with the best possible environment for learning (Loona & Wennerholm,

2017). Today, the mother tongue lessons are organized when at least five students in the same school register their interest in receiving instruction in their mother tongue, since it is not mandatory, and it is at the discretion of the school to decide whether these lessons will happen during the school hours or after. It is more often than not that schools decide to hold these lessons after school hours (Loona & Wennerholm, 2017).

Despite the solid foundation for mother tongue instruction only 54% of students that have the right to participate in mother tongue are actually receiving this benefit (Skolverket, 2015, as cited in Loona & Wennerholm, 2017), since the subject is not popular amongst students that are usually tired and unmotivated after school. The significance of mother tongue instruction for students in Sweden has been highlighted from a study conducted by the Swedish National Agency for Education entitled 'With another mother tongue' (Skolverket, 2008, as cited in Loona & Wennerholm, 2017), which found mother tongue lessons to be distanced from school activities but important nonetheless for students' performance. Students that participate in mother tongue lessons tend to have better academic performance compared to those who do not and only take classes in Swedish as a second language. This difference is significant with only an hour of instruction in mother tongue which is considered remarkable but some core challenges remain such as the need for qualified and experienced teachers as well as appropriate material to provide better quality teaching in heritage language in Sweden (Loona & Wennerholm, 2017).

In 1986, Shulman introduced the concept of pedagogical content knowledge as a way of challenging the way teaching was conceived until then. In his eyes, the discourse around education and teaching was favoring either content or pedagogy, which created a gap (Shulman, 1986). To fill this gap, he introduced pedagogical content knowledge, which is an interim between content knowledge and pedagogy. This new concept included the knowledge of the most frequently taught subject areas and objectives as well as the ability to recognize what makes these topics difficult and how to successfully explain them to students (Evens, 2020). Today, teachers' professional knowledge is considered to be essential for student learning and quality teaching (Evens et al., 2017). Following the influence of Shulman (1986), the amount of research around teacher knowledge has been growing, since researchers believe that such knowledge can be assessed and is detrimental for students' academic performance (König et al., 2016). More information regarding pedagogical content knowledge and its conceptualization will be given in Chapter 2. This research combined both teachers' professional knowledge and the context of heritage language education in Sweden.

The content of the thesis is the following: the first chapter introduces the importance of heritage languages and teacher's professional knowledge. The second chapter presents the theoretical framework is presented, and the notion of pedagogical content knowledge is explained. The third chapter discusses the previous research in the field of pedagogical content knowledge both in science and language teaching. Then the methodology of the research project is explained by showcasing the research design, the participants, the instrument for semi-structured interviews and the interview guide. The methodology chapter also includes the ethical considerations for the study. The fifth chapter illustrates the findings, which are applied to answer the research questions. Chapter six discussed the results and the implications they have for teacher training and heritage language education.

## **1.2 Aims and objective**

Through the participants' interviews and reflections, the aim of the research was to investigate Greek heritage language teachers' pedagogical content knowledge and the challenges they face. Based on



the findings the different approaches between the teachers and the underlying factors affecting their teaching would suggest the need for further training in teaching Greek as a heritage language in foreign contexts and the support of the Greek government for seconded teachers. Highlighting the challenges teachers face, the Swedish context could inform the Greek Ministry of Education about the specific needs of the teachers and possibly promote collaboration between the two countries. To achieve this aim, the research questions were formulated as seen below:

1. How do Greek heritage language teachers employ pedagogical content knowledge in their teaching?
2. Is there any difference in PCK between more and less experienced teachers?
3. What are the challenges teachers face when teaching Greek as a heritage language in Sweden?

## **1.3 Significance of study**

A study in teacher's pedagogical content knowledge in heritage language teaching offers various opportunities in the development of international and comparative education. At the international level, such a research can contribute to improving the quality of heritage language teaching and therefore ensuring language maintenance for migrants, which is very beneficial for the academic performance of students (Loona & Wennerholm, 2017). At the comparative level, because of the intimate nature of qualitative research and the plethora of information collected through interviews, this research allows for an overview of the teachers' instructional practices and their thinking behind such decisions. Since most of the research in teachers' pedagogical content knowledge have been conducted in the science and mathematics domain, there is little research concerning language teaching.

According to Cowen (2006), in the field of international and comparative education, phenomena should be investigated within the context they unfold. It is important to highlight the context and factors that influence teachers' practices and to understand their context specific problems to be able to foster change in education. The contribution of this research to the field of International and Comparative education is through showcasing the experiences of the participants and their teaching practices as well as the challenges they face in the context of heritage language. This gives insight on how to inform teacher training and professional development for teachers to equip them with all the tools they need to succeed in teaching Greek as a heritage language. Successful professional development is valuable both for the teachers and for the ethnic communities worldwide, since the teachers will be able to offer better quality education to their students, and with the proper support, promote heritage language learning to all students that are entitled to it and increase participation. With increased participation and an effective heritage language education, the ethnic communities can maintain their language and feel supported by the local government.

Additionally, research on heritage language education is fundamental for maintaining the cultural inheritance of ethnic communities worldwide. The contemporary education reality forces academic research to investigate the phenomenon of pluralism in schools by looking at phenomena such as multilingualism, multiculturalism and multiliteracies (Trifonas & Aravossitas, 2014). According to Trifonas & Aravossitas (2014), advancements in heritage language education can protect the harmony between the coherence and diversity in today's societies that understand the benefits of cultural diversity. It is therefore, relevant to the field of International and Comparative Education, to research heritage language teaching and use the findings to inform teacher training and the education sector in order to strengthen the field of heritage languages.

## **1.4 Limitations of study**

One of the main limitations of the study was the period it was conducted. Due to the pandemic situation in Sweden, it is understandable that less teachers were willing to participate in the study and meet with the author for an interview. Even though the interviews could have also been conducted through an online platform, the limited free time and heavy workload during this period might have made a number of teachers decline the invitation to participate in the study. Most of the teachers who agreed to participate in the study found it easier to conduct the interviews right after their classes, at the premises of the school, before leaving for the day. Subsequently the sample size of the research is rather small and, on its own, does not allow for generalization of findings.

Another limitation of the research is that the sample was not randomly selected. All teachers were contacted by the president of the school and voluntarily participated in the study, so it might be the case that the teachers with an academic background and interest in improving the domain of heritage language teaching were the ones that expressed their wish to participate. Lastly, all of the participants in the study are female, which is a limitation because it does not include the viewpoints of male teachers and does not allow for a comparison based on gender, that could have been beneficial for the study.

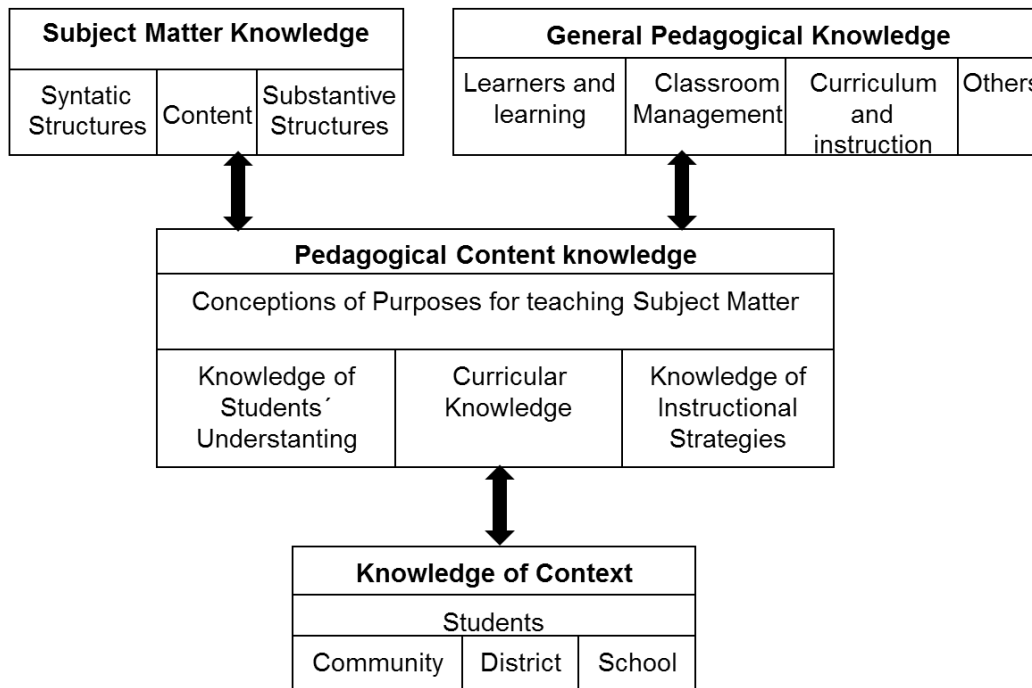
## 2.THEORETICAL FRAMEWORK

Shulman's (1986) professional knowledge framework provides a theoretical framework for this study. This chapter highlights the key characteristics of PCK and introduces Richard's (2011) PCK categories that acted as a guide both for the creation of the interview guide and the analysis of the data.

### 2.1 Teachers' professional knowledge framework

When researching teachers expertise, it is common to come across the different categories of knowledge introduced by Shulman (1986). His analysis has influenced the research on teachers and many researchers when testing teachers knowledge tend to adopt his distinction between content knowledge (CK), general pedagogical knowledge (GPK) and pedagogical content knowledge (PCK) (see for example Bukova-Güzel, 2010; Evens et al., 2019; Fernandez, 2014). This research is focused on language teachers PCK, but in order to understand what PCK is, it is necessary to look at the whole framework of teachers' knowledge, in order to gain a better idea of the distinction between the categories and how they intertwine.

When Shulman first introduced the idea of PCK in 1986, it was not considered a separate knowledge category but was seen as part of CK that helped teachers achieve better results in their teaching. Later, in 1987, PCK was presented by Shulman as a separate knowledge category that is dependent on teachers' subject matter knowledge and was the ability to take this content knowledge and transform it in order for students to be able to understand the subject matter no matter their background or individual learning difficulties. Even though Shulman (1986) was the one to introduce the idea of PCK, it was Grossman (1990), his doctoral student, that later systematized and created a comprehensive model of all the components of teachers' knowledge base (Fernandez, 2014). According to this model, there are four components that intertwine and results in teachers' knowledge base. These are: GPK, CK, PCK and knowledge of context. PCK is central in this model and is considered the force that is able to transform general pedagogical knowledge, with the contribution of content and context.



**Figure 1: Model of teacher knowledge** (Grossman, 1990, in Fernandez, 2014, p. 85). Note. From "Knowledge Base for Teaching and Pedagogical Content Knowledge (PCK): Some Useful Models and Implications for Teachers' Training," by C. Fernandez, 2014, *Problems of Education in the 21st Century*, 60, p. 85 ([http://www.scientiasocialis.lt/pec/node/files/pdf/vol60/79-100.Fernandez\\_Vol.60.pdf](http://www.scientiasocialis.lt/pec/node/files/pdf/vol60/79-100.Fernandez_Vol.60.pdf)). CC-BY-NC.

- Subject matter knowledge is what Shulman (1986) referred to as CK and is the subject knowledge teachers have and is directly linked to the content they are expected to teach (König et al., 2016)
- GPK is the knowledge that is not related to the subject but it is a very important aspect of teachers knowledge (König et al., 2011). According to Shulman (1987), GPK involves “*broad principles and strategies of classroom management and organisation that appear to transcend subject matter*” (p.8) in addition to knowledge about educational assessment of learners and educational contexts and aims. General pedagogy is still a term that is hard to identify and needs further clarifications as it seems to be shaped by cultural contexts that define the school objectives and the role of the teachers (König et al., 2011). That said, a systematic review that was conducted by OECD showed that the research studies exploring GPK were mostly focused on the instructional process such as teaching methods, student learning and ways of assessment (König et al., 2016).
- PCK, which is the knowledge category this research focused on, is considered as the specific knowledge teachers possess that distinguishes them from other experts in the field (Shulman, 1987). Since its introduction, PCK has helped explain the complex relationship between knowledge of subject and knowledge of teaching a subject by using appropriate methods and evaluation tools. PCK is the fusion of all needed knowledge, in order to teach and learn a subject (Sothayapetch et al., 2013). In Grossman’s framework, PCK has four elements:
  1. Teachers’ knowledge and beliefs in regard to the purposes of teaching a subject to students of different levels
  2. Knowledge of students’ previous knowledge on the subject and possible misconceptions

3. Knowledge of curriculum in order to foster connections between a subject and across different subjects
  4. Knowledge of different strategies for instruction. (Bukova-Güzel, 2010)
- Knowledge of context is presented as a component of teacher knowledge that informs teachers' decisions based on the individual characteristics of the community, the district and the school they are located in.

These knowledge base categories have been under investigation by various researchers, especially PCK, but it is still not clear enough how these cognitive aspects are connected. Research, mostly in the area of mathematics, has shown that CK and PCK are highly intercorrelated (Krauss et al., 2008) or discuss the possibility of CK and PCK merging into one knowledge category (Hill et al., 2005). There is significantly less research on GPK, making it a neglected category of teacher knowledge (König, 2016). König et al., (2016), conducted a research on teachers' knowledge base in TEFL, which included pre-service teachers from different programs in Germany and after a structural analysis found that PCK is closely connected to CK and GPK. The intercorrelation between CK and PCK was more significant than the intercorrelation of GPK and CK. This is in alignment with what Shulman's (1987) idea of PCK, which relies both on CK and GPK whereas CK and GPK are more secluded.

Since this research was focused on language teaching, as the subject area, it was of great importance to find a framework that had been designed specifically with language in mind. As we will see in detail later, teaching languages is very different than others subjects such as natural sciences and should be considered as a separate domain when it comes to PCK. For this reason, the PCK categories of Richards (2011) was selected, which were developed with second language teaching in mind. This is not a different kind of PCK but rather an extension of Shulman's (1986) initial framework but adjusted to the needs of teacher training in language teaching. In this extension, PCK is considered the basis for language teaching. It is also seen as a product of language learning and language teaching and it can also aid with practical issues in the classroom. It does cover a wide area of knowledge such as curriculum, assessment, reflection and classroom management. According to Richards (2011), teacher training should employ teachers with a solid foundation in PCK, that will later allow them to:

- Understand learners' needs
- Diagnose learners' learning problems
- Plan suitable instructional goals for lessons
- Select and design learning tasks
- Evaluate students' learning
- Design and adapt tests
- Evaluate and choose published materials
- Adapt commercial materials

- Make use of authentic materials
- Make appropriate use of technology
- Evaluate their own lessons

These categories were taken into consideration when designing the interview guide as well as a guide for the analysis.

# 3. PREVIOUS STUDIES

This chapter presents some of the existing literature that is relevant to the study. The focus of the existing literature on mathematics and natural sciences will be discussed as well as the differences between more and less experienced teachers. In the second part of the chapter, the distinct characteristics of language teaching are examined and the results of studies specifically on PCK in language teaching are considered. Lastly, some of the challenges found in the previous literature regarding heritage language teaching are presented.

## 3.1 Previous studies on PCK

Teachers' instructional abilities are influenced by a number of factors, one of them being professional knowledge (Evens et al., 2019). The notion of Pedagogical Content Knowledge (PCK), which according to Shulman (1986), is the conjunction between knowledge and pedagogy and is a unique type of knowledge that separates teachers from other experts in the field, has expanded to all subject domains. It has attracted the interest of researchers that want to study this unique skillset that only teachers possess (Kind, 2009).

To measure teachers' knowledge, instruments have been developed that are able to measure teachers' cognition (Kleickmann et al., 2013). Empirical studies, especially in science and mathematics have found that teachers' PCK does positively impact instructional quality and learning for students (Baumert et al., 2010; Kunter et al., 2013). The same was discovered for biology, where PCK was found to have a positive influence on the quality of instruction (Mahler et al., 2017).

Baumert (2010) also found that PCK is even more important for quality instruction than content knowledge, which is basically subject knowledge. This is the reason why research has focused greatly on PCK, with the hope to eventually improve the quality of education for students (Evens, 2020). There are several possible reasons why the research has mostly focused on the science and mathematics domain, one of them being the higher status society allocates to these subjects, which is also evident by their inclusion in national assessment tests (König et al., 2016). In addition to that, the linear nature of these subjects also make it easier to assess teachers' knowledge and consequently, PCK (Evens, 2020). Even though, it is still unclear whether the results of research in science and mathematics are applicable to language teaching, they are still valuable and should be included in this research.

The effect experience has on PCK has been researched both from a cognitive and a situated perspective and the results are mixed. These studies usually include comparisons between experienced and novice teachers to discover whether teaching experience affects PCK. From the cognitive perspective, Brunner et al. (2006) as cited in Evens et al. (2019), conducted a large scale research with 195 mathematics teachers and found that their experience in teaching had no significant impact on their PCK ( $r = -.14, p < .05$ ). Another large scale study conducted by Kleickmann et al. (2013), which included teachers with various levels of experience (university students, teachers in their first steps in teaching and teachers with an average of 21 years of experience), compared their pck ( $N = 90$ ) and found that pre-service teachers (university students), showed a stronger development of PCK compared to more experienced teachers.

On the contrary, research based on the situated perspective shows that experience influences PCK. Lee (2010), studied 24 novice teachers during their first year of teaching and compared their teaching with a group of teachers that had 10 years of experience. In order to make the comparison, which included knowledge of students' learning and strategy of instruction, PCK was measured using a rubric with three levels of proficiency, limited, basic and proficient. The collection of data was done through interviews and classroom observation. It was found that novice teachers had basic or limited levels of PCK but improved their knowledge about student learning during their first year of teaching. Unfortunately, the same improvement was not found on strategies of instruction. This could be because of the nature of instruction and the difficulty of being able to understand the mistakes made during the job without proper feedback. It is easier to understand the areas where kids might have a difficulty understanding a concept but it is substantially harder to find new and innovative ways of presenting that concept, in order for the students to understand it better. This process also requires intensive and constant effort as mentioned above, in order for change to come (Evens et al., 2019). On the other hand, the group of experienced teachers was found to have proficient levels of PCK. These findings highlight the importance of teaching experience for PCK development.

Additionally, Friedrichsen et al. (2009), conducted a research that included students of a teacher training programme in biology. There were two groups of students with different levels of experience. One of the groups had no experience, while the other group had two years of experience. No major differences were found between the two groups, but the experienced group was found to have a better ability to reflect and accommodate various knowledge bases such as pck when providing explanations about their choices and thought process. Another situational research by Clermont et al. (1994), studied teacher demonstration in chemistry. It compared novice and experienced teachers and found that experienced teachers employed various strategies during demonstrations that allowed them to be flexible and adapt their demonstrations according to the students' needs. Park and Oliver (2008), conducted a similar study with three chemistry teachers and evaluated their PCK through observations, interviews and document analyses. The research concluded that pck advances with time. The time spent teaching and the teachers opportunities for evaluation and reflection of their own practices, had a positive effect on establishing PCK.

Why is there a difference between the findings of the research? According to Evens et al. (2019), the cognitive studies research theoretical knowledge, which is considered to be public whereas situated studies focus on the private knowledge individuals have and is developed in collaboration with the classroom.

“PCK is considered as a kind of “craft knowledge”, which is the knowledge representing teachers’ accumulated wisdom regarding their teaching practice, and guiding their behaviour during classroom practice” (Evens et al., 2019, p.425)

According to this, PCK is not opposite to theoretical knowledge but rather a fusion of teachers knowledge and constant reflection of their own practices that guide their instruction and practices in the classroom. The nature of the knowledge in focus is what can be considered as an explanation for the differences in findings regarding teaching experience. Teaching experience is more practical knowledge while teacher education is closer to the notion of theoretical knowledge that cognitive studies tend to assess. Maybe that is why teaching experience seems to have no effect on teachers PCK in cognitive studies. Another explanation could be the nature of the instruments used to measure pck. In cognitive studies, mostly quantitative tools are used to measure PCK, which can provide an answer to how much PCK the participants have but not what kind of PCK the participants have.



It is important to mention that teaching experience does not automatically improve PCK. In order for a teacher to improve their teaching skills, there must be an internal motivation for improvement that usually stems from external feedback and should be deliberate and constant to provide change (Dunn & Shriner, 1999). This is in agreement with Schön (1983), who claimed that the connection between pck and teaching experience is not direct as in a teacher does not acquire PCK just because of time spent teaching in a classroom but through reflection and self evaluation.

Because of the disparities between experienced and novice teachers regarding their instructional abilities in the classroom, there has been a focus on assessing teacher training and the opportunities it provides to teachers, for them to develop all aspects of PCK. Evidence in mathematics have found that that pre-service teachers had good knowledge of the instructional procedure of specific demonstrations and good content knowledge regarding the objects they were showcasing but they were less adequate in thinking about possible misconceptions the students might develop or about different ways of assessing student knowledge (Bukova-Güzel, 2010). Another study that used the PCK framework, to investigate some aspects of teachers' understanding of decimals also found that teachers have not developed all aspects of PCK. The study included 14 Australian teachers and used mixed methods. First, the teachers completed a questionnaire regarding different aspects of mathematics and then participated in a follow-up interview. The study found that most of the teachers had developed aspects of pck such as knowledge of resources and understanding the difficulty of a topic but only few mentioned common difficulties or misconceptions students have. Apart from that, most teachers could understand the difficulty of decimals as a subject and could provide details of how to adapt the instructions according to students' levels (Chick et al., 2006). In chemistry, Clermont et al. (1994), examined PCK between novice and expert teachers in chemical demonstrations. Interviews were conducted to test the teachers pck and it was found that expert teachers (teachers with more experience in chemical demonstrations) were able to employ different ways of teaching fundamental chemical concepts, which made it easier for them to adapt their teaching according to the learners. They were also more aware of how complex chemical demonstrations are and how they can be demanding for the students. Because of this understanding, they promoted simplified versions of chemical demonstrations and signified their importance. Based on these findings, it is evident that teacher training needs to improve and focus on developing all aspects of teachers' PCK, that will help them understand better learners' difficulties and needs.

## **3.2 Previous research on PCK in language teaching**

Even though there is much research on teacher knowledge in natural science subjects, it is still not clear how these findings can be applied to other subjects such as foreign language teaching (König et al., 2016). Foreign language teaching and heritage language teaching, which is the focus of this study, are not the same. Foreign languages are a part of the official education curriculum around the world and are regulated differently than heritage languages. That said, language teaching has a lot in common no matter the language taught or the cultural background of the student and since for many of the teachers that teach Greek as a heritage language, the process is similar to that of foreign language teaching, it is valuable to include the distinctive characteristics of this process in comparison with other disciplines.

Foreign language teaching has some distinctive characteristics that distinguish it from other subjects taught in school and therefore making it hard to generalize findings from other domains. There are several reasons for this. Firstly, in language teaching, there is a unity in content and medium, which is

not the case for other subjects such as mathematics (König et al., 2016). In many foreign language classrooms, there is no clear differentiation between when the language is used as content and when it is used as a tool for communication between the teacher and the students. Contrary to mathematics for example, a language teacher cannot be focused completely on content because their role is more complicated. In addition to presenting content, they have to use language as a way of fostering communication with the students to support the language acquisition, especially with younger students or beginners. Not only that, but the teacher also needs to closely monitor the linguistic forms the students produce and simultaneously analyze the content of the students' sentences. On the contrary, science teachers for example, take the students' language skills for granted and actually depend on them to teach their subject and they can completely focus on teaching the task at hand such as solving a mathematical problem (König et al., 2016). Consequently, studies that conceptualize teacher knowledge based on the specific discipline (for example mathematics) and are content specific are not directly applicable to foreign language teaching even though they are valuable for gaining a deeper understanding of teacher knowledge in general.

Apart from that, as König (2016) points out, there are more reasons to distinguish foreign language teaching from other subjects such as the central role of oral production and the dependency on specific techniques that promote oral production since this is an essential part of the curriculum in combination with writing skills. A language teacher should have advanced communication skills in order to teach effectively but that alone is not enough, since language proficiency is not sufficient for providing quality teaching. That is why in most countries, a native speaker is not automatically considered a qualified foreign language teacher. The role of a language teacher is very complex and requires an awareness of language levels, in order to determine the strengths and weaknesses of the students and promote language learning through employing strategies that are based in teaching methodologies. In order to create an environment that students can flourish in, language teachers need to have acquired specific competencies that are required to help students develop communication skills and skills related to the content. The teaching methods used by language teachers are based on interaction between the students and the teacher and are driven from the social context of the classroom which is not the case for other subjects such as mathematics or science. Another difference is in the way teachers assess mistakes in language teaching. It is very common for students to make small mistakes in their effort to communicate and therefore incorrect learner output in language teaching is generally more acceptable and seen as less severe than in mathematics, partly because encouraging communication is vital in language teaching (Borg, 2006). These mistakes can be interpreted by the teacher if they have previous knowledge of second language acquisition theories in order to identify the areas that the students might need extra assistance with. That said, in every context, expectations are different concerning the goals in content knowledge but it is safe to say that in more advanced levels of language teaching, where there is a core focus on content, language teaching could be partially compared with science subjects such as mathematics (König et al., 2016).

Even though language teaching has some distinctive characteristics, some of the evidence from research on PCK in language teaching do agree with the evidence from other subject areas. In the case of teaching experience and its importance for the development of PCK, a study conducted by Mehrpour & Moghaddam (2018) found differences between the practices of novice and expert teachers, with classroom management being one of them. Novice teachers were found lacking the ability to use multiple management techniques in the classroom. Expert teachers were found to be flexible and quick to take advantage of classroom events to support their teaching. Expert teachers were also found to be more autonomous and confident in the classroom. In regards to assessment, it

was found that novice teachers employed a typical evaluation practise, which was the same for all students, whereas expert teachers used a variety of assessment practises, based on learners educational level. All the teachers participating in the study noted the items regarding PCK as very important for language teachers. Even Though both expert and novice teachers ranked PCK as very important, during classroom observations, it was found that novice teachers had a problem implementing their beliefs in their practice. They were found using the same teaching methodology for the entire observation time, throughout different subject areas such as vocabulary, grammar, reading and listening. The routines were not adapted regarding the features of the different subject areas. On the contrary, expert teachers were found to adapt their instruction methods, depending on the content area and difficulty of the topic they were teaching. These teachers used different ways of presentation keeping the students' abilities and possible difficulties in mind. In regards to educational psychology, all teachers showed a strong belief in the importance of knowledge in psychology in teaching, but in the case of novice teachers, the observations did not comply with their statements. The novice teachers were found to use the same techniques for all of their students, without taking into consideration the needs of slow learners or the psychological development of the students. On the other hand, expert teachers were aware of their students learning styles. In multiple occasions, the expert teachers also had an interest and knowledge of the educational psychology discourse, which informed their teaching. When observing their teaching, the researchers found different types of instruction, tailored to the needs of all students, including the slow learners and the reserved students. Additionally, some expert teachers, though not all, employed discussion that allowed the students to express their personal experiences and inform them about their background.

Intervention studies also provide valuable insight for PCK in language teaching. That is targeted professional training for language in-service teachers. Many intervention studies have concluded that there is a positive impact of their intervention for PCK development (Atay et al., 2010; van Compernelle & Henery, 2014; Yates & Wigglesworth, 2005; Weshah & Tomok, 2011). Yates & Wigglesworth (2005) conducted a study about teachers' PCK and found that after several workshops there was a small improvement on the participants' PCK. In this study, some of the participants were also involved in the development of the workshops and it was found that these specific participants had significant advancements on their PCK after the workshops. The authors attribute this difference on the time each group of participants was involved with then intervention. The group of teachers that participated longer in the process of intervention had the most significant results. Weshah & Tomok (2011) also found that their training program positively influenced teachers' PCK, even though these authors did not describe in detail the nature of their intervention, so it is hard to understand what kind of training the teachers participated in. Atay et al. (2010), created an intervention, for pre-service teachers, that was focused on designing and executing interactive activities based on a novel. The participation in micro-teaching sessions and especially the feedback the participants received from their instructors and peers were found to be very beneficial for their PCK. The importance of feedback in PCK development was also highlighted by Van Compernelle and Henery (2014), whose research found that having an expert mentor for feedback was especially beneficial for PCK development.

### **3.3 Challenges in language teaching**

Regarding the challenges in language teaching, previous research shows that foreign language teaching and heritage language teaching have some common challenges but heritage language education also has some distinct challenges (Willoughby, 2014). The heterogenous background of students that attend heritage language classes and their differences in language proficiency is one of

the main challenges teachers face (Willoughby, 2014). This high level of heterogeneity leads to multi-level classrooms with students that have different sociocultural background and learning goals (Aravossitas & Oikonomakou, 2018). In addition to that, according to Loona & Wennerholm (2017) teachers usually face students that are tired and unmotivated, because heritage language classes usually take place after school and are distanced from the activities that happen during the school day. Additionally, there is a need to develop appropriate supporting material for heritage language education as well as ensure a close collaboration between teachers and parents (Aravossitas & Oikonomakou, 2018). These challenges mentioned in the literature acted as a motivation for investigating the challenges Greek heritage language teachers face in Sweden.

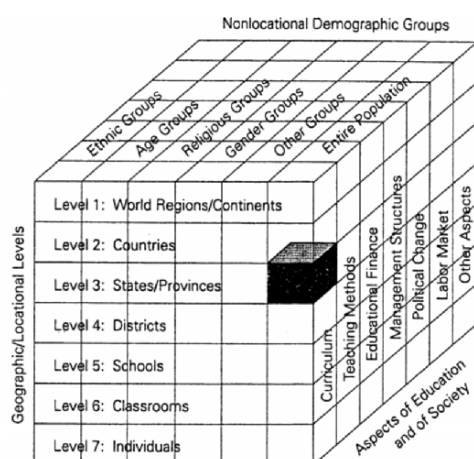
# 4.METHODOLOGY

This chapter describes the methodology used in the study. It includes the research design, epistemology and ontology, description of participants, data collection method, data analysis, reliability and validity as well as ethical considerations.

## 4.1 Research Design

A research design is the foundation for collecting and analyzing data and is the structure of any research (Bryman, 2012). The aim of the present study was to investigate Greek language teachers' PCK, the challenges they face when teaching as well as any insights on how to improve teacher training, in order to help teachers, develop their PCK and deliver better quality education. There are many research designs in educational research but for the purposes of this research the comparative research design was selected.

Comparative research in education is heavily based on a framework suggested by Bray and Thomas (1995), which is called *the cube* (p. 475) and was created in order to promote a multilevel and holistic analysis of phenomena in education. As illustrated in Figure 2, this cube includes three dimensions and seven levels and suggests that in order to have a better understanding of educational phenomena, researchers should take into consideration the different dimensions and levels that influence education (Walterová, 2018). This framework acted as a guide for constructing the comparative angle of this thesis and making sure that the comparison was multidimensional and would result in useful findings. This research is situated in Level 7 of the cube, since it is focused on comparing individuals while also incorporating an aspect of education, which is Teaching Methods. Lastly, the comparison between the individuals is done based heavily on their teaching experience, which adds a third aspect of comparison in the research.



**Figure 2: A framework for comparative education Analysis** (Bray & Thomas, 1995, p.475) Note. From “Levels of Comparison in Educational Studies: Different Insights from Different Literatures and the Value of Multilevel Analyses” by M. Bray and R. M. Thomas, Harvard College.

According to Bryman (2012), the comparative design includes the examinations of different cases, using the same methods. It relies on the logic of comparison, which entails social phenomena, can be

better understood through the comparison of different cases. The comparative design made it possible to analyze teachers practices and evaluate their PCK. All teachers were individually interviewed using the same interview guide. The interviews were semi-structured as to allow freedom for the teachers to express themselves and avoid limiting their responses. This allowed for a deeper data collection. The comparisons were mainly on the teachers responses regarding their teaching practices and challenges they face; however, there were also other characteristics that were taken into consideration such as level of education, teaching experience as well as work situation that were compared as well. This design was chosen because it could highlight the differences between teachers' characteristics that influence their teaching.

To investigate teachers PCK, this research utilized a systematic method of comparisons (Bryman, 2012). This analysis and comparison were based on the PCK categories suggested by Richards (2011) that were also mentioned in chapter 2 "Theoretical Framework". The original categories suggested by Richards (2011), were 11 but because some of the categories were similar and could be combined both for the interview guide and the analysis it was decided that the original categories: *Evaluate and choose published materials*, *Adapt commercial materials* and *Make use of authentic materials* would be combined in one category, which was named: *Materials used*. Additionally, the original categories: *Adapt tests* and *evaluate students learning* were also combined in a new category, which was named: *Evaluation of students*. After these alternations, final categories that were created and used as framework for the analysis were 8: *plan suitable instructional goals, selection and design of learning tasks, materials used, understanding learners' needs, diagnose learners' problems, evaluation of students, use of technology, evaluation of own lesson*.

## 4.2 Ontological and Epistemological positions

Regarding epistemology, this research was based on interpretivism, which is reflected through the analysis of the data. Qualitative content analysis was conducted which is based on the interpretation of written text and later the categorization of data into content categories through coding of relevant themes (Elo & Kyngäs, 2008). Interpretivism was important for the author to subjectively look at the data and position them into the relevant categories. In connection to interpretivism, the research was also based on the ontological position of constructivism, which views knowledge as subjective and situated in a specific context at a given point in time and is constantly subject to change. The social phenomena are directly related to the individuals and the individuals express their own opinions based on their interactions and experiences, which are constantly evolving and never definitive (Bryman, 2012). This research was very dependent on the specific context it was conducted in and there are many social influences that are linked to the practices teachers employ in their lessons and directly influence their work, such as time and limited resources. The aim of the research was to investigate teachers PCK while also taking into consideration their own experiences and struggles, not solely by evaluating their specific competencies. With that said, the notion of PCK was not constructed by the participants since it is already an existing framework and constructivism in this research is rather related to the teacher's construction and expression of their own struggles and challenges that guide this research and its findings.

## 4.3 The participants

Since the focus of the study was to investigate teachers' PCK, semi-structured interviews were conducted with nine Greek language teachers that teach Greek to students in Sweden, as shown in the table below.

**Table 1 Participants' Gender and Code**

<i>Teacher</i>	<i>Gender</i>	<i>Teacher's Code</i>	<i>Native Greek Speaker</i>
<b>1</b>	<b>Female</b>	<b>T1</b>	<b>Yes</b>
<b>2</b>	<b>Female</b>	<b>T2</b>	<b>Yes</b>
<b>3</b>	<b>Female</b>	<b>T3</b>	<b>Yes</b>
<b>4</b>	<b>Female</b>	<b>T4</b>	<b>Yes</b>
<b>5</b>	<b>Female</b>	<b>T5</b>	<b>Yes</b>
<b>6</b>	<b>Female</b>	<b>T6</b>	<b>Yes</b>
<b>7</b>	<b>Female</b>	<b>T7</b>	<b>Yes</b>
<b>8</b>	<b>Female</b>	<b>T8</b>	<b>Yes</b>
<b>9</b>	<b>Female</b>	<b>T9</b>	<b>Yes</b>

All the participants that agreed to participate in the study were female. Each teacher was given a specific code, which will be used to reference the teacher when presenting the results of the study.

**Table 2 Participants' Background**

	<i>Degree</i>	<i>Specialisation</i>	<i>Years of experience in teaching Greek in Sweden</i>	<i>Ages taught</i>	<i>Other job</i>
<b>T1</b>	<b>Bachelor's</b>	<b>Preschool teacher</b>	<b>1.5 years</b>	<b>5-8</b>	<b>Yes</b>
<b>T2</b>	<b>Master's</b>	<b>Primary Education</b>	<b>2.5 years</b>	<b>6-12</b>	<b>Yes</b>
<b>T3</b>	<b>Bachelor's</b>	<b>Preschool teacher</b>	<b>5.5 months</b>	<b>4-7</b>	<b>Yes</b>
<b>T4</b>	<b>Master's</b>	<b>Primary Education</b>	<b>8 months</b>	<b>6-11</b>	<b>Yes</b>
<b>T5</b>	<b>Bachelor's</b>	<b>French and Greek language and literature</b>	<b>5 years</b>	<b>8-17</b>	<b>No</b>

<b>T6</b>	<b>Bachelor's</b>	<b>Primary Education</b>	<b>4 years</b>	<b>6-16</b>	<b>No</b>
<b>T7</b>	<b>Master's</b>	<b>Special Education</b>	<b>2 years</b>	<b>9</b>	<b>No</b>
<b>T8</b>	<b>Bachelor's</b>	<b>Greek language and literature</b>	<b>5 years</b>	<b>8-18</b>	<b>No</b>
<b>T9</b>	<b>Master's</b>	<b>Primary Education/ Special Education</b>	<b>4 years</b>	<b>6-12</b>	<b>No</b>

As shown in Table 2, all the participants in the study are certified teachers with higher education degrees in different aspects of education. Having an educational background is important for providing quality education and it is not always the case with heritage language teaching in Sweden, where it is a reality for native speakers to teach their language without any teaching qualifications (Loona & Wennerholm, 2017). The teaching experience of the participants varied from 5.5 months to 5 years with an average of 3.6 years of teaching experience in Greek as a heritage language. The participants also have experience with different age groups, which is expected in this profession and most teacher training programs tend to prepare students for dealing with the different age groups they might come across in their professional journey. Most of the teachers (5 out of 9), teach Greek as their main profession, although not only in this school, while the rest of the teachers also work in other professions in combination with teaching Greek on this school.

The participants teach at the same school, which is a private school where families pay fees so that their children can attend Greek lessons. This school was chosen because the author had previous experience with the school, and it was easily accessible. In addition to that, since the research was based on interviews, where the medium is language, it was essential for the participants and the author to share the same native language, so that any misunderstandings could be avoided. It was also seen as crucial that the participants could fully express themselves by using their native language and not have any restraints or limitations due to language barriers. An email was sent to the president of the school, with the aim of the research and the expectations from the teachers and then the president shared with the author the personal details of the teachers who were interested in participating.

## 4.4 The instrument

The instrument used for data collection was semi-structured interviews. The questions included in the interview were prepared by the author and validated by the supervisor. The questions were created in alignment with the research objectives, so they are directly related to PCK and the challenges teachers face. The questions were also based on a previous research conducted by Sothayapetch et al. (2013), which also used semi-structured interviews to investigate science teachers PCK. An interview guide was created after the questions were decided, as shown in Table 3. To be easier for the participants, the interview guide was translated to Greek as seen in Appendix 2. The translation was conducted by the author who is a native Greek speaker and was also tested during the pilot study by two teachers, who are also native Greek speakers. The questions were organized according to the categories of PCK presented by Richards (2011), which are considered important for teachers and would provide an



insight on their teaching practices and their PCK. Even though the guide has a specific sequence of questions, the order of questions was not the same for every participant as in some cases the questions were driven by the previous answers of the participants. Despite that, the same questions were asked to almost all participants. The interviews lasted approximately between 12-40 minutes.

**Table 3 The interview guide**

<i>Category</i>	<i>Questions</i>
<b>Plan suitable instruction goals</b>	<b>How do you plan for your lesson?</b>
<b>Select and design learning tasks</b>	<b>How do you choose each lessons learning objective and how do you select the learning tasks for the day? How do you stimulate learning in your lesson? Do you design the learning tasks before the lesson? What do you take into consideration when designing them?</b>
<b>Materials used</b>	<b>Which textbooks do you use in your teaching? Do you include any other materials except for the textbook? How do you choose the extra material you will present to the students? Do you make any adaptations? Do you create any authentic materials for the students?</b>
<b>Understanding learners 'needs</b>	<b>How do you start teaching a new concept to your students? Do you consider students pre-knowledge and thinking before you start your teaching? Do you connect this material with previously taught concepts?</b>
<b>Diagnose learners learning problems</b>	<b>How do you prevent common mistakes or misconceptions that students might make? How do you know if something will be difficult for the students to understand?</b>

<b>Evaluate students learning / Adapt tests</b>	<b>What techniques do you use to check if the students have properly understood the new material you have taught them?</b> <b>Do you create unique tests for assessment based on students' level of proficiency / age / language abilities?</b>
<b>Make appropriate use of technology</b>	<b>Do you use technology in your teaching? If yes, in what way?</b>
<b>Evaluate their own lessons</b>	<b>How do you evaluate your lessons?</b> <b>How do you adapt your teaching after evaluation?</b>
<b>Challenges</b>	<b>What problems do you face when trying to implement pedagogical practices while teaching Greek?</b> <b>How do you solve these problems?</b>

## 4.5 Data collection

After the initial communication between the author and the president of the school, the teachers that volunteered to participate in the research were contacted and individual meetings were arranged with each of the teachers. Individual interviews were chosen because it would prevent the teachers being influenced by each other's opinions or feeling the pressure to withhold details about their teaching techniques and personal decisions for their lessons. The interviews were then audio recorded and transcribed. The data derived from the texts produced after the transcriptions of the interviews. Since the focus was on text and therefore words, the analysis had a more qualitative approach. This was also reflected in the questions that were included in the interview guide, where the teachers had a lot of freedom to share their own experiences. According to Bryman (2012), there are five central characteristics of qualitative research: emphasis on the personal views of the participants, importance of context and process, limited structure and the establishment of theory based on the collected data. This research was focused on teachers' personal experiences, practices and knowledge base. The author, during the interviews, tried to understand their views and challenges, and was always giving them space and time to expand and explore their feelings and ideas. None of the questions had a specific way of answering and that allowed for teachers to give specific examples from their own experiences. Since the interviews were conducted in Greek, the author translated the texts that were then chosen to be included in the results chapter, as examples of teachers practices and views. Such an approach to data collection was chosen, due to the research questions. The semi-structured interviews offered a more detailed and relevant to the research response because of the inclusion of specific examples of classroom practices from the teachers. Lastly, for all the activities included in the research, the author kept a diary to document every stage of the process and ensure the smooth execution of the research project.

## 4.6 Data analysis

Teachers' knowledge base and more specifically PCK has been studied extensively from the aspect of science subjects (König et al., 2016) but the research on PCK in language teaching has been limited (Evens et al., 2019). In this case, existing knowledge and research regarding this phenomenon could benefit from further investigation (Hsieh & Shannon, 2005). The author aimed to discover whether Greek language teachers in the Swedish context had gained the needed skills and knowledge regarding PCK and whether they implemented them in their teaching. Qualitative content analysis was applied to analyze the data collected from the transcriptions of the teachers' audio recorded interviews. The categories presented by Richards (2011) which included: *Plan suitable instruction goals, selection and design of learning tasks, materials used, understanding learners' needs, diagnose learners' problems, evaluation of students, use of technology, evaluation of own lesson*, were used as the guide for the initial coding categories. Directed content analysis was chosen as the way of analysis, because it allowed for the use of the existing framework and the emergence of potential new findings.

The process of directed content analysis was dual in this research and it was based on Hsieh & Shannon's (2005), approach of qualitative content analysis. According to this framework, the analysis of the data involves both inductive and a deductive approach. The eight PCK categories mentioned above were used as the primary coding categories. Previous knowledge on PCK acted as a basis, on which the data were coded and analyzed on and that makes the deductive approach of the analysis. The coding began immediately, because the author felt that the initial categories would not distort the identification of the text. After transcribing the interviews, the author read the transcripts several times, to familiarize with the data and then relevant words or phrases were coded. After, the author created categories until most of the text was identified in the determined categories.

For the inductive part of the process, any data that were not classified in the initial categories were then classified and analyzed to see if a new category or subcategory could emerge. The findings were tested to see whether they support or disprove the existing theory and they were presented according to the initial categories in a descriptive matter. The codes were also supported with characteristic examples from the teachers' interviews that were essential for a better understanding of each coding category. Due to the research design and methodology, the analysis would not produce results that could be useful for a comparison using statistical tests (Curtis et al., 2001). Instead, it was decided to look for the frequency of the PCK categories and initiate a comparison between the experience of the teachers and the frequency of the PCK categories in their interviews.

## 4.7 Quality criteria

According to Cohen et al., (2017), there are several things that can increase the quality of a research such as clear research purpose and research questions, correct choice of methodology, characteristic examples, and detailed descriptions. Two important quality criteria according to Bryman (2012) are reliability and validity. For a research to have high quality, it should have increased validity and reliability. Even though these principles are considered important in assessing research quality, many have argued their relevance for qualitative since they seem to be more applicable to quantitative research (Cohen et al., 2017).

Because of this need to assess qualitative research based on different criteria than quantitative research, Lincoln & Guba, (1985), developed two alternative primary criteria: trustworthiness and authenticity. Trustworthiness has four criteria: credibility, transferability, dependability, and

confirmability. Credibility relates to how the research was conducted and whether it followed the standards of good practice in order to produce convincing results. This research was conducted after extensive research on previous study designs and every activity was documented. Unfortunately, it was not possible for the author to observe the teachers during their lessons to triangulate the data. The teachers were asked to give specific examples of their practices, but it would have been ideal to have the time and opportunity to observe a lesson from each teacher and see the materials and teaching practices they use.

In regards to transferability, because of the small size of the sample, it is limited (Bryman, 2012). It is safe to assume that the experiences of nine teachers can not represent the experiences of all Greek language teachers in Sweden and surely not in other countries. In general, qualitative research is not aimed towards generalization (Bryman, 2012). The nature of this research was exploratory, and it was aimed towards investigating Greek language teachers' PCK in the Swedish context. It is especially difficult to have increased transferability when the research is about teaching practices because they are subject to cultural and societal influences (Brown, 2009). The author had the chance to attend the school and have the interviews with the teachers in their working environment which allowed for a better understanding of the possible underlying societal and cultural factors influencing the data. It gave the author the chance to see how the teachers interact with their students and colleagues after the end of the lesson, the structure of the school and how the parents behave in the corridors. Even though it is hard to make assumptions from qualitative research, the uniqueness of context can result in patterns in an ethnic group level. For instance, if some of the results of this research were similar to the results of previous research in language teachers' PCK, it might highlight some pattern regarding language teachers' knowledge base.

Dependability, according to Bryman (2012), is based on the idea that complete records of all activity surrounding the research have been kept and are accessible for other researchers to review.

Dependability includes the whole research process, from the formulation of the research questions to the selection of context and participants to the audio files and transcriptions of the interviews. Every step of this research was documented. The research proposal, the interview guide, the interview recordings, the interview transcripts, and the signed consent forms were kept by the researcher in a safe place and were uploaded on an online folder created by the supervisor, where only the student and the professor had access. The author also kept a detailed diary with the initial communications with both the president and the teachers of the school, the timeline of the interviews as well as some primary comments and observations from the interviews.

Confirmability measures how influential the researcher's beliefs were for the study (Bryman, 2012). The author tried to avoid their personal beliefs from influencing the research analysis and remain neutral. It is true that a researcher is also a part of the social world and complete objectivity is not realistic but reaching for neutrality does increase the quality of the research (Cohen et al., 2017). To achieve that, the same questions were asked to all the participants, following the interview guide. Probing was used to extract details and specific examples from the teachers. Additionally, the physical presence of the researcher during the interviews was valuable, because physical cues and body language could be observed and noted, which allows for a better understanding of the teachers' experiences and challenges.

Lastly, the final criterion is authenticity, which concerns the political impact the research project has. It has five criteria: fairness, ontological authenticity, educative authenticity, catalytic authenticity, and tactical authenticity (Bryman, 2016). In relation to fairness, the research showcases the standpoint of nine Greek language teachers in Sweden. It is not representative of the experiences of heritage language teachers in general. Ontological authenticity regards whether the research offered a better

understanding to the participants about their social context (Bryman, 2016). It is reasonable to assume that through the interviews and the discussions with the participants, they had a chance to sit down and reflect on their own practices and challenges. This could have an impact on their understanding of their situation. If the participants also have the opportunity to read this research, they might gain some insight on other teachers' practices in the same context and employ some techniques or adopt some ideas that can benefit their teaching. Catalytic authenticity assesses whether a research encourages its participants to take action and engage in altering their situation (Bryman, 2016). By starting a discussion around the challenges these teachers face because of the context they teach in and the unique needs of the students, it is possible that some of them might take an initiative towards changing their situation and ask for assistance. Tactical authenticity is linked to how the research enables its participants to get involved in action (Bryman, 2016). It is rather ambitious to estimate that this research could empower the participants into taking action because they lack the administrative power over the school.

## 4.8 Pilot study

The first two interviews were used as a sample for piloting the questions of the semi-structured interviews. After the pilot study, the questions remained the same so there was no need to discard the first interviews from the data analysis of the study. This pilot study was valuable for the research because it allowed for the author to reflect and become aware of details that could hinder the research process. From the reflection on this pilot study, the author became aware of using leads in questions and therefore suggesting answers. To eliminate this, the author tried to ask the questions and listen carefully to the participants and then probing to extract more information from the participants regarding their personal experiences. It also became clear to the researcher that the participants needed some additional explanation about some questions for example regarding students' common mistakes or misconceptions. The author then proceeded to giving examples of common mistakes and misconception students may have when learning Greek.

## 4.9 Ethical considerations

In social research, where the focus is on individuals, ethical issues surround many aspects of the research process. Especially in educational research, where the focus is on teachers, principals and students, ethics are concerned with how these participants are treated. In qualitative research, it is common for the researcher and the participants to have a close communication and thus it is important to have some standards and codes that drive the research process. The ethical considerations that have been proposed include: reducing harm for the participants, valuing autonomy and decision making, defending privacy, probing reciprocity, and treating participants without discrimination (Hammersley & Traianou, 2015).

When choosing to conduct interviews as the method of data collection, it is important for the researcher to eliminate their bias and the process should be as neutral and unbiased as possible. From an ethical perspective, when conducting interviews informed consent should always be asked from the participants, in guarantee of confidentiality (Cohen et al., 2017). In this research, the author initially contacted the president of the school via e-mail and explained the topic of the research as well as the data collection method.<sup>1</sup> The president then informed the school and based on the teachers' interest in

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<sup>1</sup> The e-mail address is available at the website of the school.

participating, the president provided the author with the teachers' contact details. Then the author contacted each teacher to schedule a meeting at the school.

At the meeting, before the interview begun, the author shared additional information regarding the purpose of the study and handed them the Stockholm University consent form (see Appendix 3), which included details about the research project and the participants rights. This ensured that the participants had detailed knowledge about their rights and also had the author's contact details, if they wanted to withdraw their participation at any moment, even after the interview. The author also guaranteed to protect their personal information and recordings and store them in a safe place where only the author and their supervisor had access to. In addition to that, the teachers were informed that their data would not be kept for longer than necessary and would not be used for the purposes of other studies, ensuring confidentiality (Bryman, 2016).

Anonymity and confidentiality are crucial, especially because there are not many Greek schools in Sweden and the identity of the participants could have been revealed if all their personal information had been presented in the study. For this reason, the author chose not to include the profession of the teachers that also work outside of the Greek school. The names of the teachers were also not included in the research, and they were given code names T1-T9, in random order.

This research followed both the ethical guidelines of the Swedish Research Council<sup>2</sup> (Swedish Research Council 2017) which are followed by Stockholm University and GDPR (European Union, 2018). The publication of a research project is also important for ethics (Hammersley & Traianou, 2015) as it makes the results available to other researchers that may want to use it and to the participants that might benefit from reading it. Therefore, after all the necessary actions taken by Stockholm University, the author will make the completed paper available to the participants.

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<sup>2</sup> *Vetenskapsrådet in Swedish*

# 5.RESULTS

The data elicited from the 9 participants' interviews were analyzed using directed content analysis. The present chapter presents the results of the analysis. In the first section, some information is given regarding the operation of the Greek school. Following, the results are classified and presented according to the PCK categories that were used in the interview guide.

## 5.1 The Greek school

In this first part of the results chapter, some contextual information about the Greek school will be given, to provide a better understanding of the teachers' answers and therefore the results of the study. This information was obtained from the nine teachers that participated in the study through the introductory questions about their background and through the rest of the questions of the interview. The teachers offered a lot of details regarding the structure of the school, since this affects their teaching greatly.

The teachers highlighted that the school runs on a weekly basis. T8 referred to it as a 'school of free time'.

T8: It is important to understand that this is a free-time school, which means that the child comes because the parents force them to. [...] Because they come to the Greek school after the end of their Swedish classes. You should respect their time

This is because the school is not obligatory and the students that attend the school do so on their free time. It has all the grades from pre-primary to high school level and it follows the Greek education system model regarding the classification of grades. The school does not strictly follow model of the Greek education system but rather some general guidelines from the Greek ministry of Education, that relate to teaching Greek as a second language. Some of the teachers are education professionals, with teaching degrees from Greece but all of them are native Greek speakers. Two of the teachers, T8 and T9, that participated in the study were seconded from Greece. Being seconded to Greek schools outside of Greece is a position that is organized and filled by the Greek government and teachers can compete and get hired for the position after completing an application (Stylou, 2019).

The students that attend the Greek school are usually of Greek origin and have either come to Sweden recently or were born here by Greek immigrant parents. It is also common to have students who have one Greek parent that was either raised here or migrated.

T1: For example, I have a student that have two Greek parents and their mother tries to educate them in the same way she was educated in Greece. I can not have the same demands from the other student [...] whose mom was born and raised here and herself does not speak Greek fluently.

The youngest students are six years old, and the older students are eighteen years old. The students are admitted to respecting grades according to their level of proficiency in language and their age. Students in the higher grades also prepare for the examination of Greek language proficiency which is called Ellinomatheia. Ellinomatheia (Center for the Greek Language), is organized by the Greek Ministry of Education and the Center for the Greek Language. It has been created according to the protocol of CERF and it gives the opportunity to obtain the attainment of the Greek language after successfully completing an examination held every May. There are different levels of language proficiency that students can obtain certifications that allow them to study at Greek universities. Regarding assessment it is important to mention that the school does not require the students to pass

any examinations in order to continue to the next level or get a degree. The certification of Greek language knowledge is an external process and is not related to the school. When the teachers refer to assessment and evaluation, they refer to exams and other forms of assessment they use to test whether the learning goals have been reached or what the students need additional help with. It is a rather internal process that will benefit the students and inform the teachers but does not result in any official grades.

T7: I also follow the list [of instructional goals] from the Center of the Greek Language which says in what proficiency level the students should be according to their age and what they should be taught.

## 5.2 Plan suitable instruction goals

For this category of PCK, it was found that most of the teachers create a detailed plan for every lesson. The instructional goals usually stemmed from the textbook the teacher has been using and the focus of each chapter of the textbook. There are specific goals for each chapter of the textbook and the teachers tend to use these as guidelines for their planning of the lesson. There was also a focus on adapting the instructional goals of the lesson according to the needs of the students

T2 shared their experience of trying to use different international days or other celebrations as a way of organising the content for the next lesson.

T2: Many times, I try to prepare something which is relevant to an international day, it can be the international language day or a national celebration [...] sometimes we may talk about some traditions such as Christmas and I like to talk about Christmas around the world, not just focusing on the country that we learn the language.

It was also mentioned by T1, T2, T3, T6 and T8 that they create the instructional goals based on the needs of the students and whether they had achieved the goals of the previous lesson. Planning was found to be very important for the teachers and they spend a lot of time preparing for the lesson

T3: I make a plan for the lesson based on the textbook and the learning needs of the students

T2: The previous lesson makes me think of the next one or if I see that they have a [knowledge] gap then I have to cover that gap [...] I try to prepare.

T1: I make a plan based on the next lesson of the textbook. I also look on websites that suggest how to best utilize the textbook, they have a guide about what you can talk about with the students. Then you use this how you want in the classroom, depending on the level of proficiency and how many kids are in the classroom and however you think is best

T6 and T8 mentioned creating a bigger plan at the beginning of the academic year and then also having individual plans for each lesson. For T4, her experience as a student informs her plan for the lesson, since she structures it the same way her teachers have structured it over the years

T6: I plan from the beginning of the [academic] semester. I sit and devote up to two weeks in order to make a teaching plan for all the areas of language that we focus. I choose the literature list, I prepare the content and depending on whether I have reached the point I want that is if my lessons are going according to plan then I continue with the plan. Otherwise, I make changes.

T8: I always make a plan for the whole [academic] year and for each lesson. It is not possible without preparation.



T9 shared that they feel comfortable entering the classroom even without a specific plan. The teaching experience they have acts as a guide on how to approach each section of the textbook and present it to the students successfully. But there is always a focus on the specific classroom and the age of the students.

T9: I, personally, after 19 years of being in schools know how to stand in front of a classroom. I do not need a specific plan, it exists in my brain, in my ‘hard drive’. I just change it according to the classroom situation and whether I have younger or older kids.

To summarize, regarding the first PCK category ‘Plan suitable instruction goals’, the results found that teachers value planning and believe it to be an essential part of their preparation for the lesson. The instructional goals they choose for each lesson usually stem from the next chapter of the textbook and the specific needs of the students. The level of proficiency of the students and their learning needs guide the planning of the goals for the next lesson and the teachers are flexible and adapt their plan according to what they believe the students need most.

## 5.3 Select and design learning tasks

In this category of PCK, regarding the selection and design of learning tasks, the analysis found that most teachers select or design the learning tasks and activities prior to the lesson as part of their lesson plan. For the selection of the learning tasks, the teachers mentioned various factors that influence their decisions. One of them was the level of proficiency of the students, in order for the tasks to be manageable to them and not too intimidating. Additionally, the age of the students was found to be an important factor, as the teachers would use different learning tasks and activities according to the age of the students. The students’ interest were also taken into consideration when selecting the learning tasks, as the teachers tried to use tasks that would appeal to the students and keep them interested in the lesson, to make the learning more interactive. The teachers also stimulated the students using dialogue, changing the tone and color of their voice and by using body language to capture their attention. Some of the teachers also mentioned that they use these learning tasks as stimulation for the students. Experience was also found to be a factor in the design on learning tasks, as one of the teachers with less experience mentioned that they feel uncomfortable creating learning tasks on the spot and needs to have a clear plan beforehand.

T3 shared that they select the learning tasks based on the knowledge gaps of the students and the areas they need more help in. T7 also mentioned that they choose the learning activities based on the needs of the students.

T3: It is the needs of the students [...] I try to focus on where I have noticed there is a knowledge gap and the areas where I see they [the students] are behind in speaking and writing respectively

T7: I choose according to the needs and the list from the Center for the Greek Language where it says what levels the students should be in according to their age and what they should be taught

T7 also mentioned their knowledge in child development as a privilege for being able to select and design the learning tasks for her class. This teacher gained knowledge in psychology and child development through their undergraduate degree.

T7: I believe the teacher should help and observe the students they have [...] I, as a teacher, have a privilege which is that I have very good knowledge of the capabilities of the children. [I know] how a child can think at six years old and what the deviations are

Almost all the teachers mentioned that they take into consideration the children's levels of proficiency when selecting and designing the learning tasks. Specifically, T1 and T2 mentioned that they try to adapt so that the students do not feel disheartened or lose interest. T1 mentioned that they try to find activities for all the levels in the classroom and they do not pressure the kids to participate in any activity and if they see that a student is not participating in the activity because they might think it is too hard, the teacher will use easier tasks for this kid to urge this student to participate with the rest of the group. This approach creates positive feelings for the students and helps them move forward.

T1: I do not pressure the kids [...] If I see a kid that can not do it [the activity] I will make it possible for this kid by asking them an easier question in order to also have a positive psychology to move forward

Many of the teachers use creative activities as learning tasks, to stimulate the students. T2 and T4 mentioned trying to connect the tasks with the daily lives of the students and their own experiences to make them more interesting. They try to capture the interest of the students by making them understand why they need to be able to do this task and how this will help them daily, by improving their use of the language.

T2: I would say I try to connect it with something we do in daily life. [...] I try to connect it with something they need. For example, I will tell them they will go to Greece and they will need to go to a restaurant, so we need to learn the vocabulary so let's do it now

T4 shared her experience with using a chapter from the textbook as an inspiration to start a discussion around sports that would help students develop their vocabulary and at the same time keep them interested because it would be something personal that they would feel connected with. This technique was successful for them and the teacher noticed that the students with a lower level of proficiency participated in this activity, which they did not expect.

T4: I try to do something interesting, something or to take out something from the children's lives. For example, there was a chapter [in the textbook] which was focused on sports. And then I would ask them what kind of sports do you do? And that was interesting. Especially because I have some students that do not have such an advanced level of proficiency as others, and they were the ones that participated the most.

T3, T5 and T6 shared that they prefer to design learning activities that are game-based as they find that these work best for their students. These games vary according to the teacher and the age of the student and they can include role playing, board and card games. T6 mentioned that she will use these games and activities even spontaneously, depending on how the class is going.

T6: I also have some card games with me or some board games which are portable. We will also do role-playing. It depends, but I prepare and always have something with me. It also happens that spontaneously I will start an activity.

T5 mentioned how important age is for choosing the activities, because the interests of the students are different in each age group and they tend to prefer different activities. According to T5, younger kids prefer a less structured approach to activities where they can share their experiences or create something creative whereas older kids prefer having something to comment on such as a movie or their expectations for the next lesson.

T5: Also based on the age, because when they are very young, they prefer to do something with painting or share an experience they had or listen to a story. If they are older we will, for example, create categories with their expectations for the next lesson or watch a movie and ask them to summarize it.

T8 and T9 also mentioned that their own personal interests also influence their decision on learning tasks and stimulating the students during the lesson. T8 shared that their own love and involvement in theater reflects on the tasks she chooses to give to her students and her whole lesson in general. Based on that they choose to use role play as a way of stimulating students and also helping them achieve some of the learning goals of the lesson and for practicing using the language. According to T8, each learning task should have a cognitive effect and the students should gain knowledge from it. This technique of role playing is very popular amongst the students and they are full of surprises. T9 also shared a similar experience, where their passion for crafts is evident through their choice of learning tasks they design for the students. They will use different ways of approaching new information by making the students use their hands and make collages or create something from scratch. T9 shared an example of how they incorporate creative ways of stimulating the students through using old newspaper articles and asking the students to find the new letter they were taught that day and create a collage with words or images of words that have that letter.

T4 felt less confident creating learning tasks on the spot and needed extra preparation before the lesson. She mentioned how important experience is in being able to design new learning tasks in the classroom in the case where the students did not enjoy the ones that the teacher had already prepared. In this case the teacher always had two extra activities prepared

T4: I can not make up new tasks during the lesson, I need more experience, I think. I try to have two activities extra if one does not work, we can move to the other.

In regard to the ways teachers try to stimulate their students, as it was mentioned above, most of them use individual learning tasks and group activities as a way to make the lesson more interactive and therefore create stimulation for the students but it was also found that the teachers use body language, questions or dialogue to attract the interest of the students. Additionally, the mentioned different media such as films, songs, and images that they incorporate in their teaching in different ways but there will be a more detailed presentation of how teachers use technology and media in general later in the chapter.

## 5.4 Materials used

From the research in the category ‘‘materials used’’, it was found that all teachers use the textbook in combination with additional material. The teachers use either the textbooks from the Greek Ministry of Education that are used in the Greek schools or a series of books called Margarita which were developed by the Cretan University and are targeted towards children of Greek immigrants that learn Greek while living in another country. It was found that the additional material is extremely important for the teachers and is a big part of their teaching. The additional material helps students understand the information better, by presenting more examples and different approaches. All the teachers also mentioned adapting the material based on the level of proficiency of the students or the learning goals of the lesson. Some of the teachers mentioned the material being directly connected to the textbook so there is a coherence and a ‘‘theme’’ in each lesson. Others mentioned creating authentic material.

T1 and T5 discussed how they like connecting the extra material with the information introduced in the textbook and is related to the texts they discuss in the classroom

T1: I use extra exercises that are based on the textbook [...] I find them through the internet but there are some specific ones that kind of complete the textbook so I try to use them to have the same theme

T5: I choose [the material] based on how interesting it is and its content. It has to comply with what we have done in the lesson. It is always related to the text from the book.

All teachers mentioned creating authentic material because of the challenge to find already made material that is right for their classroom. The teachers must take into consideration the proficiency level of the kids and sometimes adapting the already existing material is not enough. T1 shared her experience of creating additional material for the students which was very time consuming but was necessary because the teacher wanted to help the students in the best way possible, even if it required extra effort. T3 also shared a similar experience of using Word to create a set of exercises for their students.

T1: Last year, I had a group of students that were 7 years old but because they were also having Greek lessons in the Swedish school, their level was very good and I felt I could go further with them in grammar. In that case I could not find material that was ready and I made my own on Word. I would devote one and a half hours additional to what I was given for planning before each lesson to make these. Because I wanted it. I wanted to help them.

Since the extra material was found to be very important for the teachers, almost all of them also mentioned doing necessary adaptations to the material after assessing it. According to the needs or the specific learning goals of the lessons, the teachers would make small or bigger adaptations to the content of the format of the material. Sometimes the format and style of an exercise would be attractive to the teacher and they would take inspiration from it but then also take into consideration the capabilities of the students.

T7: It depends, if I find good material that is a bit hard for my students I try to adapt it so that it will be more understandable

The research found that teachers take various factors into consideration when choosing, adapting, or creating their own supporting material for the students. One of the factors was the students' proficiency level as mentioned above but also the context and the linguistic background of the kids. T2 shifted the focus on the specific needs of the kids that have been born and raised in Sweden and maybe do not speak Swedish so much at home, so they are not so familiar with the language. These kids tend to have a difficulty pronouncing some letters or understanding some grammatical phenomena that do not exist in the Swedish language. The material available on the internet is usually addressed to children that live and go to school in Greece, so it does not serve the specific needs of the students in Sweden. T2 also added that the material is usually above the children's level of proficiency, exactly because it was made for children in Greece, and she changes the instructions so that the kids can understand what they should do and be able to complete the task on their own. In addition to assessing and adapting the material she also takes into consideration how much time and mental focus is needed to complete this task and depending on the level of difficulty the teacher might choose to divide the task into smaller ones and complete them in the course of two lessons.

T2: If something demands a lot of writing and much of their focus and effort, we do not do it [all at once], we do it in two parts. Then I also look at the exercises and if they are too hard for the kids that learn Greek as a second language, I will try to do it in a simpler way. I will leave the instructions [...] and make different ones in very simple Greek so they can understand with just a few words what they should do.

T8 and T9, because of their many years in education, explained how they have collected additional material that they can use at any time. More specifically, T8 discussed how she uses the selected textbook but does not rely on it. It acts as a guide to help organize the lesson but the most important tool for her is her own material. Even after having a variety of different exercises for the students, the

teacher mentioned still making new and updated material to attract different groups of students, according to their interests.

T8: It is not possible to work without a textbook at all. But on the other hand, I can not rely only on one textbook... I mean it is a guide or sometimes even not a guide at all... anyway you use it because you have to use it but for me it is the personal material I have collected all these years [ that is important]. I have a huge amount of additional material and imagine that even after 30 years I still make new exercises to capture the interest of the specific students I have now.

T9: I use the textbook and all the additional material I have collected in the ten years I have worked in education.

T8 made some very interesting comments regarding the additional material used in the classroom. First of all, she mentioned the variety of material that is available on the internet and the need to properly assess and organize this material. The material should be sorted into the correct categories to be used properly. Additionally, T8 expressed how important it is for the material to comply with the teacher's style and personality. There is a lot of material available but not all of the material is aligned with the teachers personal teaching style and therefore will not be easy to use in the classroom. Shifting the focus on the characteristic teaching style of each teacher was only done by T8, which is also the teacher with the most experience of all the participants. This could be a result of many years education that allow for the development of a personal teaching style that follows the teacher in all of their decisions. As an example, T8 shared how she can not use material that is too serious because that is not her style and she will not force herself to implement some extra material in her teaching that is not compatible with her but instead she will adapt the material to work with her.

T8: There is so much material available. Someone just needs to organize and sort it. And you know what? All this material is often not compatible with your classroom or with you as a teacher. I can not present something that is very serious, with a very serious style and language because that is not my personality and I will present something in my own way. I always adapt the material but I can not adapt to the material.

Regarding the materials used, the research found that all teachers use additional material in combination with the chosen textbook. That material is most frequently connected to the learning objectives of the lesson and usually adapted to fit the proficiency level and needs of the students.

## **5.5 Understand learners' needs**

In this category of PCK the teachers were asked about how they start teaching something new to their students and what are the factors they take into consideration when doing so. The answers were all different, as each teacher shared their specific way of introducing new information to the students, but some common approaches were identified. Most of the teachers mentioned the importance of connecting the new material with the old and building on the foundation that the students already have. Some teachers prefer to introduce new information through text or images where the students can explore and try to guess what the lesson will be about. Other teachers use questions to make the students reflect on the knowledge they might already have about a new phenomenon before presenting it themselves. One teacher chooses to focus on grammatic rules when presenting new information to her students and tries to connect this with everyday language use, so the students have a practical application of the phenomenon. Lastly, one of the teachers focused greatly on her goal to create a meaningful lesson for the students that will make them feel something. Creating feelings and a positive experience for the students is a vital part of her teaching. The way she presents new information and the supporting material she uses are all centered around creating feelings and motivating the students.

First, T1, T2, T3, T5, T7 and T8 when asked about how the present something new to the students mentioned that they connect the new information with what the students have learned previously. Creating connections with previous material was found to be very important for the teachers and essential for students' learning. More specifically, T2 expressed how she feels it is impossible to teach something without building on what the students already have. According to her, there should be a clear connection between the new and old information in order to show the students that language has a clear structure and there is no need to memorise a ton of information. Because Greek is a language with very specific structure and rules, T2 believes that highlighting these connections for the students will help them understand and make learning the language easier for them

T2: I believe that if you do not build on what they already know it is impossible to achieve anything. I always take something they know very well and with that I try to connect the other one so they can see there is a logic and we do not come here to just say grammatic rules and memorise them [...] it is a language with much structure and maybe this will make them think that slowly everything will become easier for them. They will experience that while learning Greek in the future too, that maybe what seems really difficult and complex now will be easier later because we constantly build, build, build [...] There is a linear connection between the old and the new information.

T2 was the only teacher that mentioned using the Swedish language as a basis for explaining and introducing new information to the students. Sometimes she even uses direct translation from Swedish to Greek to help the students understand better how to use a word or how this grammatic phenomenon works. She finds that translation works and helps her and the students.

T2: What works well is the translation from Swedish to English, especially for vocabulary. If it is a grammatical rule that also exists in Swedish it is easier for the kids to understand it [ through Swedish]

Another approach that was common between T5 and T6 was the questions approach. Both teachers discussed about how they will ask the students if they have any previous knowledge on the new subject or if they can guess any connections with what they already know. These questions make the students reflect on their knowledge and also starts a discussion around this new subject and therefore makes the students more engaged and interested in it. T5 also mentioned using pictures and making the students guess what the new information of the lesson would be to get their attention. T6 shared her technique of using an introductory discussion to stimulate the students where they would share their prior knowledge on the subject and what they wish to learn about it by the end of the lesson. This would also give the students an end goal and make them work harder during the lesson.

T5: I may make a question regarding this new phenomenon, if they have any existing knowledge on it or I will show them a title and I will ask them to guess what we will be learning about. I usually start by making them a bit curious about what is going to happen [...] so they will start asking questions. I usually make them guess from a title or a picture.

T6: We will have an introductory discussion about what they already know and what they want to learn and later I will use the book or additional material to introduce the new information [...] but I do focus on what the children already know and their curiosity...what they want to learn more about.

T1, T3 and T9 use a common way of introducing new learning objectives through text. This text can be either from the textbook or not, depending on what the teacher decides is the most appropriate for her group of children. T3 mentioned that depending on the objective, she will choose to read out loud to the kids so they have some acoustic stimulation first and then they will start talking about what they are going to learn. T1, because she follows the structure of the book, considered a connection between the previous and the new text is best for the students to be introduced to a new objective. She shared an example of introducing a new letter to her students where she will make a revision of what was

previously mentioned in the class by giving them examples that include two letters they already know and will also try to use this new letter as a way to remind grammatical phenomena to the students, such as definite articles. T1 mentioned using her experience as a student guide her decision and she prefers using visuals for her students, because that is what she preferred when she was younger. T9, who has younger students that mostly learn the letters and simple words, shared a similar approach where the students will for example start looking for new words in the text and be able to recognize a new letter or a new word that they have never seen before.

T1: I connect it [the new objective] with the old. For example, now we had done the letter M and next we had the letter H, so I tried to give them words that had both letter in them. I also connected letter H with the different pronouns we have in Greek

T3: I try to use oral stimulation first and focus on exercises that they can maybe practice this new information orally first so they can hear it and have some acoustic stimulation too. After that I will make them read a text where this new objective will be included so they can practice and embed the information

T9: I will start with a very simple text where the students will have to detect the words and then I will ask them questions

T4 and T7 did not mention a direct connection with previous knowledge. T4 mentioned that she begins by presenting a grammatic rule to the students and then tries to capture their interest by connecting this new information with their everyday life. T4 uses a textbook where every chapter has a theme so this theme will stimulate the discussion and the teacher will try to intergrade this grammatic phenomenon into the conversation by asking students to use it and produce sentences using it. T7, mentioned using a video to present new material to the students because she believes that this is more interesting for her students. Then after the students have had a first introduction to this new objective, the teacher will use the whiteboard to highlight some of the most important information. T7 underlined the importance of asking the students to actively use this new information so that it will be better embedded in them. According to her experience, by making the students use their hands, their brain is better activated, and it leads to independence, when students can solve tasks alone without any help, by using this new information.

T4: I begin with grammar [...] I try to get their attention first of all and to connect this with their everyday life

T7: After the introduction with a video, they will always write something and complete written tasks that make them use this information. They will implement the new knowledge. I want their brain to also be actively involved in order for the new information to be embedded. I believe that only if the students can go through the process of producing the same work that the teacher and succeed, then the information has been embedded

T8 highlighted the importance of taking into consideration both the previous knowledge but also the age group of the students. According to her, there are different ways of presenting new objectives to students and should be appropriate for their age. She also mentioned how she approaches an objectives from multiple angles that will provide stimulus for the students and make them understand this new information. There are many ways to approach an objective and a more holistic approach works best for her students, who are older. T8 was the only teacher that mentioned the need to excite students emotions and make them feel something while also touching on the learning objectives.

T8 shared her experience of using creativity and theatre to introduce students to neuter gender nouns. She acted like they were in a restaurant and there was a formal dinner. In the menu that was titled "nouns", there were many courses. The first course was specific nouns and the second one was abstract nouns. The dessert were exceptions, and the students went through the whole dinner where

they would finish one course and move to the other. Another example she gave was when she wanted to introduce her students to synonyms and she did so by presenting a short film from a festival in Greece, where the focus was happiness. The students had the chance to hear about the small moments of happiness a young kid experiences. Only at the end of the movie it was revealed that this kid is blind. T8 mentioned that in this movie there were a lot of nouns and more specifically synonyms, but it was also the content of the movie that made her choose this to present to her students. It created awareness and made the students feel something.

T8: You can create awareness through your teaching and to foster the development of feelings. How can you make them feel something? You can use a range of material and different ways to do it. I can not imagine teaching Greek as a second language without music, dancing, singing. You take a lot of material and you organize it but without feelings, forget it!

Lastly, T8 made a niche on how she handled the pandemic situation. She mentioned wanting to not only achieve the learning objectives but also fill the kids with positivity in a period of uncertainty and she would find themes for her lessons such as laughter where the students would see different films and caricatures that would make them laugh.

T8: I wanted, aside from the lesson to make them feel positive and we talked about the importance of laughter

When presenting new content to the students, most teachers were found to connect the previous knowledge with the new information. The introduction of new information is done in different ways, according to the preferences of teachers and students and can include text or images. Only two of the teachers did not mention connecting the new information with previous knowledge.

## 5.6 Diagnose Learning problems

For this category of PCK, teachers were asked about how they handle difficulties students have when learning the Greek language and how they evaluate the difficulty level of a new learning objective. This category reflects one of the main aspects of PCK, which is understanding the difficulty of learning objectives and the possible struggles students may face (Evens, 2020) In the previous categories the teachers mentioned taking into consideration the age and language proficiency level of the students when making decisions. Here, it was found that it was common for teachers to focus on their empirical knowledge and experience in the classroom to prognose the difficulty of a learning objective. Other teachers also paid attention to the students' reactions when introduced to this new information to understand whether it was easy for them. The teachers with more experience mentioned having an idea of the areas that are more challenging for the students. To make it easier for the students to understand, the teachers would present the information in different ways while highlighting the important details. Three teachers mentioned that it is common amongst their students to have some difficulty with pronouncing and writing specific consonants. Some of the techniques mentioned for solving this problem were online games and extra opportunities for the students to practice on their weak areas.

When asked about how they help students with common misconceptions or mistakes they might make T1, T3, T6 and T9 mentioned using repetition to help with these challenges. Repetition of the rules and presenting the material in different ways help the students understand the small details that they might be missing. According to the teachers looking at the same information from different angles is very helpful for the students but repetition is also crucial. Practical examples are also part of their strategy, where students can see the new information in application and understand it better. T1 specifically



using examples and comparing them to showcase the differences and explain to the students why these examples are different and how they were formulated, by what rules.

T1: I, obviously, repeat the information multiple times and use examples, especially with spelling rules. I also try to visualize the information for them so they can understand it better.

T3: I believe it is really important to repeat the rules and explain them again and again, until the students can understand them eventually

T6: By repetition, I always repeat the rules for the students if they have not been embedded in them. My teaching is focused on repetition.

T1, T4 and T5 also mentioned that they pay attention at the students 'reactions when they introduce a new objective to them. They can understand when the students feel lost or when they are confused and do not follow. Then they also try to repeat or give a better explanation of the objective so that the students can understand and also use examples.

T1: I understand from their eyes. If they are looking blank at me, I know it is hard for them and they can not understand.

T4: From their face, I understand they are struggling to understand.

T5: From their reaction, they react with fear when they can not make sense of something and they should make sense to understand. I try to repeat the same information and use examples to help the students.

T7, T4 and T8 when asked about students learning difficulties shared their experience of having discovered that students in Sweden, tend to struggle with pronouncing some letters from the Greek alphabet. T7 mentioned that this varies depending on whether the students have recently migrated from Greece or have been born and raised in Sweden and therefore have had limited exposure to the Greek language. Students that primarily speak Swedish at home, have a hard time writing and pronouncing the letters Φ, Ξ, X, Δ and sometimes confuse the sounds these letters make with letters from the Swedish alphabet. So, this problem extends both to oral and writing activities. To help the students train on this, T7 mentioned using some phonics training with activities targeted on those letters where she will demonstrate for the students exactly how they should pronounce the letter and how their mouth and tongue should look and also simple tricks and key words to remind the students of the specific sound. T4 mentioned an online game that she uses where the students can train phonics through mythology.

T4: With the things they struggle the most, like the letters X, Φ, Δ, I try to give them extra opportunities to train with these letters [...] There is an online game where the students can use mythology characters and train the letters. I send it to the students and told them to use it.

T7: I have started identifying common mistakes they make. They confuse the sound of the letter Δ and pronounce it wrong. Same with the letter Φ [...] I try to do some phonic activities for them where I show them exactly how we use our mouth to make the sounds of the letters and where their tongue should be and how their lips should look.

T8 and T9 mentioned how valuable their experience in teaching is. According to them, because of their many years in education, they are now familiar with some common mistakes the students make and therefore, they are better prepared to face up to the challenge. They will use additional material and adapt their lesson plan to the needs of the students and will only move away from an objective when it is finally embedded in the students. Otherwise, they will repeat and explain again and again this new information to the students with any chance they get. T8 specifically, mentioned how she believes there is no way to avoid these common mistakes completely and instead, teacher and students together should fight through the confusion because there is no magical solution that will make the

students understand everything on the first try. But the teacher has her knowledge, her extra material to help the students in this ‘‘fight’’. T8 also gave an example of how she uses funny expressions in Greek that make the students laugh, to make them remember words and phrases that they get to forget or confuse. T9 on the other hand, discussed how she tries to repeat the information but also acknowledges the fact that the kids in her class mostly speak Swedish at home and at their everyday life and it is hard for all the information to be embedded in them even after years at the Greek school.

T8: In our job there is no magical solution but there are techniques. I have my weapons as a teacher, my exercises, games, images, caricatures. It is not really possible to avoid common mistakes but there are ways to help the students

T9: I try to repeat the same things, that is the rules, but other than that I understand that it can not be fully embedded in them because they do not use it in their everyday life.

Last but not least, T2 mentioned that she always takes into consideration the similarities or differences that Greek and Swedish have and usually finds that students struggle with concepts and rules that exist only in Greek. For example, in Swedish nouns are only separated into two categories: en-nouns and ett- nouns whereas in Greek there are three categories: feminine, masculine and neuter. This categorization affects the spelling and grammar of nouns and is basic for the students to properly use them. According to the teacher, in these cases, there is no specific rule that can help the students but rather a constant training on nouns to make them empirically remember which noun falls in which category.

T2: I often find that it will be hard for them to understand something that does not exist in their language. For example, nouns are hard for kids to categorize because we have three categories in Greek. How is this kid going to learn which noun is masculine or not? Empirically.

In this category, the findings indicated that most teachers use repetition to try and solve students’ misconceptions. One common struggle for Greek heritage language students seems to be the pronunciation of specific letters, which the teachers try to improve either with phonic activities or online games. Experience was found to influence the teachers’ ability to understand the difficulty of specific learning objectives and identify common mistakes amongst students. The two most experienced teachers mentioned how important experience is for developing such an understanding.

## 5.7 Students’ evaluation

For this PCK category, the teachers were asked about how they evaluate their students and how they make sure they have reached their learning goals. The results found that there are different ways that teachers approach evaluation and assessment but there are some common practices, even though they also differ depending on the situation. The teachers with younger students expressed their concern on putting actual tests for the students because they believe it can make them more anxious and create a negative association between the Greek lessons and assessment. All teachers mentioned that they create assessments based on the proficiency level of the class, but some create completely personalized assessments that are based on the personal strengths and weaknesses of each individual student. This was found amongst teachers of older kids. One teacher mentioned having the same tests for their students but assessing them in a different way, because she has individual expectations for each student. Lastly, two teachers mentioned how they assess not only academic performance but also what the students have learned regarding culture in Greece, because they believe this to be an important part of their teaching.

T1, T2, T3, T4, T5, T7 and T9, shared their experience of using students’ take at home assignments to assess their progress. The teachers focus a lot on giving assignments to the students where they can

practice and apply the learning objectives. Practical assessments were found to be the most common ones amongst the teachers.

T3: I assess them from the assignments they take at home and I try to see where they are struggling.

T9: I test them through practical applications and assignments. I adapt the assignments to the proficiency level of the class.

T5 mentioned giving specific texts to the students where they can test their reading comprehension. By having open ended questions based on the text, the teacher can also evaluate the writing skills and spelling of the students. This kind of assessment can reach different areas of competence in a short amount of time. These teachers also mentioned adapting the assignments to the level of proficiency of the whole classroom but not individually. T5 explained how she understands there are differences between her students as far as language proficiency is concerned and she has different expectations from her students depending on their abilities. These expectations are reflected in the way she assesses her students' assignments. Then she will either give individual feedback to each student or make general comments if there were common mistakes amongst the students.

T5: They always have text-based assignments at home so I take them and assess them after each lesson [...] I assess them differently, based on my expectations of them.

T8 and T6 that teach older children compared to the other participants, mentioned that they indeed use personalized tests for each student. It is common to have multiple levels of proficiency in the same classroom and according to these teachers, having the same assessment for all students is not beneficial. That is because some of them will find the test very hard to solve and others will find it very easy and will not challenge themselves. T8 highlighted the need to give positive feedback to the students to make them move forward and not only use assessment to point out the weak areas.

T6: I think individually for each students and I always give them appropriate assignments according to their abilities

T8: I always give different students, different assignments [...] You should not only show students what they do not know but also show them what they do know so they can move forward.

T8 also shared her experience of giving self-assessments to the students where they had the chance to test themselves and see what their weak and strong areas are. According to T8, this worked really well for her students that responded positively to the idea of self-assessment.

T8: I test them but not in the traditional way [...] I also use self-assessment where the students can test their own abilities and I always tell them to not cheat themselves which works, they have been very positive

T2 and T8 also brought the attention to what is actually considered a mistake in language teaching. According to them, they primarily focus on oral production even if the students make mistakes. They always encourage students to speak and will not point out every single small mistake they make because this will discourage them from speaking. Because these children are not exposed to Greek to the same extent that children in Greece are, there is no need to fixate on spelling mistakes because spelling is more empirical rather than a sign of misunderstanding. T2 discussed extensively about how important communication is and that for many children this is the reason they attend the Greek school, to be able to communicate. Sometimes students will make mistakes because they try to translate directly from Swedish to Greek but T2 will choose not to focus on correcting them but instead on continuing the conversation to keep them interested and encourage them to keep producing sentences.

T2: I do not think spelling mistakes are so important. It is something empirical and if I point it out they will correct it eventually [...] I want to see that they can communicate with me so I do not really

mind when they make mistakes for example because they directly translated a sentence from Swedish to Greek and the structure is not correct [...] I will continue the conversation with them.

T8: It is important that they keep talking because they are children that do not primarily speak Greek so if they can communicate and watch a movie or a play, to me that is enough

Lastly, T7 and T8 mentioned the importance of culture when teaching Greek, because these students have a Greek heritage and a goal of the Greek school should be to also make them interested in the culture, not just teaching them Grammar and spelling. T7 highlighted the importance of creating a positive experience for the students so that they will create a positive connection with the language. Also, the personal interest of the teachers regarding languages can influence the experience of the students and that is why T7 focuses on talking to her students about the importance of learning languages in general and how this can positively impact their lives.

T7: I believe that the Greek school should also be a representation of our country and our culture. We should understand the importance of teaching this language and creating positive feelings for the students [...] help them connect Greek with something positive and make them understand that the more languages they know the better for them.

To summarize, the most common form of assessment was found to be practical assessments that the students have to complete at home or in the classroom. Teachers of older students mentioned creating personalized assessments for their students, to ensure that all the different proficiency levels in the classroom were covered.

## 5.8 Appropriate use of technology

How teachers use technology is also a part of PCK. In this category, the teachers were asked about how they use technology to inform and improve their lesson. The results showed that teachers systematically use technology both in order to prepare for their lessons and create the learning tasks but also to provide supporting material to the students. Supporting material, as seen previously, is essential for teachers because they need additional resources except for the textbook. So teachers were found to use the internet to search for different ways to approach the textbook and collect additional material that can be used in the classroom. According to the teachers, technological means make the lesson a lot easier. Almost all of them mentioned projecting slides on the whiteboard in their classrooms which gives them freedom to write on the text so all the students can see. That way, the students will not lose focus and everything the teacher mentions is written on the board.

Except for that, some teachers mentioned using online games as a way to stimulate the students and also make them practice what they have learned that day. These online games always have an educational goal. T4 specifically mentioned using Kahoot, which is an app, that allows the teachers to set multiple answer questions which the students can then answer from their device. What is unique about kahoot is that it is really fast paced, and the students have very limited time to answer the questions. Then whoever answered the questions faster wins, which gives a motive to the students to pay their full attention to the game. In combination with kahoot, T4 mentioned using an online game based on Greek mythology, where students could practice some of the letters, they have trouble pronouncing.

T4: I use kahoot a lot, which is an app where you can create multiple choice questions [...] It is easy because my students are older and all have their own mobile devices [...] I also use a Greek mythology game for practicing letters.

In addition to online games, a lot of teachers mentioned using pictures, video and movies to support their students' learning. These were either used to start the lesson and keep the students interested on

the subject or to give them a chance to relax towards the end of the lesson. T5 mentioned using images to start her lesson and having the students guess what the lesson would be about. T1 expressed how important it is especially for younger students, to give the chance to watch something and relax since their attention span tends to be a lot smaller than older kids'. T8 specifically mentioned using tragedies that she finds on the internet to encourage students to discuss in groups and to talk to them about ancient Greek tragedy and how ancient Greek theater operated, so they can use this knowledge if they were to go and see a tragedy in Greece. She wanted them to have the references and also have a level of proficiency that allows them to enjoy watching a movie or going to the theater.

T8: I use theater a lot. I use Greek tragedies and show them how Greek theater works and start a discussion about it [...] My goal is for them to be able to understand and when they go to Greece and see a tragedy they will be able to understand who is the main character, who is the chorus and what is the plot.

T5: I use images and make the students guess what the lesson will be about

Technology was also found to be used for students 'work and creative projects. T8 shared her experience of creating a short video about Greece's Independence Day, where the students were recorded talking about this historical event and they also had the chance to select pictures to include in the video. The video was then distributed to the parents and school staff to show off the students' hard work and to promote the work of the Greek school. The students were hesitant at first, but with the help of their teacher, they reached their desired goal.

T8: We also created this video about the 25<sup>th</sup> of March, where the students had the chance to show their oral proficiency by talking about such complex historical events [...] they were afraid at first that they would not sound "Greek" enough but I assured them that I will never make them do something they are not capable of

Lastly, it was found that technology was indispensable for distance learning during the pandemic in Sweden. The teachers are now back to normal teaching but they had to do some of the lessons online since last year, following the national guidelines. During this time, T7, mentioned how she had to educate herself in using technology and how this was beneficial for her students, because they discovered that they prefer having videos incorporated in the teaching to help them understand grammatic rules.

T7: I found alternative ways to support my lesson when the situation with the pandemic happened. I used a lot of videos that were focused on grammar and found that they are more interesting than just me talking

To summarize, technology was found to be extremely important for teachers, with most of them using projecting slides, video and images to enhance their students learning. Technology also made it possible for teachers to create experiences for their students such as a collaborative creative project or a competition through an app that the whole classroom participates in. Lastly, technology was found to be indispensable in distance learning.

## 5.9 Evaluation of lesson

In this category of PCK, the results showed that all teachers evaluate their lesson. When asked about how often and in what way teachers evaluate their lesson, there were different approaches. Some of the teachers said they evaluate their lesson every single time they walk out of the classroom, others said they do it often but not every time and one teachers said she does it every semester. It was common for teachers to evaluate how the lesson went by how they were feeling at the end of the lesson and whether the students had enjoyed it. Evaluation was also connected with achieving the

specific learning objectives. One teacher mentioned they keep notes during the lesson and they look at them after to remember what had been achieved and what not. After evaluation, the teachers mentioned adapting the material or teaching techniques according to what works best with their students.

T9 mentioned that she often reflects on her lesson and thinks about what she could have done differently. This includes material, techniques or even classroom management and is very important for improving her teaching and helping the students.

T9: Yes, I evaluate often, I think of what went wrong [...] what I could have done better...I try to get better all the time

T1, T2, T3, T4, T7 and T8 shared that they reflect on their teaching after every lesson. To reflect on her lesson, T5, chooses to keep notes during the lesson to remember what was achieved and what not and to find ways to adapt her lesson. T2 expressed her anxiety when things do not go according to her plan and then she needs to go home and come up with alternative solutions on how to help the students overcome any challenges. In addition to that, T2 discussed how she always thinks of multiple factors that influence students' performance and tries not to think that everything is her fault and to make sure that she always tries her best for her students.

T2: It is very hard, I often sense it when the students do not enjoy the lesson and they become distracted and they do not understand anything. I know it is not only me, it is also them and it is the parents and it is the lesson and the country and the books and everything.

T5: I usually evaluate and I keep notes of what has not been achieved, what was hard and then I will find other ways to try again [...] If I find something that my students like, I will use it again.

T1 shared her experience of having to be flexible in her teaching and not religiously trying to follow the lesson plan. She mentioned that often she will have prepared some activities in detail, but the kids will not be interested, or the activities will be really hard for them and then she has to change course and find alternative ways to approach her goal. According to her, it is not beneficial to pressure the children into completing tasks they do not feel comfortable with and it is better to deviate from the plan and go for something else. This shows that the teacher evaluates during the lesson too and tries to be aware of how the students are feeling and how the lesson is going.

T6 mentioned conducting an evaluation every semester. The evaluation is dual, meaning that she evaluates both the students and her teaching methods. She will see whether the students have reached the learning goals and how to improve her teaching in order to help the students fill any knowledge gaps they might have.

T6: I have some guidelines before starting the evaluation [...] I do it every semester [...] If I see that we have not achieved our goals I will try to help the students fill the gaps

T2 and T6 also expressed their surprise when students exceed their expectations. According to this, it is often that teachers should reflect on the expectations they put on their students because sometimes they tend to doubt both the students' and their own abilities.

T6: When you see that the students have already reached their goals and they can do more, you have to give them more and you have to change your teaching to challenge them

T2: Many times the students remember everything and I feel like I want to cry of happiness because I do not believe they are so good and they remember what I taught them! [...] Many times you underestimate them and you underestimate what you can do as a teacher, your abilities.

Insecurity was also found to be a common feeling amongst the teachers. Many of teachers with less experience, T1, T3 and T4 mentioned feeling unsure about whether their teaching techniques were

right or if they could have done some things better. The teachers mentioned numerous times how they want to improve and give the children the best possible experience they can have and help them achieve fluency in the language.

T4: I always think of what I could have done differently. I get out of the classroom and say I could have done this better [...] I try to prepare but it needs a lot of work... If you want to do it right it needs a lot of work and preparation to give them 100% [...] I feel insecure because I only teach once a week and I do not have that much experience compared to other teachers

All in all, teachers were found to think that evaluation of their own lessons is important for improving their teaching by reflecting on their own practices.

## 5.10 Challenges

Regarding the second research question that concerned the challenges teachers face in their teaching, it was found that teachers struggle the most with managing the different proficiency levels of the students within the same classroom. It is often that because the students are mostly classified according to their age, that there are big deviations within the students' knowledge. The students struggle to adapt their teaching according to the individual needs of the students when the differences are so big and even though some of them take the time and energy to create individual assessments, it is very difficult to cover the needs of the students during teaching. Some teachers shared their experience of having students that can barely communicate in Greek and students that are fluent and want to advance in writing and reading, which is very challenging for the teachers and not beneficial for the students.

Most of the teachers mentioned having some students that were born in Sweden and have a lower level of proficiency and some students that were born and raised in Greece and have migrated recently or their parents have migrated recently and still speak Greek at home. This makes teaching such a diverse group very challenging for the teachers. T8 referred to CERF levels to highlight this difference between the language levels of the students, mentioning that she has students in the same classroom that are CERF level A1 and CERF level C1. A1 level is a basic understanding level and level C1 is an advanced level.

T1: There are different groups in the classroom with different knowledge of the language. I have kids that do not speak Greek at home and that makes it very hard.

T8: It is a huge problem. It is a struggle to have a classroom where one kid is A1 level and another kid is C1 level, what do you do in this case? It is very very hard

T2 also mentioned that she tries to teach in a way that benefits all levels but it is hard and sometimes there is pressure from the parents that want to send their children to study in Greece and therefore have different expectations of them. This creates practical difficulties for the teacher but the needs of some cannot dictate the needs of all, so she tries to adapt her lesson in the best way possible.

T2: I will not let students behind because your kid [referring to the parent] wants to study in Greece [and demand a faster pace] while there are students that have a hard time even communicating

T9, who is seconded from Greece and with many years of experience, mentioned that she felt helpless when she started teaching in Sweden, because it was very difficult to help all students taking into consideration their different proficiency levels. She also mentioned that there was no additional support from the ministry of education in Greece to help her adjust to this new teaching environment.

T9: When I first came here [ in Sweden] I felt like they throw me into a deep sea and told me to swim on my own. There is no support [from Greece], someone to tell you how to do something and how to handle this group of kids.

T4 also discussed how this sometimes creates a division between the students and some of them will find tasks very easy and this makes the other kids feel inferior because they are not at the same level. This really angers T4, and she tries to make some of the stronger students sit next to students that struggle to help them.

T4: Sometimes I will have students saying "oh this is so easy" or "everyone knows that" and I tell them no, not everyone knows that. This really makes me angry

The results also showed that most teachers struggle with the limited time they have. It is very hard to adapt the lesson and pay attention to the individual needs of the students when the time is so limited. T2 explained how she feels like she does not have enough time to do all the activities she wants which is a vital part of the lesson. T5, T7, T8, T9 and T3 shared a similar experience where they feel like the limited time they have for teaching is one of their basic struggles

T2: The limited time, I think it is a very important part of Greek language teaching because I always feel like I did not have enough time to teach what I want to the students

T5: I feel like the time we have to teach something is not enough [...] the children do not have the chance to revisit the information enough

Additionally, because the students come to school after the end of their normal day at school, and this subsequently means that their free time is limited, it is common that students are not interested in learning Greek. Many teachers mentioned that their students only attend school because their parents want them too and they are not really attending the lesson to learn. Thus, it is very hard for the teachers to win over the students and make them interested in the lesson. T6 also mentioned that some students are not so interested in learning about the history and culture of Greece and feel distanced, even though they might have Greek descent, and this is challenging to overcome. T9 shared a conversation she had with her students recently, where they talked about the reason the students come to the Greek lessons. Most of the students shared they attend Greek lessons because their parents want them to which immediately puts a barrier between the teacher and the students, since the students feel suppressed.

T9: It is very hard because most of the students come to the Greek lessons because their parents force them to [...] I had a conversation with my students the other day and I asked them why they come to the Greek school and most of them answered because their parents want them to [...] so you understand that when I have students that do not really want to learn, it is very challenging.

T3, T5 and T6 also mentioned that they would like for the parents to help the students more with practicing Greek and devote some of their time during the week to help with their homework. T3 also mentioned that she struggles without feedback from the parents because she believes this would really help her know the strengths and weaknesses of the students. The collaboration of the parents and the support from home was found to be an important factor for students to advance in Greek and the teachers mentioned that having help from home really helps the students.

Another challenge that was presented was the broad goals and the absence of a specific curriculum that the teachers should follow. T2 mentioned how she finds it confusing not having a specific curriculum and such broad guidelines because it depends solely on the teacher to decide how to structure her lesson and what learning objectives to choose, which creates additional work for the teachers. In connection to that, the teachers highlighted the lack of contemporary books and appropriate material for students that learn Greek as a second language, especially in the Swedish



context. The books that are available are usually too hard for the students and are not adapted to the specific linguistic needs of the students that speak mainly Swedish and have some specific needs such as extra help on pronouncing some letters or understanding some grammatic phenomena that do not exist in Swedish.

Teacher education and teaching experience were found to be very important for teachers. T9, who has almost 20 years of experience, mentioned that teacher training in Greece is rather theoretical when practical experience is so important. According to her, having experience is essential for being able to assess students' needs and abilities as well as for feeling comfortable when entering the classroom. T3 also discussed the importance of integrating courses for teaching Greek as a second language in mainstream teacher training in Greece, since due to the growing immigration, it is highly possible that many of the graduate teachers will have to teach Greek to children that were not born and raised in Greece and have specific needs.

T9: At university everything is very theoretical, I will say it again, the experience will guide you... I am not the same I was when I started teaching [...] when I enter the classroom I feel like I am at my own home [...] You learn through your mistakes and you get better and you learn so so much

Lastly, T2 mentioned that it is challenging when the leaders of the school are not education professionals because it would be very helpful for the teachers to be able to discuss their problems and get guidance from the people that are considered to be leading the school, such as the president.

The teachers mentioned many challenges that they face in their teaching with the biggest one being the heterogeneity in proficiency levels amongst students. In addition to that, the data found that the lack of adequate preparation in teacher training, support from the Greek government as well as appropriate materials result in the challenges teachers face.

# 6. DISCUSSION

## 6.1 Instruction

Regarding the first research question of how Greek heritage language teachers employ PCK in their teaching, the results showed that teaching techniques vary depending on many factors. All the teachers were found to employ PCK, but to different extents. Some teachers discussed aspects of PCK in more depth during the interview and showed a better understanding of students' needs as well as various techniques to adapt to the individual needs of a heterogenous classroom than others, which will be discussed in detail below.

To begin, most teachers shared that they create instructional goals based on the needs of the students and how the previous lesson went. In case some of the previous goals had not been achieved, the teachers would adjust the instructional goals for the next lesson accordingly. This is a very broad answer and in general teachers did not discuss in depth in this category, probably because the way they plan the instruction is heavily dependent on the specific learning objectives of the lesson and could be hard to generally describe in depth the whole process. It was evident even from the first question of the interview that the heterogeneity in the classroom affects every step of the lesson, including planning appropriate instruction goals. Heterogeneity in the classroom was found to be one of the most frequent issues that teachers would bring up. It was mentioned in every single category of PCK, together with adaptation, because adapting the teaching and material to the individual needs of the students was presented as one of the biggest parts of the teachers' job. This agrees with previous research on heritage language teaching that highlights the difficulty and distinctive abilities needed for managing such heterogenous students in a classroom (Willoughby, 2014). The fact that teachers are willing to spend the time and effort to plan instructional goals based on the different needs of different groups of students can indicate the passion these teachers have for providing their students with the best possible education, but at the same time, the participants did not discuss in detail how they actually implement this personalized instruction. It is safe to assume that it is extremely hard to manage the different groups of students in the classroom, let alone find a way to work harmoniously with all of them. On the other hand, instructional goals can vary greatly depending on the learning objectives of the lesson so that could be the reason the teachers did not give a lot of details on this topic.

Regarding the design of learning tasks, the results showed that teachers use a variety of methods, depending on their preferences and the students' interests and abilities. Teaching styles really differ between teachers, no matter their experience but it was noticeable that the two most experienced participants were the ones that expressed how their personal interests inform their teaching and gave many examples from creative ways they use their interests such as theater and crafts to stimulate the students and make their learning experience more enjoyable. This could also be a result of teaching experience which makes teachers more comfortable and therefore creates space for creativity (Sothayapetch et al., 2013).

In the area of technology, the results showed that all teachers are able to use technology in their teaching, to improve the quality of their lesson and to stimulate students but to different extent. Other teachers merely discussed the use of technology for presenting material to the students such as images and video and other teachers shared their experience with using application or digital games that help students practice Greek but also create interaction in the classroom. One teacher used technology to create a project with her students, which can create closer relations between the students and promote

the feeling of belonging in a team. This difference between the teachers could be allocated to the different ages they teach. It is normal for teachers with older students to be able to utilize technology in more creative ways as the students are old enough to participate actively, which is not always the case for younger students that do not even have their own mobile device.

## **6.2 Students' assessment**

Because of the heterogeneity in the heritage language classrooms, the teachers mentioned numerous times how they try to adapt their teaching to the students' needs. But this was not the reality for many teachers when it came to assessment. Many teachers assess their students through the traditional methods of using written exams, but others try to find more creative ways to assess students and even give them personalized assessments depending on their proficiency level. This is again, very personal to the teacher and the group of students, as teachers with younger students tend to avoid exams because of the age of the students and the possibility of creating feelings of anxiety. Difficulty of assessment in heritage language classes due to the different proficiency level of the students has been mentioned before by Willoughby (2014). According to her research, the teachers face the same issue with assessment in Australia, where the heritage language curriculum has not been developed adequately to allow for the proper reward and encouragement of highly proficient learners while also rewarding the less proficient learners. Even though many designs for distinctive assessment have been tested, they have all been rejected, because of the fear of creating a division between the students and possibly penalizing more advanced students (Willoughby, 2014). The teachers that reported creating personalized assessment for students had more than five years of experience, which might be related to their decision and skills to properly assess the learning needs of the students and adapt the assessment according to their level. Additionally, these teachers also have students over the age of 10, which makes it easier to have a conversation about the needs of a differentiated assessment and possibly avoid this division between the students, but it is not possible to know the effect this practice has on the students and their relationship.

## **6.3 Differences between more and less experienced teachers**

The importance of experience for PCK was highlighted by the results of this research. Experienced teachers such as T8 and T9 with more than 15 years of teaching experience expressed how experience guides you and it is through the mistakes and constant reflection that a teacher becomes better and able to manage the practical difficulties in teaching. One of the teachers with less experience, T4, mentioned numerous times in her interview how she feels insecure because of her lack of experience, which is understandable, given that it takes time to feel confident when teaching. This is in alignment with Richards et al. (1995), who argues that teaching experience is very beneficial for the development of PCK and with Watzke (2007), who claims that PCK develops through the experience of teachers, which includes areas such as instructional decision, that are informed based on teaching experience. Additionally, Mehrpour & Moghaddam (2018), reported that teachers with more experience were found to be more autonomous and less focused on details during the lesson, which agrees with the findings of this research.

Understanding the need for and facilitating differentiated assessment was one of the main differences between more and less experienced teachers. More experienced teachers also mentioned using multiple ways to assess the students, except for the traditional written exams. This is evidence of

advanced PCK, according to Bukova- Guzel (2010), who argues that teachers that are able to assess their students in different ways have higher PCK.

In two categories of PCK, it was found that two teachers use their experiences as students to organize and execute their lesson. T2 and T4, have less teaching experience compared to other teachers and this could be a reason why they choose to rely on their experiences as students to inform their teaching. According to the findings of Liu (2013), teachers with minimal experience tend to depend on their student experiences unlike experienced teachers that rely on their teaching experience to inform their teaching. This shift from student to teacher happens during the induction phase, meaning the first years of teaching, which is critical for the development of PCK, as the new teachers have the opportunity to apply their knowledge from teacher training. This finding could be an indication that PCK advances with time through teaching experience and opportunities for reflection which has been discussed before in the field of heritage language education (Lee, 2010; Park & Oliver, 2008)

Another area of PCK, where there was a difference between experienced and novice teachers was understanding learners' needs, where two teachers with less than two years of experience did not mention at all connecting the new information with previous knowledge, which is essential PCK knowledge (Sothayapetch et al., 2013). This of course does not mean that these teachers do not actually use this connection with previous knowledge in their teaching, they could have just failed to mention it in the interview

## **6.4 Challenges in heritage language teaching**

Many of the challenges that teachers face in heritage language education were presented in this research. The biggest challenge amongst all teachers was the heterogeneity of the students in the same classroom, as it is common to have students that speak Greek close to the level of a natural speaker and others that can barely communicate. This is a big challenge for the educators that have to adapt to a diverse body of students with different characteristics and learning goals (Aravossitas & Oikonomakou, 2018). This challenge is evident on all aspects of teaching from planning to instruction to assessment and the teachers feel like they have to work a lot harder than expected to meet the needs of the different groups and pay attention to all students, without leaving some behind. As we saw earlier in the chapter, heterogeneity is a phenomenon in heritage language classrooms in other parts of the world as well and is definitely one of the most prominent issues in heritage language education (Willoughby, 2014). Through all the hard work teachers do on the side as well as their genuine interest for students to succeed, it can be concluded that these teachers are passionate for improving and for delivering quality education to their students. Despite their effort, teacher training does not prepare teachers for dealing with diverse groups of students and there is no professional training for in-service teachers, even the ones that are seconded by the Greek government. These findings are in agreement with Chatzidaki (2019), who mentions that the preparation and professional development for seconded teachers is close to nonexistent even though the education institutions in Greece should be able to recognize and understand the challenges heritage language teachers face and the need to educate them further.

Some of the additional challenges found in the research were the lack of contemporary books that are appropriate for the age and the needs of heritage language students as well as the lack of support from parents. Both challenges have been discussed before by Loona & Wennerholm (2017), who also mentioned that most of the material used in heritage language teaching is ment for students that live in the country of interest and not for students that live abroad and have specific needs in order to achieve language proficiency. The context of the books is also important, as students in foreign countries do

not always understand the references in the books. The teachers would also like to have more support from the parents, with helping their children at home to practice Greek, so that they have opportunities to use the information they learned in the classroom before going to the next lesson.

## **6.5 Implications for teacher training**

The findings of the research highlight the need for improvements in teacher training education and the professional development of in-service teachers. Younger teachers who have less experience were found less capable of employing PCK in their teaching Van Compernelle and Henery (2014), argue that targeted professional training and intervention has a positive impact on teachers' PCK. This agrees with Richards et al. (1995), who found a positive influence of teaching experience on PCK. Especially workshops and training that provides opportunities for feedback is essential for developing PCK and allowing teachers to reflect on their practices as well as get advice on improving their teaching. Liu (2013) suggested that it is extremely important for the teachers to have these opportunities for feedback during their first years as teachers. This is because during the first years as teachers, major improvements in PCK have been noticed (Liu, 2013).

From the analysis it was also found that teachers with less experience feel less comfortable in the classroom and face practical difficulties with handling unexpected situations. To combat these challenges, according to Bukova-Güzel (2010), teacher training instructors should adequately prepare teachers for entering the classroom by providing them with real life opportunities where they will be able to consciously apply PCK. To manage that, appropriate planning is needed in order to organise experiences in a school setting. In connection with that, Chatzidaki (2019), suggested that seconded teachers should have extensive training before being transferred to their new posting, because of the unique challenges heritage language teaching has. This training could possibly help teachers deal with the challenge of heterogeneity in the classroom, which was one of the most persistent issues in their discussions. The teachers have a hard time adapting to the needs of all students with different levels of proficiency, which is a clear sign that further training and education is needed to overcome that.

## **6.6 Suggestions for future research**

In Sweden, education of immigrant children aims not only at promoting the attainment of the Swedish language but also at creating an environment where students can maintain and advance in their mother tongue (Loona & Wennerholm, 2017). Despite the focus on language maintenance, few studies have been conducted in Sweden to investigate language maintenance and language loss in immigrant children and therefore evaluate how successful heritage language maintenance in migrant children is (Loona & Wennerholm, 2017). There is one research by Namei (2012), who found that the children of Persian immigrants socialized a lot more in Swedish than in Persian. They were also found to be more advanced in Swedish than Persian. They would use Persian to communicate with their families but, when possible, they would use Swedish to communicate with other family members. Subsequently, it is unlikely that the children will pass on their heritage language by teaching it to their children. If this happens, the heritage language will be lost by the third generation (Fishman, 2012). The researcher attributes this shift to the low status heritage languages have in society and the limited opportunities to actually use the heritage language in social situations in Sweden. That research is evidence that language shift is happening in Sweden and more research should be done in the field of heritage to understand the needs of the students and the ethnic communities and promote language maintenance. Taking into consideration these previous findings as well as the results from this research that

showcased the challenges heritage language teachers face, it could be a motivation for further investigation on how heritage language teaching is conducted in Sweden, how it is organized and the additional support schools, teachers and students may need. Research in heritage language could also change the low status heritage languages have in society and provide the government and the field with useful advice on how to improve heritage language teaching and learning.

In regard to PCK, it would be beneficial to conduct more research that is focused on language teaching since most of the existing literature is on mathematics and natural science subjects (König et al., 2016). According to Evens (2020) because of the limited amount of existing research in PCK and language teaching there is no unison regarding the conceptualization of PCK in language teaching and developing a concrete theoretical background with clear guidelines can help the field by allowing the relation of findings. In addition to that, conducting research on PCK in bigger samples would enable generalizations and even comparisons between domains, with the condition that an appropriate large scale instrument would be developed (Evens, 2020). Finally, in order to better understand how teaching experience contributed to PCK it would be valuable for future research to focus on following teachers during their teacher training and their first years in the classroom , which would hopefully make understanding the relationship between PCK and teaching experience in more depth (Evens et al., 2019)

## 7. CONCLUSION

This research was focused on exploring how Greek heritage language teachers in Sweden employ PCK in their teaching as well as the challenges they face. Through their answers, the research also aimed to find out whether there is any significant difference in their PCK based on their teaching experience. From the findings, it was found that teachers employ PCK in their teaching, mostly by adapting the material and instruction methods to the age, proficiency level and interests of the students. Adaptation was suggested to be key for the teachers and one of the main characteristics of their instructions. Regarding the second research question, more experienced teachers were found to be more autonomous in the classroom, having more confidence and being able to adapt to unexpected situations more easily. On the other hand, less experienced teachers were found to struggle with confidence in their teaching, as well as fear unexpected situations and having the need to be very well prepared. They were also found to lack the ability to connect the new information with the information the students already have, which is one of the essential characteristics of PCK (Sothayapetch et al., 2013). For the third research question, the results initiated that heritage language teachers face several challenges and are in need of additional support both from the local government and the Ministry of Education in Greece, that is responsible for seconded teachers. The heterogeneity of the proficiency levels of the students as well as the inadequate preparation to deal with such diverse classrooms in terms of language needs, were found to be the top challenges teachers face. This has implications for teacher training, since it showcases the areas that teachers need more training on and highlights the need for targeted professional development for heritage language teachers.

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# Appendix 1

## INTERVIEW GUIDE

### Personal information

1. How long have you been teaching Greek as a second language?
2. What is your highest educational degree achieved? What was your major?
3. What age range of students have you taught during your career?
4. Do you have another position besides your teaching role?
5. Were you born in Greece?
6. When did you move to Sweden?

### Plan suitable instructional goals for lessons

- How do you plan for your lesson? Do you create a plan?

### Select and design learning tasks

- How do you choose each lesson's learning objective and how do you select the learning tasks for the day?
- How do you stimulate learning in your lesson? Through listening to a lecture or any other way?
- Do you design the learning tasks before the lesson? What do you take into consideration when designing them?

### Evaluate and choose published materials /Adapt commercial materials/ Make use of authentic materials

- Do you use the official textbook from the Greek ministry of Education for students in Greece in your teaching?
- Do you include any other materials except for the textbook?
- How do you choose the extra material you will present to the students? Do you make any adaptations?
- Do you create any authentic materials for the students?

### Understanding learners' needs:

- How do you start teaching a new concept to your students?
- Do you consider students' pre-knowledge and thinking before you start your teaching?
- Do you connect this material with previously taught concepts?

### Diagnose learners' learning problems:

- How do you prevent common mistakes or misconceptions that students might make?
- How do you know if something will be difficult for the students to understand?

### Evaluate students' learning / Adapt tests

- What techniques do you use to check if the students have properly understood the new material you have taught them?
- Do you create unique tests for assessment based on students' level of proficiency / age / language abilities?

#### **Make appropriate use of technology**

- Do you use technology in your teaching? If yes, in what way?

#### **Evaluate their own lessons**

- How do you evaluate your lessons?
- How do you adapt your teaching after evaluation?

#### **Problems when teaching Greek**

- What problems do you face when trying to implement pedagogical practices while teaching Greek: time? Students? Books? Parents?
- How do you solve the problems?

# Appendix 2

## Interview guide in Greek

### Interview guide

#### Personal Information:

- Γεννήθηκες στην Ελλάδα;
- Πότε μετακόμισες στη Σουηδία;
- Έχεις κάποιο πτυχίο από ΑΕΙ? Από ποια σχολή και με ποια ειδίκευση;
- Πόσο καιρό διδάσκεις τα ελληνικά ως δεύτερη γλώσσα και πού έχεις διδάξει;
- Τι ηλικίες έχεις διδάξει στην πορεία σου ως καθηγήτρια ελληνικών
- Δουλεύεις και σε κάτι άλλο παράλληλα με τη διδασκαλία των ελληνικών;

#### Plan suitable instructional goals for lessons

- Πώς προετοιμάζεις το μάθημα; Κάνεις κάποιο πλάνο;

#### Select and design learning tasks

- Πώς επιλέγεις τις διδακτικές δραστηριότητες κάθε μαθήματος και τις ασκήσεις που θα κάνουν τα παιδιά στην τάξη;
- Πώς ερεθίζεις τους μαθητές κατά τη διάρκεια του μαθήματος;
- Μέσω της ομιλίας; ή κάποιας άλλης μεθόδου;
- Προετοιμάζεις τις μαθησιακές δραστηριότητες πριν το μάθημα; Τι λαμβάνεις υπόψιν κατά τη δημιουργία τους ;

#### Evaluate and choose published materials /Adapt commercial materials/ Make use of authentic materials

- Χρησιμοποιείς το επίσημο εγχειρίδιο του υπουργείου παιδείας ή κάποιο βιβλίο σχεδιασμένο για τη διδασκαλία της ελληνικής ως δεύτερης;
- Χρησιμοποιείς άλλο υλικό εκτός από το βιβλίο;
- Πώς επιλέγεις το επιπρόσθετο υλικό που θα χρησιμοποιήσεις; Κάνεις κάποια τροποποίηση στο υλικό εάν χρειαστεί;
- Δημιουργείς αυθεντικό υλικό για τους μαθητές σου;

#### Understanding learners needs:

- Πώς ξεκινάς να διδάσκεις κάτι καινούργιο στους μαθητές σου;
- Λαμβάνεις υπόψιν τις κερτημένες γνώσεις των μαθητών ;
- Συνδέεις με κάποιο τρόπο το νέο υλικό με το παλαιό;

#### Diagnose learners learning problems:

- Πως αποφεύγεις πιθανά κοινά λάθη που μπορεί να κάνουν οι μαθητές;
- Πως καταλαβαίνεις εάν κάτι θα είναι δύσκολο για τους μαθητές / νοητικά απαιτητικό;

**Evaluate students learning / Adapt tests**

- Ποιες τεχνικές εφαρμόζεις για να ελέγξεις εάν οι μαθητές έχουν κατανοήσει αυτό το νέο κανόνα/ ιδέα/ τεχνική που τους έχεις διδάξει;
- Δημιουργείς προσαρμοσμένα διαγωνίσματα με βάση το επίπεδο των μαθητών / την ηλικία / τις γλωσσικές τους ικανότητες;

**Make appropriate use of technology**

- Χρησιμοποιείς τεχνολογικά μέσα στη διδασκαλία σου; Εάν ναι, με ποιο τρόπο;

**Evaluate their own lessons**

- Πώς αξιολογείς το μάθημά σου;
- Πως προσαρμόζεις το μάθημά σου μετά από αυτή την αξιολόγηση;

**Challenges of teaching Greek**

- Ποια προβλήματα αντιμετωπίζεις όταν προσπαθείς να εφαρμόσεις παιδαγωγικές πρακτικές κατά τη διάρκεια της διδασκαλίας ; Χρόνος, γονείς, βιβλία, εγκαταστάσεις
- Πώς επιλύεις αυτά τα προβλήματα;

# Appendix 3

Consent form

## **Master's Programme in International and Comparative Education (2021)**

### **Consent form**

We hope you are willing to take part in this study, which aims to investigate teaching Greek as a second language. The objective of the study is to get more insight into how teachers use their pedagogical knowledge to teach Greek as a second language in schools. In order to carry out the study, data in the form of interviews would need to be collected during the month of March - April 2021. The results will be kept anonymously and used in a Master's thesis to be submitted to the Department of Education at Stockholm University.

We ask for your approval to use the data collected for the study. Participation is always voluntary. In order to collect data for the study, we need your signed consent on the second page of this form. Even in the case that you sign the form at this point, it is still possible for you to withdraw from participation at any time without giving a motivation why.

During the course of the student working on the study your personal data are protected and will not be disclosed to unauthorized persons. We will store recordings and other details in a safeguarded manner. Any photographic/video/sound collected in the first phase will be anonymized, coded and transcribed as text. This will be done immediately upon transmission in order to disable any potential for detecting that you have participated. The consent forms will be kept in locked storage at Stockholm University so that they may not be linked to our recording. When the study is completed and the thesis has passed assessment, we will destroy the original data that has been collected (e.g., film/sound files, or digital survey).

In order to complete the study, it is very valuable for us to receive your consent. Please contact us in case you need further information.

Eleni Alkalaki

Master Student

Email: [elenia1997@yahoo.com](mailto:elenia1997@yahoo.com)

Telephone: +46 700274926



Date

#### Consent Form

I have taken part of the information of the study and accept that the material is recorded and stored for use in the master's thesis.

- ☐ Yes
- ☐ No

The name of the informant, date and signature.....

#### **Further regarding guidelines and legislation related to the study**

The personal data essential for carrying out the study are regulated according to the requirement of consent (samtyckeskravet) in the Swedish legislation (the Personal Data Act, in Swedish) Dataskyddsförordningen. Stockholm University is responsible for personal data. According to the law of protection of Personal Data Act (dataskyddsförordningen f.o.m. 25 maj, 2018) you are entitled free access to all information involving you and if needed, to have incorrect information amended. You also have the right to request deletion, limitation or objection to the use of personal data, with an opportunity to lodge a complaint to the data security officer at Stockholm University at [dpo@su.se](mailto:dpo@su.se) alternatively the Swedish Data Protection Authority at <https://datainspektionen.se/kontakta-oss/>. Please approach the supervisor or student for further information.