

Characteristics of teachers with positive attitudes towards school self-evaluation in Greece

A comparison between primary and secondary school teachers

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IV

Abstract

Quis custodiet ipsos custodes? (Who will guard the guardians themselves?)

An important process in the fields of school accountability and school improvement is school self-evaluation. The main advantage of school self-evaluation is also its main challenge: the prefix 'self'. When the guard is also the guarded, challenges are emerged about the validity of the process. A prerequisite for school self-evaluation of good quality is the positive attitude of the teacher towards school self-evaluation.

Using three theoretical frameworks, this thesis identifies factors that are positively associated to teachers' positive attitudes towards school self-evaluation in Greece. In particular, 15 independent variables have been measured in order to identify which of them are positively correlated to a positive attitude towards school self-evaluation. Furthermore, a comparison has been made between primary and secondary school teachers in Greece in order to find whether these factors are differentiated between primary and secondary school teachers.

The findings suggest that the teachers who have a master or doctoral degree, the teachers who have a collaborative culture and the teachers who accept some basic value assumptions are more likely to have a positive attitude towards school self-evaluation than teachers who do not have the characteristics mentioned above. The findings may be useful to teacher training institutes, school self-evaluation experts and school directors.

Acknowledgment

Each project in human society has been influenced by previous generations' projects. Implicitly or explicitly we feel, act, and react based on our ancestors' feelings, actions, and reactions. The acknowledgement of these previous generations is the one side of the coin. The other side is the motivation that the future generations give us. I wrote this thesis having in mind both my ancestors and my descendants. The prefix 'my' is neither limited in my family, nor in my nation. The 'my' refers to the famous and infamous people that work silently or less silently for the improvement of what we call education. Names and current positions are playing minor role. This Master thesis is dedicated to the vast majority of people who care about a better education and who may not expect acknowledgement; whatever their names are, whatever their positions, wherever they work. It is my pleasure to dedicate this thesis to them. However, there are some people who have played a special role during the writing of this thesis. These people are:

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Abbreviations

CER	Comparative Education Research
CfBT	Center for British Teachers
ECB	European Central Bank
ESSE	Effective School Self-Evaluation
EU	European Union
GDP	Gross Domestic Product
IEP	Institute of Educational Policy
IIEP	International Institute for Educational Policy
ISIP	International School Improvement Project
LAOS	Looking at Our Schools
NATO	North Atlantic Treaty Organization
OECD	Organization for Economic Cooperation and Development
PISA	Programme For International Student Assessment
SICI	Standing International Conference of national and regional Inspectorates of education.
SSE	School Self-Evaluation
STEM	Science, Technology, Engineering, and Mathematics
UK	United Kingdom

UNESCO	United Nations Education, Scientific and Cultural Organization
ZEBO	ZelfEvaluatie in het BasisOnderwijs (Self-Evaluation in Primary Schools)
ΣΜΕΑ	Σχολικές Μονάδες Ειδικής Αγωγής και εκπαίδευσης (Special Needs Schools)

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1 Introduction

Although decentralization and the related school autonomy are worldwide trends since 80s, Greece still has one of the most centralized educational systems in the world (Winkler, 2016). One of the most prominent tools towards the decentralization of education is school self-evaluation (hereafter SSE). In SSE “the individual school is considered as the primary unit of improvement” (Devos & Verhoeven, 2003, p. 403). In Greece the inspection of schools has been cancelled since 1982. After 34 years without any kind of school evaluation the *fear of evaluation* characterizes Greek teachers (Zouganeli, Kafetzopoulos, Sofou, & Tsaos, 2007). Moreover, the post-2010 financial crisis in Greece leads to substantial budget cuts in public sector that are associated with school closing and teachers’ firing. In such a context, the evaluation policy is a difficult task for the Ministry of Education in Greece. In order to provide findings that would facilitate the creation of an evaluation culture in Greek teachers, this master thesis is dedicated to identify which characteristics of teachers are predictors of a positive attitude towards SSE.

1.1 Purpose of the study

The ultimate purpose of this master thesis is to facilitate the creation of a culture of evaluation in Greek teachers. The ways that this study uses in order to achieve this purpose are two: i) it seeks to identify the characteristics of the teachers who are more likely to have a positive attitude towards school self-evaluation and ii) to identify whether these characteristics are differentiated between the two large groups of teachers: primary and secondary school teachers. Both of these tasks are geographically limited in Greece. The title of this thesis is consisted by four words (or phrases): Characteristics, Teachers’ attitudes, School self-evaluation, Greece. The rationale for the selection of these phrases and words is explained in the following paragraphs.

1.2 Rationale: Why school self-evaluation?

In 1983, Donald Schön, a leading M.I.T. social scientist wrote the book ‘The Reflective Practitioner: How Professionals Think In Action’ (Schön, 1983). In this book, Schön argues that professionals know more than they can write; they rely less on academic knowledge and more on their daily practical knowledge. Eleven years later, Michael Gibbons and his

colleagues labeled the way that this implicit and practical knowledge is produced as ‘mode 2’ knowledge production (Gibbons et al., 1994). In the same period, a former deputy minister of Quebec's Ministry of Education wrote: “‘We now speak of 'context-driven' research, meaning research carried out in a context of application, arising from the very work of problem solving and not governed by the paradigms of traditional disciplines of knowledge” (Limoges, 1996, p. 14). In this context, I argue that the ‘mode 2’ knowledge production is represented in schools by the term ‘school self-evaluation’ (SSE). The phrase may be deceptive: SSE is not only an evaluation process; it goes further. One of the most important academics of SSE, John MacBeath, defines SSE as “a process of reflection on practice, made systematic and transparent, with the aim of improving pupil, professional and organizational learning” (2005a, p. 4). By this view, SSE strengthens school’s capacity to search for solutions. These context-driven solutions are difficult to be provided using isolated experimental studies. This is the main advantage of SSE: The exploitation of the particular (and unique) school context in order to facilitate school improvement and school effectiveness. SSE has been widely used in European countries since 90’s (Simons, 2002). A reason from the emerged usage of SSE is the lack of relevant school effectiveness research studies about the practical ways for school improvement (Schildkamp & Visscher, 2009). During 80’s and 90’s school effectiveness research identified several effectiveness enhancing conditions (Cotton, 1995; Levine & Lezotte, 1990; Purkey & Smith, 1983; Sammon, Hillman, & Mortimore, 1995; Scheerens, 1992). However, school effectiveness research do not inform schools how to construct these conditions and in which way underperforming schools can do better (Schildkamp & Visscher, 2009). SSE mechanisms are able to collect reliable context-related data which can be used for school improvement plans which are different for each school (Creemers & Kyriakides, 2010).

Another categorization of reasons that lead the emerged usage of SSE is presented by Chapman and Sammons (2013) who identified three reasons to use SSE: economic reason (it is cheaper than inspection), accountability reason (schools must hold accountable to society) and improvement reason (schools have to look always for improvement). In regard to economic reasons John MacBeath argues that “...it is now seen as more economical and growth promoting to put evaluation in the hands of schools themselves” (2005b, p. 34).

SSE can be interpreted as a mean for emancipation, as an alternative to inspection schema, as a tool for school improvement and as an aspect of teachers' professionalism. The elaboration of all these topics is provided in the next chapter under the name 'Contextualization'.

1.3 Rationale: Why teachers' attitudes?

In this section, the role of the teacher and the role of the attitude are provided both separately and combined.

1.3.1 The role of the teacher in school self-evaluation

“Investing in professional development [of the teachers] is not a cost, it’s an investment. Every other country that succeeding well knows that, whether it is Australia, Canada, South Korea, Singapore, Hong Kong or Shanghai” (Robinson, 2016).

SSE does not come free of problems, misconceptions and unintended effects. Many of these challenges have to do with the main actor of school improvement: the teacher. A non-exhaustive list of teacher-related challenges is provided below:

1. SSE may be seemed as ritualized or bureaucratic process (especially when it is imposed and handled by external forces) rather than a practical and reliable school-improvement process (Avitzis & Mavromatidis, 2012; Chapman & Sammons, 2013).
2. Sometimes teachers rely on a pre-determined, ready-made, ‘of-the-shelf’ approach to SSE. This one-size-fits-all approach is easier to be adopted instead of a real bottom-up approach. It is the case that SSE is transformed to self-inspection (MacBeath, 2005b).
3. The contradictive role of school teacher and interval evaluator of the school (Mathison, 1991) affects teachers’ willingness to highlight hard truths about their school (Chapman & Sammons, 2013).
4. “Teacher unions are perceived as hindrance to school self evaluation activities” (OECD, 2013, p. 435).
5. Teachers perceive SSE activities as time-consuming and difficult (Vanhoof, Van Petegem, & De Maeyer, 2009).
6. Teachers may use SSE to promote their own interest; micro-politics of the school may act as a hindrance to school improvement (Ball, 1987; Berman, 1978).

7. Teachers may be afraid of possible vindictive behaviors when it comes to the evaluation of the school's management (E-Governance, 2016); The principal-teacher relationship may be a crucial factor of SSE (OECD, 2013).
8. The ideal balance between external and internal evaluation and consequently between the accountability and improvement logic has not been found yet (F. Janssens & G. van Amelsvoort, 2008; SICI, 2003). "There was not a single or simple way of achieving this balance" (SICI, 2003, p. 9).

All these challenges undermine the quality of SSE. Teachers are often identified as a crucial factor in order to improve the quality of SSE (MacBeath, 1999; Schildkamp & Visscher, 2010; Vanhoof et al., 2009). In fact, the process of SSE "...can be successfully implemented only if the attitudes towards self-evaluation of the participants involved in the process are positive" (Drvodelić & Domović, 2016).

1.3.2 The role of the attitude

Attitude is defined as: a) the evaluation of something that is in our memory (Fazio, Jackson, Dunton, & Williams, 1995); b) the tendency towards the evaluation of something (Eagly & Chaiken, 1993); c) the categorization of something along an evaluative dimension (Zanna & Rempel, 1988); d) The tendency to respond positive or negative to something (de Souza Barros & Elia, 1997); e) "the mental position with regard to a fact or state" (Merriam-Webster, 2016); f) "the tendency to behave towards the object so as to keep or to get rid of it" (Culbertson, 1968, p. 79).

Some researchers (Bagozzi & Burnkrant, 1979; de Souza Barros & Elia, 1997; Kauts & Kaur, 2013) treat attitudes as a construct consisting of three components (under the label ABC model): the Affective component, the Behavioral component and the Cognitive component. Others (Edwards, 1990; Edwards & Von Hippel, 1995; Malhotra, 2005; Verplanken, Hofstee, & Janssen, 1998) separate these elements and their prediction capacity over possible behavior.

Attitude does not stand alone but it is characterized by "how intensely a person feels about the attitude object" (Culbertson, 1968, p. 80). The degree of intention may depend on i) social roles, ii) the extent that this attitude is irreversible, iii) the extent of the imposition of this attitude from 'above' and iv) the certainty about this attitude (Culbertson, 1968).

Attitudes have played crucial role in history. For example French revolution was partly based on attitudes towards the socio-political situation of that time (Petty & Krosnick, 2014).

Attitudes sometimes can be identified as oversimplifications of the complex world in order to understand it; this is the case for stereotypical attitudes. Attitudes can only be observed by the behavior that stems from them. But this is not always the case: Wicker (1969) who reviewed 30 relevant studies argues that in most cases behavior and attitude were unrelated or slightly related. This can be easily understood if one takes into consideration the law requirements that should be followed even if one does not have the appropriate attitudes towards the law. Moreover, social pressures can lead our behavior even if our attitudes are different. On the other hand Gordon Allport, a famous social psychologist, identified the attitude concept as “the primary building stone in the edifice of social psychology” (Allport, 1954, p. 451).

1.3.3 The role of teachers’ attitudes towards school self-evaluation

Teachers are important stakeholders in a SSE process. This section indicates points in the relevant literature, which shows that attitudes, perceptions and views of teachers and other school staff towards SSE are crucial factors for an effective SSE.

The project ‘Effective School Self-Evaluation’ ran by the Standing International Conference of Central and General Inspectorates of Education (SICI) across 14 European Inspectorates during 2002-2003 created a framework in order to evaluate how effective is SSE. The report concludes that schools with effective SSE have also staff with strong commitment to SSE. Representatives from Portugal, Ireland and Scotland argue that teachers’ training and teachers’ support in SSE are possible areas for improvement in their educational systems.

Chapman and Sammons argue that “only when this [consensus among teachers] can be achieved will school self-evaluation fulfill its aims of promoting student and professional learning” (Chapman & Sammons, 2013, p. 15).

Anton De Grawen and Gabriel Carron from IIEP/UNESCO, comparing different models of school supervision, argue that despite the fact that “quality cannot be imposed from outside” (p. 166), the external supervision system is better than SSE, “(...) when teachers are poorly trained and motivated (...)”. This signifies how important the motivation of teachers is for the use of SSE.

Jan Vanhoof et al. (2011) draw on their research finding from 96 schools in Belgium conclude that “attitudes with regard to self-evaluation [...] are powerful predictors of the quality of self-evaluation” (p. 277). According to the same research principals have more positive attitudes towards SSE than teachers.

Countries can support SSE by removing teachers’ fear for evaluation. Ireland, a country that SSE is highly promoted, can be used as example: The LAOS (Looking at Our Schools) framework “as implemented by the inspectors, had affirmed teachers and schools, dispelled fear of evaluation convince school staffs that this is the way to do it” (Mcnamara, 2006, p. 577).

Kim Schikamp and Adrie Visscher from the University of Twente found that positive attitudes towards SSE are related to the usage of a School Performance Feedback System that is used in Dutch schools. In particular, “the degree to which teachers felt that they received sufficient training in the use of ZEBO” (Schildkamp & Visscher, 2009, p. 157) has impact on the use of the ZEBO results. ZEBO is the Performance Feedback System that was used in Dutch schools. This case shows the importance of teachers’ feelings. Feelings are elements of attitudes (Bagozzi & Burnkrant, 1979; de Souza Barros & Elia, 1997; Kauts & Kaur, 2013).

Nelson and Ehren (2014) argue that teachers’ attitudes towards SSE are important only in cases, which SSE is a collaborative process and not imposed from upwards.

MacBeath (2005c) as cited by Vanhoof et al. (2009) argue that SSE cannot work if teachers’ attitudes are not positive. Vanhoof et al. (ibid) state that the attitude towards SSE is a factor that determines the extent to which SSE would have worthwhile results.

To sum up, teachers’ attitude towards SSE are playing crucial role for SSE it is worthy to be investigated in countries like Greece that evaluation culture is absent. More about the Greek context will be elaborated in the next paragraph.

1.4 Rationale: Why Greece?

The research site is Greece, an 11 million people country in the periphery of Europe, member of European Union since 1981, member of OECD since 1961, member of NATO since 1952.



Figure 1. Greece within Europe

In recent years Greece faced a tough financial crisis. Despite the fact that Greece represents only the 0.3 % of the GDP of the world, the country was in the limelight for the worldwide economic stability in 2015. Although this fact helps to interpret the findings of this thesis, the main reasons for the selection of Greece are different.

The first reason to select Greece is that the evaluation culture in Greek teachers is absent: “Greece faces a major challenge in developing a culture of evaluation, as external evaluations have historically been distrusted, particularly by the teaching profession” (Nusche, Earl, Maxwell, & Shewbridge, 2011, p. 45). Greece is the only European country that lacks evaluation of its schools since 1982 (Theoharis, 2011). The phrases ‘school evaluation’, ‘school self-evaluation’, ‘teachers evaluation’ and any possible combination, which contains the word ‘evaluation’ is able to generate strikes, public debates, policy changes and political arguments. A need for evaluation in the public sector has been emerged during the recent post-2010 financial crisis and is now widely accepted by Greek society (Mavromihali, 2011). Thus, research findings that facilitate the creation of an evaluation culture in Greek teachers are very useful in this context.

The second reason is my prior experience of SSE in Greece. I was in a very difficult situation to risk losing my job as a teacher in the middle of the Greek financial crisis because I just wanted to write my opinion about the school, during a pilot school self evaluation program for Greek Vocational Schools in 2011. The blackmail by the director of the school (he required from teachers to present the school as a ‘paradise’ in their reports) was a good reason for me to be involved further on this topic and to identify the reasons for this unethical approach. In other words, I believe that SSE in Greece is transformed into a bureaucratic process which

will only produce well looking (or even fake) reports for each school. Knowing the profile of the teacher who has positive attitude towards SSE, the policy makers can recruit the appropriate staff and teacher-training institutions would be able to add relevant SSE training courses in their curriculums.

Thus, the rationale for the selection of Greece is twofold: the personal involvement with SSE and the interest about the public wellbeing of my country by strengthening the quality of education through SSE.

1.4.1 The brief history of school and teachers evaluation in Greek education

Before the establishment of the Greek state, Greeks have lived under the Ottoman Empire occupation since 1453. This period ends with the Greek Revolution in 1821 and the establishment of the Kingdom of Greece in 1830. These 400 years of suppression had an impact in Modern Greek education. The orthodox church became the main (and maybe the only) factor that enable some kind of national education at least for the first 200 years of Ottomans occupation (Terzis, 2010). The reason for the strong role of the church in education was that the church was the main representative of the Greeks in the Ottoman Empire. It was the tax receiver, the law provider, the religion provider, the political representative and the main responsible for the illegal or revolutionary actions of the non-Muslim population of the Ottoman empire (Terzis, 2010). Due to this strong role of the church the spreading of the Enlightenment ideas to Greek schools was limited. The church resisted to every new concept and every revolutionary idea that was able to change the status quo and the church's powerful role within the Ottoman Empire (Kitromilides, 1996; Terzis, 2010). Despite the fact that the central role of the Orthodox Church in Modern Greek educational system is not the same, Greek schools are still highly influenced by the church:

- Classrooms are decorated with icons of Jesus and Virgin Mary.
- A Christian morning pray still signalize the beginning of the school day
- The parents are obligated to provide written statements that they are not Christians if they wish to exclude their children from the religious courses

- The religious courses present the other religions as ‘misunderstandings’ of the real orthodox religion
- The miracles of the Christ are presented at the schoolbooks as something that has really happened.

I choose to briefly present this tradeoff between Orthodox church and Greek education because the historical continuity of Greek education is essential element in order to better understand the current situation (Terzis, 2010). We have seen until now that the church was the main provider of education before the establishment of the Greek state. It has been also indicated that the church has still a powerful role in current Greek education.

After the establishment of the Greek state in 1830 the following phases of school evaluation are important:

1833: The minister of education is able to set up inspectors.

1941: The publishing of the peer tutoring guide (Kokkonis, 1860), imposed several moral constrains on teachers’ life. For example, according to this guide, when the teacher was in a wedding, he (only men were allowed to teach) was not allowed “to be seemed as the person who causes the cheerfulness” (Bouzakis et al., 2011, p. 10).

1895: Establishment of Inspection Council for the middle education

1964: Establishment of a Pedagogical Institute (*Παιδαγωγικό Ινστιτούτο*) as the responsible body for the inspection of the schools.

1967: A military coop in Greece took place. Closing of the Pedagogical Institute by the military dictatorship. Establishment of several Higher Regional Councils for Primary and Secondary Education (*Ανώτερα Περιφερειακά Υπερσειακά Συμβούλια Δημοτικής και Μέσης Εκπαίδευσης*). These councils had administrative responsibilities as well as teachers’ punishment responsibilities.

1974: End of the militaristic dictatorship. The responsible for the evaluation of the teachers were the Inspectors of Education (*Επόπτες Εκπαίδευσης*).

1982: The Inspectors of Education were abolished due to the criticism by teachers' unions (Ministry of Education, 2012). The main argument of teachers was that the inspectors did not evaluate what was happened in the school but they evaluated teacher's personality (in and out of school) and this happened in the middle of political charged era (Goupos & Minas, 2006).

1982-2016: Greek schools are working without any kind of school evaluation. School evaluation in Greece has been described as 'threat and ghost' (Kapahtsi, 2008). New legal frameworks about school evaluation have been made in 1985, 1997 and 2002. All these frameworks remain unused due to the strong resistance by teachers and due to high political pressures.

1.4.2 Why teachers resist to school evaluation in Greece?

In the relevant literature several reasons can be found about the resistance of Greek teachers towards school evaluation. A non-exhaustive list is presented hereafter.

Centralization: "Greek schools are governed by the school directors who are assisted by deputy directors. However, both the director and the deputy director do not have any authority over the teaching staff and the curriculum. Until now their only work has been to keep teachers informed about the circulars issued by the Ministry of Education" (Verdis, 2002, p. 30). In such centralized systems teachers are afraid that the external evaluators may not know the local context.

Permanency: Greek teachers are never laid off. Only in extreme cases can the state fire a teacher. The fear for the loss of the permanency is another factor for resistance towards evaluation. When a teacher knows that he/she would probably lose this permanency, why to accept evaluation?

Seniority: Seniority is the main criterion for the selection of directors (Verdis, 2002). Although this has change a little and new criteria have been added in 2015 and 2016, the seniority still determines the possibility for a teacher to acquire a higher position in the hierarchy. The older teachers, that have already waited so many years, do not have the motivation to accept evaluation. They may lose their position by younger teachers with stronger qualifications.

Political determination: Governmental changes have impact in administrative positions (OECD, 1997). There is always a fear that political favors would be the main criterion for the evaluation of teachers and schools.

Imposed policies: Pressures and recommendations from international and regional entities as OECD and EU (Dimitropoulos, 2002) may create a negative climate because these policies are seemed as imported policies and not as a local need.

The 'underdog culture' (Diamantouros, 1995): The tension in some cultures to afraid the "change"; the fear that something or someone will cheat them; the self-perception of the victim.

The 'broken phone': the 'broken phone' is an old childish game: a message is passed on, in a whisper, from child to child. In the end, the final child hears a completely differently message than the original because the whispers could not be heart very good. This is the case for SSE in Greece (Bourletides, 2014): The Ministry of Education provides seminars of bad quality to school counsellors. The school counsellors provide bad quality information to school directors and the directors misinform the teachers. Hence, a misinformed school community cannot have a positive attitude towards SSE.

The lack of training: The lack of adequate training in teachers education (Recalidou & M., 2005) affect negatively the attitudes towards evaluation (Koutouzis, 2003).

The previous authoritarianism: The inspectors body's techniques during the dictatorship (1967-1973) have not forgotten yet (Kapahtsi, 2008; Theoharis, 2011).

Professional autonomy protection: It seems logical for a professional to resist to anything that reduces his/her professional autonomy.

Political constraints (Theoharis, 2011): Governments remain reluctant regarding the implementation of unpopular evaluation policies because teachers population is approximately 150,000. Political parties find it difficult to go against to these 150,000 voters.

Uncertainty avoidance (Hofstede, 1984): The uncertainty avoidance leads the team members to accept the existing institutions and avoid the change. Greeks, as a Mediterranean country's citizens have a high degree of uncertainty avoidance culture (Theoharis, 2011).

The ongoing financial crisis: After 2010 Greece is facing a multiple shock in several aspects of everyday life. Youth unemployment is 64%. National GDP has been reduced by one third between 2010 and 2015. Prior firings of teachers have been imposed without any kind of evaluation and due to imposed policies by IMF, EU, and ECB (the so-called *troika*). It is not the best time for the beginning of school evaluation.

The lack of supportive structure for school evaluation (Ministry of Education, 2012): Evaluation has been absent for three decades. The consequence is that the readiness and the capacity for evaluation are reduced.

Biased opinions: Every discussion about evaluation leads to two possible conclusions in Greece: the first possible conclusion is that evaluation is the solution for everything. The second is that evaluation is the disaster of everything (Theoharis, 2011). These biased views are not in favor of any evaluative culture.

1.4.3 Historical background of school self-evaluation in Greece

SSE is not a new concept for Greece. Four prior attempts have been made in order to introduce SSE in Greek schools. Hereafter, these attempts are briefly presented.

The first attempt: 1997

The first program about school self-evaluation in Greece has been attempted in 1997. The responsible authority for the research in education was the Pedagogical Institute. A section within the Pedagogical Institute was the Department of Evaluation. This department under the surveillance of Joseph Solomon, the introducer of school self-evaluation in Greece, undertook a three years experimental project in a limited number of schools, in order to formulate a context-related evaluation framework for all schools of Greece. The name of the program was ‘Internal Evaluation and Scheduling of Educational Work in the school’ (Solomon, 1999). The general task was ‘the dissemination and stabilization of a type of evaluation [...] that is both friendly and meaningful’ (Solomon, 1999, p. 9). SSE was identified as ‘a powerful mean for the strengthening of school in the context of decentralization process’ (Solomon, 1999, p. 20). In the end of the program a proposal was made about a SSE system. In this proposal the author argue that a change at teachers’ perceptions and aspirations for SSE is a required precondition for the success of SSE (Solomon, 1999). This is related to the main topic for this

master thesis: This thesis is dedicated to find characteristics of teachers who have positive attitude towards SSE. Further details about teachers' attitudes towards SSE have already provided in prior section.

The second attempt: 1997

The second attempt was implemented again from Joseph Solomon but this time as a part of a European program for the evaluation of the quality of education (Zouganeli et al., 2007). Five schools from Greece among 101 European schools have attended to this program. The conclusion was that "school self-evaluation is the appropriate start point for the easy introduction of educational evaluation in Greek schools" (Mantas, Tavoulary, & Dalavikas, 2009).

The third attempt: 2010

For two school years, 2010-2011 and 2011-2012, several schools from all the regions of Greece participated in a pilot project under the name "Evaluation of Educational work: Process of School Self-Evaluation". Every school from primary and secondary education have the opportunity to participate in this program. In the region that I was a teacher in this period, Epirus, only 1 primary school, 1 lower secondary school, 1 Vocational School and 1 private upper secondary school have been participated in the program. The vast majority of the schools deny the participation although a small financial compensation was provided in every teacher who participated in this program. My personal experience of this program was that the bureaucracy was the main characteristic of the process. Coordinators of teachers' teams have been invited to visit the support structures for SSE in order to be informed about this new concept. Ignorance about all aspects of SSE was the main characteristic in those visits; nobody knew what to say, what to suggest. In one of the schools that participate in the program, the teaching staff has been divided between the teachers who did not want to participate and the teachers who wanted to participate in SSE. The climate in the school got worst. In my school, the school director blackmailed me in order to write that everything was good in our school and the only problem was the lack of financial support from the Ministry of Education. This negative situation leads me to undertake a small survey in all the same type schools (vocational schools) of the country in order to find if a similar 'bureaucratic and fake-result' approach was implemented in other schools. The findings of the survey was

published in a congress (Avitzis & Mavromatidis, 2012). They are provided in the Literature Review chapter of the present study. Briefly, the main findings of the survey suggests that teachers who participated in this program stated that they afraid the possible revengeful behaviors by the directors, they perceived SSE as a bureaucratic process, they focused on painless issues and they focused on how school looks like and not how it is in reality (Avitzis & Mavromatidis, 2012). Schools had the opportunity to select only a specific area of school life. The two most frequently selected areas were the relationships between pupils and teachers (selected by 33% of schools) and the relationships between school and parents (Pasias et al., 2012). One can say that the most frequently selected areas are very ‘easy’ subjects and do not seem to be the main purposes of a school. Teachers have chosen areas for evaluation that have nothing to do with learning outcomes and teachers’ effectiveness.

Moreover, the most negative evaluated areas were: economics of the school, support that teachers receive for their professional development, the school physical environment (buildings etc.) and the equipment of the school (Pasias et al., 2012). These quantitative data taken by the Institute of Educational Policy are in line with Avitzis and Mavromatidis (2012) findings: the negative evaluated areas have nothing to do with teachers’ responsibility. In other words, teachers stated that the worst things in their school had nothing to do with them. For instance the buildings of the school have been evaluated negatively by the 45% of the schools; but the school building is not teachers’ responsibility. It is hard to find schools with negative self-evaluation of their students’ achievements or of their teachers’ effectiveness. The evaluation avoidance for the core issues of a school seems likely to have happened.

The fourth (and last) attempt: 2014

In 2014 all schools of Greece were obligated to be self-evaluated. This attempt was different from the previous three attempts because it was not a pilot program for specific schools but it was obligatory for all schools. School self-evaluation in 2014 was related to the teachers’ evaluation and the possible financial stagnation or even the firing of teachers. Teachers’ unions called their member not to participate in SSE. In the Appendix E the reader can find extracts from several brochures that teacher unions sent to schools in order to resist in SSE. The process of SSE faced substantial resistance. The national elections of 2015 were the end of this failed attempt. The new government postponed the obligatory SSE. Until October of 2106 that this thesis was published, the SSE was not implied to any school in Greece.

1.5 Rationale: Why searching for teachers' characteristics?

1.5.1 Research gap

Several research studies about teachers' attitudes towards evaluation (not self-evaluation) can be found in Greek literature (Anastasiou, 2014; Ghoula, 2006; Kasimati & Gialamas, 2003; Polyzos, 2007; Zouganeli et al., 2007); but research studies about teachers' attitudes towards SSE are very limited in Greece and often they are geographically restricted in one city. This limited literature is presented in Literature Review chapter. Moreover, there is a lack of research studies about teachers 'characteristics that are crucial for a better attitude towards SSE. By this way, a gap has been identified and a path for other similar studies is might opened.

1.5.2 Significance of the study

Knowing the kind of teacher that is more likely to have a positive attitude towards SSE, Greek education can acquire at least three advantages:

- The central educational authorities can adapt their requirements for teachers' recruitment in order to secure a better attitude towards SSE.
- Teacher training institutes can adapt their curriculums in order to provide a better training for SSE.
- School principals can rely on appropriate teachers to run the SSE, instead of imposing responsibilities to teachers with negative attitude to SSE.

1.6 The comparison: primary versus secondary school teachers

A recent comparative study in Greece shows that primary school teachers have different working conditions than secondary school teachers (Bouzakis et al., 2011). In detail, primary and secondary school teachers have been found to have different perceptions and opinions in the following areas: teachers' training, curriculums, school leading and control, relationships with parent and students, working conditions, school equipment, school economics, societal and psychological parameters in the school, proposals for improvement (Bouzakis et al., 2011, p. 285).

These differences had not been taken into consideration when the SSE process was designed in Greece. This is reflected in the printed material that has been distributed in order to support SSE. In particular, the observatory for SSE in Greece has published five guides in order to support SSE process. The titles of these guides are: General Framework, Educational Planning, Methodology and Research Tools, Action Plans, Draft Reports. The paradox is that these guides are the same for every educational level; from the pre-primary school to upper-secondary school. Moreover, the observatory for SSE in its website state that "The suggested procedures are common to all types of schools and all levels of education" (IEP, 2011).

I hold the opinion that the SSE processes have to be differentiated between primary and secondary school. In order to support this opinion, this thesis compares these two groups of teachers regarding their attitudes towards SSE and the predictors of their attitudes. The first research question is dedicated to support or reject this opinion.

1.7 Research Questions

The first question is about the comparison aspect of this study. It aims to identify whether there are differences between two main groups of teachers: Primary school teachers and secondary school teachers. The second research question is aiming to identify what are the factors that determine a positive attitude towards SSE.

- Research Question 1: To what extend primary schools and secondary schools are different regarding (a) teachers' culture, (b) teachers' professional capital and (c) teachers' acceptance of value assumptions?

- Research Question 2: To what extent teachers' attitudes towards school self evaluation can be predicted by knowing (a) teachers' culture, (b) teachers' professional capital and (c) teachers' acceptance of value assumptions?

1.8 Theoretical Framework

The possible explanation of teachers' attitudes and the comparison between the two groups will be based on teachers' professional capital (Hargreaves & Fullan, 2012), teachers' culture (Quinn & Rohrbaugh, 1983) and teachers' acceptance of assumptions that SSE is based (Kyriakides & Campbell, 2004). All three theoretical frameworks are elaborated analytically in the chapter 'Theoretical Framework'.

The first framework, professional capital, is focused on how educational systems can get the highest value from their investment on teachers' qualifications, experience and networking. Professional capital is consisted of three different types of capital: human capital, social capital and decisional capital. In this study these three kinds of capital are measured through 10 variables.

The second framework, the competing values framework, has been chosen to help the school level process: Knowing which kind of organizational culture is correlated with positive attitude towards SSE, school principals are able to allocate the relative responsibilities to the right teachers. For example if teachers with 'hierarchy culture' found to have negative attitudes towards SSE, then these teachers can be excluded from SSE processes. In this study the organizational culture is measured through 4 variables. The competing values framework has been already used by another study in Holland (Vanhoof et al., 2009) to determine teachers' attitudes towards SSE.

The third way, which has been chosen to predict teachers' attitudes towards SSE is the acceptance of 5 basic assumptions that SSE is based on. If the acceptance of these 5 assumptions found to be correlated to teachers' attitudes towards SSE, then the teacher training institutions can adapt their curriculum in order to facilitate the acceptance of these assumptions. These 5 assumptions are based on the 4 value assumptions that Kyriakides and Campbell (2004) argue that SSE is based. I have adjusted these value assumptions in the present study.

1.9 Methodology and Limitations

A questionnaire was distributed in the 13 administrative regions of Greece. The questionnaire consisted of 5 sections: demographics, questions about the culture of the teacher, questions about the professional capital of the teacher, questions about the acceptance of value assumptions that SSE is based and questions about the attitudes towards SSE. The participants are reached through email. In particular, emails have been sent directly to teachers unions, Facebook groups, school counselors and through friends of friends. The technique was a mix of snowball sampling and purposeful sampling. The statistical methods that were used in order to answer the first research question were the Mann –Whitney U test, the frequencies tables and the Chi-square method. For the second research question the selected method was the binary logistic regression.

Limitations

The 89 questionnaires that were received comparing to the 150000 teachers that work in Greece is a very small proportion. This small number of participants reduces the generalizability of the findings. The reasons for this small number of participants were the limited data collection time and the lack of an adequate budget in order to visit all the regions of Greece.

1.10 Structure of the study

The structure of this thesis follows the typical master thesis structure with one exception: After this introductory section, and prior to the literature review chapter, a chapter named ‘Contextualization’ has been implied. In that chapter, the reader can be informed about several aspects of SSE in order to understand it better. The literature review chapter is divided into two smaller parts: Greek and non-Greek literature. The Greek literature is further divided into two subsections: Relevant literature and marginally relevant literature. The ‘marginally relevant literature’ consists of research studies about teachers’ attitudes towards evaluation (not SSE). The ‘relevant literature’ consists of research studies about teachers’ attitudes towards SSE. These studies are mainly undertaken into a limited geographically area in Greece. The present study, despite the limitations, is the first study that covers all the regions of Greece regarding this particular topic.

The Theoretical Framework chapter presents the analytical tools that have been selected in order to predict teachers' attitudes towards SSE. The Methodology chapter describes the following issues: Research strategy, statistical analysis methods, recruitment of participants, data collection tools, sampling issues, validity issues and ethical considerations. The Results chapter provide the reporting of the findings in a technical way while the discussion chapter provides possible explanations of the findings along with relevant findings of similar studies. Finally, the Conclusions and Recommendations chapter provides recommendations for several stakeholders, identifies directions for further research and concludes all the prior findings.

2 Contextualization

2.1 School self-evaluation: definitions

The literature review indicates that a common and clear definition about SSE does not exist. Variation in definitions among countries, and indeed within countries, has been identified (F. J. G. Janssens & G. H. W. C. H. van Amelsvoort, 2008). The majority of definitions describe SSE as a process that is connected to school improvement. Schildkamp and Visscher (2009) from the University of Twente define SSE as “a procedure involving systematic information gathering initiated by the school itself and intended to assess the functioning of the school and the attainment of its educational goals for purposes of supporting the decision-making and learning and for fostering school improvement as a whole” (p. 150).

Scheerens (2002) defines educational evaluation as “judging the value of educational objects on the basis of systematic information gathering in order to support decision making and learning” (p. 41). Based on the previous definition, Scheerens changes the phrase ‘educational objects’ with the word ‘schools’ in order to give the definition for SSE (Gerry McNamara & O’Hara, 2008).

Furthermore, Mc Ewen, Carlisle and Knipe (2001) cite McLaughlin (1991) which define SSE as “...an aspect of reflection that is concerned with defining one’s concerns, establishing criteria of success, and determining the most appropriate methods to judge the effects of one’s actions in the classroom” (p. 142). Chapman and Sammons (2013) based in MacBeath’s (2006) arguments identified SSE as “a formative process, embedded into the day-to-day practices of schools and should be linked to pupil learning and achievement” (p. 9).

A distinction among concepts that involve the prefix “self” is also highlighted in the literature. Self evaluation for Chapman and Sammons (2013) is more formative than self-review and can be selective rather than give just an overview as self-review does. Moreover, self-assessment and self-evaluation are often used interchangeably. Chapman and Sammons (2013) argue that self-assessment does not focus on processes and by this way could be distinguished from self-evaluation that involves processes as well.

For MacBeath (2005a) SSE “is a process of reflection on practice, made systematic and transparent, with the aim of improving pupil, professional and organisational learning” (p. 4).

Chapman and Sammons (2013) cited MacBeath’s distinction between self-evaluation and self-inspection:

Table 1
Difference between Self-Inspection and Self-Evaluation

Self-inspection	Self-evaluation
Top-down	Bottom-up
A one-off event	Continuous
Provides a snapshot	Offers an evolving picture
Time-consuming	Time-saving
Accountability-focused	Improvement-focused
Based on a rigid framework	Flexible and spontaneous
Uses existing pre-determined criteria	Takes risks
Can detract from teaching and learning	Improves teaching and learning

Note: Adapted from “School self-evaluation for school improvement: what works and why”, by C. Chapman and P. Sammons, 2013.

School inspection is defined as “the process of periodic, targeted scrutiny carried out to provide independent verification, and to report on whether the quality of schools is meeting national and local performance standards, legislative and professional requirements, and the needs of students and parents” (F. Janssens & G. van Amelsvoort, 2008).

Definitions are also given in the context of particular projects. For example Effective School Self-Evaluation (ESSE) project ran by the Standing International Conference of Central and General Inspectorates of Europe during the period 2001 – 2003 defined SSE as below:

Self-evaluation is a process undertaken by the school, in which staff systematically gather and analyse evidence, including feedback from a range of stakeholders, and use it to assess and evaluate aspects of the school’s performance against agreed standards. This process should produce outcomes which help the school to target its planning or initiatives for school improvement effectively (SICI, 2003, p. 65).

International School Improvement Project (ISIP) set by OECD in early 80's defined SSE in a descriptive way:

- a systematic process, not simply a reflection;
- characterized by short-term goals consisted of valid information about scholastic conditions, functions, aims and productivity;
- where feedback are useful to answer to specific organizational and didactic questions;
- involving participants in collegial processes of team work;
- realizing an 'own' scholastic process;
- improving and developing school system (Freddano & Siri, 2012, p. 1143).

OECD also refers to SSE as “the evaluation of individual schools as organizations” (OECD, 2013, p. 384). For OECD school self-evaluation is one of the three approaches for school evaluation: school self-evaluation, external school evaluation and comparison of the schools' performance (OECD, 2013). The definition of SSE within each educational system indicates the particular purpose of SSE. OECD (2013) highlights the importance of the definition based on the purpose that SSE is serving each time: when the purpose is the accountability of the school, then the definitions of SSE describe a product. When the purpose is school improvement, then SSE is defined as a process. The former definitions can be found in countries like England, the Netherlands, Denmark and Scotland while the latter can be found also in England, Scotland, Netherlands and in addition in Hesse and Belgium (F. J. G. Janssens & G. H. W. C. H. van Amelsvoort, 2008). However, even if the definition describes only a process or only a product a variation in the broadness of the definitions is existed. Hofman et al (2009) argue that broader definition “is almost synonymously with definitions of quality assurance” while narrower definitions can even speak for just a satisfactory survey (Hofman et al., 2009).

2.2 School self-evaluation as alternative to inspection

Central inspection models of quality assurance have received much criticism in respect to their effectiveness (A De Grauwe & Carron, 2004b; Gerry McNamara & O'Hara, 2008). Limitations, complexity and unintended side-effects of external inspections lead to the rising of SSE (Gerry McNamara & O'Hara, 2008). Conflicts between schools and external inspectorate boards may sometimes have a dramatic end: Jed Holmes, a head teacher of a primary school in UK committed suicide at 11th of July 2007. Police authorities argued that this was related to the expected inspection by the national inspection agency (Barker, 2008). The OECD argues that "there is a risk that external evaluation may be predominately associated to procedural requirements, instead of with school improvement" (OECD, 2013, p. 397). Rosenthal (2004) argues that extensive preparation in the year of external inspection by OFTED (the responsible governmental organization for school inspections in UK) may be a reason for the decrease of student achievements those years. Stressfulness and time-consuming processes are identified as unintended effects of external inspections (OECD, 2013). MacBeath illustrates the lack of validity that school inspections may have by using the interview of a pupil, "...[the pupil] describe the school as a Jekyll and Hyde school with two faces. It has one face for visitors and one for us". School inspections lead to several unintended consequences such as fraud and gaming of schools in order to get a positive assessment using inaccurate numerical data (Nelson & Ehren, 2014). "Schools for example emphasize phenomena that are quantified in the performance measurement scheme, at the expense of unquantifiable aspects of performance" (Nelson & Ehren, 2014, p. 7). This intention to link quality to measurable outcomes can also be seemed in the statement of the 6th goal of Education for All agreement: 'Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills' (EFA, 2015 p 189). This intention for measurable outcomes limits the school's capacity for maneuvering (Vanhoof & Van Petegem, 2010). In general, schools are likely to hold a defensive stance towards external evaluation in Europe (SICI, 2003).

SSE offers a softer approach to school evaluation. The trend for schools now is to become more and more autonomous (Vanhoof & Van Petegem, 2010). But this concept of autonomy does not lead to a lack of accountability. A more horizontal accountability seems to be

emerged (OECD, 2013) and this trend promotes the use of SSE in order to promote community participation. Although SSE is an emerged practice, this is not true for community participation. The state was not the main provider of schooling in education history (Govinda, 2004). On the contrary, “...the first schools were founded and even funded solely by local community groups. The state enter the scene much later in the history of schooling” (Govinda, 2004, p. 128). On the other hand SSE is usually under the supervision or with the support of the state. Almost all the European countries offer some kind of support to SSE and a common concern for capacity development for SSE (OECD, 2013). Finally it seems that some countries are using SSE in a strongest way: England, Northern Ireland, Netherlands and Scotland (F. J. G. Janssens & G. H. W. C. H. van Amelsvoort, 2008).

SSE is articulated with external evaluation in a parallel, sequential or cooperative way (Chapman & Sammons, 2013). The (im)matureness of a particular educational system is the main criterion in order to select the appropriate way: Cooperative way seems to emerged more in countries with mature enough educational systems while parallel way tends to be met on the other side (Chapman & Sammons, 2013; OECD, 2013). Matureness is used as a word to describe the degree of decentralization of the system. Focusing on European countries, diversity exists regarding the relationships between internal and external evaluations. The table below taken from Eurydice Network (Baidak, De Coster, & Godenir, 2004) illustrates this categorization:

Table 2
Relation between External and Internal Evaluation of Schools in Europe

Independence	Interdependence	
Spain	Denmark	Poland
Portugal	France	Romania
Cyprus	Ireland	Slovenia
Hungary	Sweden	Scotland
Belgium	Iceland	Czech
Slovakia	Lithuania	Latvia

Note: Adapted from “*Evaluation of Schools Providing Compulsory Education in Europe*”, by Baidak, De Coster and Godenir (2004).

Anton De Grawe (2004a) argues that SSE sometimes is used as alternative to school inspection (example is Finland), sometimes is used for preparation of external supervision (examples are UK and New Zealand) and sometimes external inspection is used for validation of SSE (example is Australia).

SSE is been promoted also by regional and international organizations (Anton De Grauwe & Naidoo, 2004a; Eyridice, 2004; OECD, 2013). The majority of OECD countries has already set up legal frameworks for SSE (OECD, 2013), “Self-evaluation is now a mainstream concept and most education systems throughout Europe are to a greater or lesser extent scrambling to find ways of integrating it into the everyday lives of schools”(Gerry McNamara & O’Hara, 2008, p. 178). The growth of SSE indicates a shift from a (snapshot) inspection schema to a continuous evaluation process (Gerry McNamara & O’Hara, 2008). Universities are cooperating with national governments (eg. England, Australia and United Kingdom) for the promotion and improvement of SSE (MacBeath, 2008).

2.3 School self-evaluation as a mean for school development

SSE does not necessarily lead to the development of actions to improve school performance’ (Schildkamp & Visscher, 2009). In order to argue with confidentiality about the impact that SSE has in student achievement one has to find available evidence; but strong evidence is lacking (Hofman et al., 2009).

SSE can be found in school effectiveness models. One of the most important school effectiveness model is the dynamic model developed by Kyriakides and Creemers (Scheerens, 2013). Dynamic model is a theory-driven and evidence-based approach to school improvement which uses SSE as a tool to collect pragmatic and reliable hard data (Creemers & Kyriakides, 2010). By this way SSE becomes a key element in school effectiveness and school improvement research.

A recent study in Cyprus (Demetriou & Kyriakides, 2012) investigates the effectiveness of different approaches of SSE in regard to students achievements. Several schools were categorized into four groups. The schools of the first three groups (experimental groups) have implied three different approaches to their SSE process. The schools of the fourth group

(control group) have not use SSE at all. Results shows that “all three experimental groups had better results than the control group” (Demetriou & Kyriakides, 2012, p. 149).

Freddano (2012) argues that SSE “guide school development, monitoring systematically scholastic results and student performance empowering, at the same time, school identity and legitimating school autonomy”(p. 143).

SSE has also important consequences on educational management and educational policy decisions. Several countries worldwide base their educational policy decisions partly on SSE reports (OECD, 2013):

Decisions about the closing of the school and the size of school’s budget are highly influenced by SSE reports in Scotland.

In school level, principals who report that their schools improve SSE also stated that improve also capacity building (large effect), transformational leadership, opportunity to learn, assessment of school and students (Gustafsson et al., 2015) The figure below illustrates these relationships.

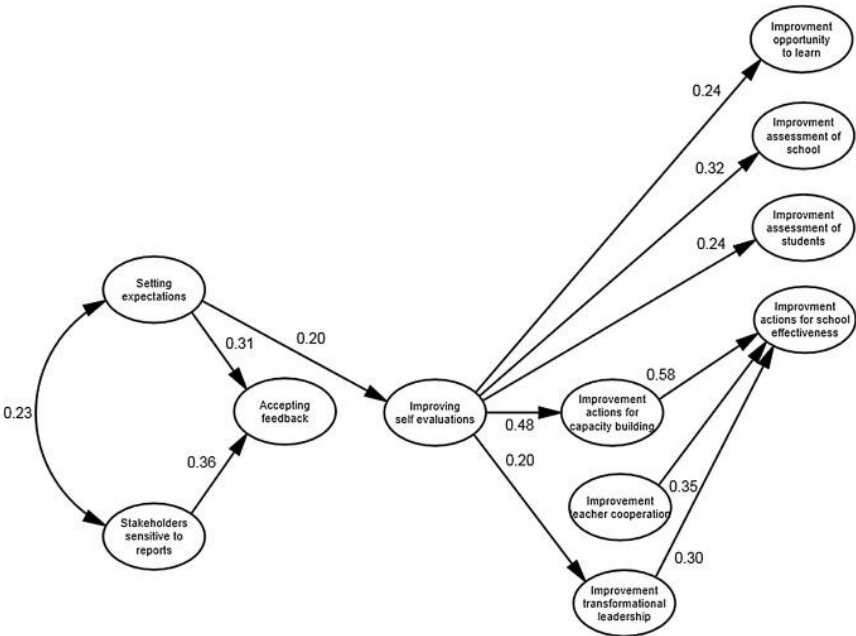


Figure 2. School self-evaluation’s impacts

Note: Reprinted from “From inspection to quality: Ways in which school inspection influences change in schools”, by Gustafsson et al. (2015).

Ronald K. (2010) based on Norwegian schools, argues that the capacity of a school to establish SSE activities, as well as to interpret the results and undertake relevant actions has positive impact on school's capacity to benefit from other forms of evaluations like examinations results (OECD, 2013).

In UK, the Office for Standards in Education, provides several case studies of schools which SSE have positive impacts in their schooling process (OFSTED, 2006).

Impacts of SSE in student achievements need to be explored further in order to prove its effectiveness. During the time that this thesis has been written (2016), the driving force towards SSE seems to be the lack of appropriateness of external inspection models rather than the existence of evidence of the appropriateness of SSE.

2.4 School self-evaluation as an aspect of teachers' professionalism

Teachers professionalism seems to be a central factor of effective schools (Chapman & Sammons, 2013; Hargreaves & Fullan, 2012). The trend towards SSE indicates teachers' need "to assess for themselves how well they are doing" (A De Grauwe, 2004, p. 71). Practical speaking, "in the end, it is the teacher with the principal, who has to deliver the goods" (A De Grauwe, 2004, p. 72). Report of Eyridice Network argues that SSE is useful to identify how school autonomy is reflected in practice (Eyridice, 2004).

Teachers run schools and teachers are professionals. Professionals are making judgments as they work about several things. The loss of faith in professional judgements is not a new concept. Clients' surveys indicated a professionals' lack of interest to be accountable to the public (Gartner, 1976) since 70's. Professional ineffectiveness has led many times into catastrophic results as wars, nuclear victims, economic crises (Schon, 1983). The limitations of technical rationality and the miss match between practitioners and researchers do not allowed things to happen in a correct way all the time. In many cases, professionals are creating new paths into unknown territories. These paths of knowledge are often named 'mode 2 knowledge production' (Nowotny, Scott, & Gibbons, 2006). The practitioners who follow these new paths are described by Donald Schon as *reflective practitioners* in the homonymous book 'The reflective practitioner' (Schon, 1983). In this book, Schon argues that most of the problems that a practitioner faces every day are not written in a book. The

practitioners must reflect in their own action. The different needs of various stakeholders are transformed into pressures and conflicts. The practitioners often cannot rely on ready-to-made, from-the-shelf solutions; This uncertainty on the problems requires pluralism on the solutions and can be better addressed by *reflection in action* rather than technical rationality (Schon, 1983). This reflection in action requires dissociation from the ideology that Michael Scriven named it as ‘the separatist ideology’. The separatist ideology can be presented in the phrase ‘I am an evaluator, you are a subject, she is an object’ (Scriven, 2000, p. 230). Scriven has described this rejection of self-reference as *valuephobia* and he supposed that it is a pervasive fear of humans to be evaluated. Of course the reasoning is obvious: The group who evaluate is the group that has power and influence on the decision making process and sometimes it may be the same group that takes the decision. On the other hand, decision-making is a process, which does not rely exclusively on evaluation’s results. A decision can be based on many factors like face-to-face persuasion, financial issues, political momentum, strikes, bureaucracy and status quo, to say some of them. The title of this master thesis shows that the prime interest is on teachers and the next paragraph is dedicated to a discussion about who controls teachers and education.

According to R. Ingersol (2003) teachers are the group that controls the classroom zone (academic instructions) while administrators are the group that controls the school wide zone (allocation and coordination). But society does not identify the occupation ‘administrator’; society only identifies the occupation ‘teacher’. Teachers have accused as the responsible group for nationwide dangers in US (Gardner, 1983), for sexism (Bailey et al., 1992), for racial discrimination (Ingersoll, 2003) and even for socioeconomic disparities that the school legitimates through the lack of equity. The inspection system often perceived by teachers as a factor that diminishes their professional status (Ferguson, Earley, Ouston, & Fidler, 1999) in UK. In Europe, external evaluators are responsible to central or top level education authorities rather than to regional or local governments, in the majority of the countries (Network, 2004). This is the view that teachers and school must hold accountable to the public.

On the other hand, there are proponents of the view that schools are too centralized (Ingersoll, 2003) and teachers are been struggled by a bureaucratic ‘leviathan’. In July 2016 approximately 2500 teachers have been fired in a single day in Turkey due to political reasons which have nothing to do about their actual efficiency (Zia & Ensor, 2016). In Nepal’s civil war, teachers were forced to adapt their teaching according to Maoist or governments interests

and even to train children for military purposes (Pherali, 2013). Carol Woodward, a head of a primary school in UK commit suicide after OFSTED inspection (Richard, 2016). This lack of autonomy becomes stressful factor, demotivates teachers, makes them apathetic sometimes and even leads to misbehaviours (Ingersoll, 2003).

These two conflicting views, the view that requires more accountability and the view that requires more autonomy are depended of the matureness of the system. Countries as Finland can rely exclusively on self-evaluating systems. The occupation of the teacher in Finland is one of the most well respected by the society (Hargreaves & Fullan, 2012), parents put some pressure for the best outcome of their school, students are participate in school self-evaluation processes and central authorities only provide evaluation frameworks and indicators for comparison. But not all societies and educational systems are mature enough for this kind of autonomy. So, the context plays a crucial role and the debate can be summarized into this phrase: What is the appropriate status of the teacher? Should teacher be a bureaucratic replaceable employee of the educational system or a professional and autonomous expert of education?

The question cannot be answered without take into consideration the purpose of education. If educational goals are restricted to students' achievements then a financial vocabulary can be easily adapted. OECD view of education represents this kind of view. Effectiveness, teachers per student ratio, PISA test, accountability, evaluation, charter schools, vouchers, privatization are part of the vocabulary that OECD papers are using about education in order to describe the successfulness or unsuccessfulness of a system. There are also individual researchers that are using this type of vocabulary in their papers. One of the most cited of them, Hanuchek, provides an overview of how education influences the GDP of a country (Hanuchek & Wößmann, 2007). Schools are perceived as industrial entities and are understood by input-output analysis. Under this view 'a good education was a prize to be competitive sought, not a democratic right' (S. Tomlinson, 2005).

On the other hand, education involves also its societal purpose that is often called social mobility (Iannelli & Paterson, 2005) as well as a type of knowledge that is called hidden curriculum and refers to the physical condition of the classroom or the school environment, the mood of the teachers or the students, the teacher-learner interaction and the influence by peers (Bilbao, Lucido, Iringan, & Javier, 2008). This social dimension provides next generations the potential for job opportunities, proper social norms, rituals, behaviors, roles,

identities, and implicit knowledge that cannot be measured in standardized tests. Under this perspective the school is a social institution rather than an industrial type organization. The economic perspective of education is focused on the readiness of education system to provide market with the proper human capital while the societal perspective of the school includes also the necessity for social capital.

This distinction has been made in order to approach better the question: what should be the status of teachers in the society? If society's concerns are mainly of economic growth and competition with other countries, then PISA test scores are important and students' achievements are prioritized than social cohesion and values. In that case teachers are replaceable parts of a system that work under technical rationality and central planning. On the contrary, when society identifies school as its footprint and as a vital human-centered institution, then teachers' role will be more independent and the trust between teachers and community plays a more crucial role than standardized and nationwide tests.

In the post-war era teachers were more autonomous in their work (Hargreaves, 2000). Education along with other social institutions, was perceived as the necessary ingredient of the welfare state (S. Tomlinson, 2005). In the last decades of the twentieth century a right wing agenda appear to be necessary for the west nations in the name of competitiveness. John Tomlinson in his book 'The control of Education', published in 1993, identify that "finance is the single most significant method and source of control [in education]" (p. 144). Several policy makers based on UK and USA based their arguing in a market perspective that leads to a more centrally driven education systems (ibid). This leads schools to select their 'customers'; schools that compete for the recruitment of 'able' students to increase their scores in nationwide tests. In parallel, teachers became easy replaceable semi/professional employees (S. Tomlinson, 2005) that deliver a ready-to-use content.

It seems that a new tool towards the professionalization of teachers is in front of us: school self-evaluation. I hold the opinion that if teachers are able to secure the quality of their work, then they could be more acceptable by the society as professionals and not as employees. It is not a new idea the self-management in the workplace. The Yugoslav Federation and the USSR have already established one century ago such methods of self-management that involved self-evaluation processes.

2.5 School self-evaluation as a tool for emancipation

Education is a vital institution of the modern society. The institutional role of education may reduce the capacity of schools for change. In other words, it is easier to change something that is not so crucial for the existence and continuity of society than to change a vital institution. I will try to provide an understanding of school self-evaluation as a tool to overcome the pre-given meaning of school education using Cornelius Castoriadis's book 'The imaginary institution of society' (1997).

Alienation, defined as a rejection of social institutions (McLeod, Ward, & Tancill, 1965, p. 583) or more general as a way of connection to the institutions (Castoriadis, 1997). We, humans, accept the way that this world has been institutionalized without any serious concern about alternative ways. We accept the current institutionalization as something that is based in rational thinking. Castoriadis (1997), overemphasizing this acceptance, argues that institutions are almost autonomous structures. In a paradoxically way humans created institutions but institutions are more powerful than the humans. Institutions are invented to solve humans' problems. For instance, people may disagree about the ownership of a piece of land. The judicial system is a well-established institution that solves this kind of problems. Under a rational way of thinking, institutions are solutions to real problems. But this explanation is not adequate according to Castoriadis: Why so many different variations of institutions around the world? Why so many changes in the institutions through the history? Institutions can be seemed as solutions to specific problems; but how a problem is identified as a problem? Regarding schools' evaluation: How a school must look like? What qualifications are required for the future citizens? Why market based approaches are dominating international organizations' though. Why is problem for a human the lack of understanding of mathematical equations? Why STEM competencies must be emphasized in modern education? Why we as humans have to increase our productivity? It is an illusion that the answering of this type of questions can be take place 'ex nihilo'. We cannot answer these questions without a common agreement on things that are not rational based according to Castoriadis. This implicit common agreement is what Castoriadis called *societal imaginary*; the societal imaginary of the people is the current structured meaning of the world (Castoriadis, 1997). The role of this meaning is to answer such fundamental questions as:

Who we are? What we want? What we need? Where we are living? All these questions are based on the need of humanity to define its identity.

The family, the nation, the religion, the justice, the job market, the commercial relations, the financial management, the educational systems and almost all human institutions are not able to function properly without a symbolic network. This oversimplification does not provide a basis for research, but provides a philosophical framework for school self-evaluation.

To sum up, Castoriadis argues that institutions have become autonomous. I argue that school self-evaluation provides an opportunity to overcome this institutions' autonomy in order to emancipate ourselves as the real and unique creators of our institutions.

2.6 School self-evaluation and its challenges

SSE is not an ideal process of school improvement. Challenges arising from the fact (among others) that it is a collaborative project, which is implemented within school as well as outside school. As a consequence, challenges may arise mainly as problems related with the interplay between schools and several stakeholders.

School inspection and SSE are two different ways towards the same destinations: school improvement and school accountability. Despite of this 'surface-based' commonality, tensions are emerged due to several reasons. Anton De Grauwe (2004) from International Institute for Educational Planning identifies the following reasons:

- Different criteria that judgements are made lead to tensions between international organizations' objectives and local practices;
- When SSE is implemented to prepare school for external supervision, the objective is more to ensure the smooth running of external audit than to improve the school's functioning in the long term;
- Conflicts arise among teachers who undertake these two-evaluation processes. The reason is that emphasis of each group of evaluators (internal and external) is on different objectives.

Local community stakeholders and parents may also be a source for tensions. SSE is a process that involves the wider school community into its function. Govinda (2004) cited Gann's (1998) arguments about possible challenges of local community participation: Local community representatives may turn schools into party-based political arena and parents may feel that are "free from responsibility for the quality of service, except by complaining when it falls below an acceptable standard" (p. 34). Govinda also indicates the different mindsets regarding school management that old actors (like the state and the teachers) having in contrast with the new actors' (like parents) mindsets. The word 'system' is kind of scapegoat that the new actors may use to pass the difficult decisions. Parents might be interested on outcomes rather than the school process (Govinda, 2004). Finally, it is obviously that this wide category of stakeholders, named parents, involves almost everyone at least one time in his/her life. Therefore it must be acceptable that a strong differentiation in their attitudes leads to a different participation style. This differentiation reinforces inequalities among schools according to Blondin and Giot (2011) as cited by the OECD (2013).

In relevant literature several challenges are emerged around teachers, teacher unions, predetermined frameworks, external supervisions, role conflicts, support structures and terminological confusions:

- SSE may be seemed as ritualized or bureaucratic process (especially when it is imposed and handled by external forces) rather than a practical and reliable real school improvement process (Avitzis & Mavromatidis, 2012; Chapman & Sammons, 2013). Schools focus at particular aspects of schooling that are accountable to inspectorates rather than search for real improvement (SICI, 2003);
- A pre-determined, one-size-fits-all, ready-made, 'of the shelf' approach to SSE is easier to be adopted than a organic real bottom-up approach. It is the case that SSE is transformed to self-inspection (MacBeath, 2005b);
- Interval evaluators may be unable to highlight hard truths about their school (Chapman & Sammons, 2013);
- Structures and capacity for change may be in an embryonic phase (Karagiorgi, 2012);
- Hider (2006) as cited by OECD Report argues that "teacher unions are perceived as hindrance to school self evaluation activities" (OECD, 2013, p. 435);

- Teachers perceive SSE activities as time-consuming and difficult (Vanhoof et al., 2009);
- The vast majority of teachers in UK argue that they do not have access to the on-line help-tool for SSE. This is a problem stemming from the principal-teacher relationship. (OECD, 2013);
- Various groups may use SSE to promote their own interest; micro-politics of the school may act as a hindrance to improvement activities (Ball, 1987; Berman, 1978);
- Fear about possible vindictive behaviors from head teachers to teachers when it comes to the evaluation of the school's management (E-Governance, 2016);
- Lack of terminological clarity in international discussions on SSE (Gerry McNamara & O'Hara, 2008);
- Lack of suggestions on how should schools collect the necessary data for valid SSE (Gerry McNamara & O'Hara, 2006);
- Role conflicts that stem from the contradictive role as school teacher and internal evaluator of the school (Mathison, 1991);
- The ideal balance between external and internal evaluation and consequently between the accountability and improvement logic has not be found yet (F. Janssens & G. van Amelsvoort, 2008; SICI, 2003). Furthermore, the 13 participated countries at 'Effective School Self-Evaluation' project identified that "there was not a single or simple way of achieving this balance" (SICI, 2003, p. 9);
- Priorities set by schools are sometimes irrelevant with schools aims or they don't seem to make significant contribution to them (SICI, 2003);
- Quality of teacher training (regarding the use of indicators in SSE) needs improvement (SICI, 2003).

This is not an exhaustive list of challenges that SSE is facing but a summary of the main challenges that are highlighted in relevant literature.

2.7 School self-evaluation and influencing factors

SSE is subject to various factors of influence. Expectations from external evaluation (medium effect) and stakeholders' sensitivity to external reports (small effect) are two factors that affect the improvement of SSE (Gustafsson et al., 2015). The supply of adequate and reliable tools for SSE are important for the good quality of SSE (Hofman, Dukstra, & Hofman, 2005; OECD, 2013). In school level, an important factor is the role of the head of the school "to mobilize resources and to ensure appropriate training and support" (OECD, 2013, p. 469). A positive factor for the empowerment of evaluation culture not only within schools but also between schools (Freddano & Siri, 2012; OECD, 2013) is the training of school staff in order to improve their evaluation capabilities. Another factor of influence is the capacity of school staff to interpret results in order to take action (OECD, 2013); this is in line with the level of professionalism that teachers have in each country. When teachers are accountable enough to themselves and a strong parental supporting is present, like in Finland in 90s, then SSE can replace external inspections exclusively (A De Grauwe, 2004). On the other hand, researchers based on the context of Ireland argue that "this rhetoric is far from the reality" (Gerry McNamara & O'Hara, 2008, p. 175) and teachers without the support of the state cannot acquire adequate competencies in order to be valid internal evaluators.

Influences of supporting do not stand unaffected in the time: "[...] the creation of genuinely self-evaluating schools is not something that can be done overnight. Rather, it implies a requirement to concentrate on enhancing the skills of the school communities over an extended period of time (Gerry McNamara & O'Hara, 2008, p. 176). In Hofman's et al. (2009) research on 1,914 Dutch elementary schools evidence shows that "an external focus on SSE (through the Inspectorate, the Local Education Authority, or the parents) could stimulate schools that lag behind" (p. 64). The same study shows that schools in which an advanced SSE system is implemented have better results on:

- The use of available learning time;
- The pedagogic and didactic performances of teachers;
- The school climate (Hofman et al., 2009, p. 64).

In the list below are presented many of the issues that have impact on the type of SSE and its quality according to the relevant literature:

- Who controls SSE: the school itself or the educational system(Chapman & Sammons, 2013); and what kind of control: support or pressure (MacBeath, 2005c);
- What is the character of SSE: top-down or bottom-up? (Chapman & Sammons, 2013; MacBeath, 2005c);
- What is the purpose of SSE: improvement or accountability? (Chapman & Sammons, 2013);
- The role of leadership in the school (Earley, 1996; MacBeath, 2008; Nelson & Ehren, 2014);
- The availability of centrally held information (Nusche et al., 2011; OECD, 2013);
- The existence of a collaboration culture in the teaching staff (OECD, 2013);
- The participation of students in SSE (Smyth, 2007);
- Teachers' and principals' attitudes towards evaluation and SSE (Vanhoof et al., 2009; Wagoner & O'hanlon, 1968) and teachers' motivation (Schildkamp & Visscher, 2009);
- The climate set by countries for SSE (SICI, 2003); the existence of encouragement and guidance (SICI, 2003).

3 Literature Review

3.1 Non-Greek literature

Attitudes towards school self-evaluation (Vanhoof et al., 2009)

Vanhoof et al. (2009) undertake a research study in Flemish schools in order to identify (among others) “what school characteristics can explain the differences observed in this attitude [the attitude towards SSE]” (p. 22). Results show that:

- The position within the school determines the attitude: Teachers with management and leadership responsibilities were more positive towards SSE than teachers without such responsibilities;
- The extent of support that teachers are enjoyed is positively related to attitudes towards SSE;
- The degree that teachers perceive their school as a place that in-depth learning and knowledge creation are taking place is positively associated with their attitudes towards SSE;
- Teachers’ perceptions about the importance of human relationships are negatively associated with their attitudes towards SSE;
- Teachers working in schools with noticeable professional learning communities tend to have more positive attitudes towards SSE.

National survey (2013-2014) post primary school principals' perceptions on school evaluation (G McNamara, O’Hara, & Brown, 2014)

In Ireland a national survey took place in 2013/2014 in order to identify school principals’ perceptions of school evaluation (G McNamara et al., 2014). According to the national survey findings:

- 86% of respondents agree or strongly agree that SSE results in a better management;

- 87% of respondents agree or strongly agree that SSE results in better teaching and learning;
- 84% of respondents agree or strongly agree that SSE takes up a lot of time;
- 85% of respondents disagree or strongly disagree that SSE tells them nothing new;
- 72% of respondents agree or strongly agree that SSE is a better approach towards improving teaching and learning than School Inspection.

Teachers' role in self-evaluation in education (Brejc, Gradišnik, & Koren, 2011)

This study draws on 388 teachers from Slovenia. Its purpose was to identify which roles are the most important for teachers who participate in SSE. The findings suggest that teachers perceive their personal responsibility as the second most important role in SSE. This is in line with one of the value assumptions that I use in this thesis as theoretical framework.

Teachers' perception of school based evaluation: A descriptive analysis based on teachers' wives (Bülbül, Tunc, Ozdem, & Inandi, 2013)

The study draws on 35 Turkish teachers. One of the findings is that “school-based evaluation efforts are not positively taken by teachers and school-based evaluation is found to have low potential to solve problems” (p. 2121). Some teachers state that evaluation from parents and students is humiliation for teachers. Researchers also state that the cooperation spirit between teachers and students is been harmed by evaluation; they refer to this fact as the Freire’s paradox.

Preschool teachers' attitudes towards the self-evaluation of preschool institutions (Drvodelić & Domović, 2016)

This study presents the findings of a survey in Croatia. Preschool teachers' attitudes that have attended self-evaluation courses during their studies found more likely to have positive attitudes towards SSE than teachers who have not attend such training. Moreover they found that the duration of the training is positively associated to the attitude. Despite the general believe that younger teachers are more positive to change the findings suggest that teaching experience is not associated to teachers' attitudes.

A Study of the Principals' and Teachers' Perceptions of the Effects of Collegial Approach to Implementing School Self-Evaluation in Selected Hong Kong Schools (Leung, 2013)

In the qualitative section of this study Leung found that “SSE brought some significant cultural changes in school A, such as improving dialogue among staff and stakeholders, as well as arousing more discussions in school meetings about school issues and policies” (p. 244). The researcher suggest that “schools should take the opportunity to institutionalize School Self-Evaluation (SSE) as normal school practice and utilize this mechanism to improve” (p. 346).

School self-evaluation of teaching and learning in Hong Kong primary schools (Yung, 2004)

The researcher argues that teachers in Hong Kong “had feelings of anxiety and pressure... but they don't think it [SSE] was a painful experience” (p. 74). The findings suggest that dissemination sessions would strengthen further the capacity of teacher to undertaken SSE of good quality. One interviewee suggests that mock SSE would be helpful for training purposes.

Geography teachers' attitudes towards self-evaluation: The case of Serbia (Tijana, 2014)

In this study 273 geography teachers from Serbia express their attitudes towards SSE. The findings indicate that teaching experience and school type are determinants of the attitude towards SSE.

3.2 Greek Literature

The literature about teachers' attitudes towards SSE in Greece, although very limited, can be further classified into relevant literature and marginally relevant literature.

3.2.1 Relevant literature

“Comments from open-government web-site” (E-Governance, 2016):

In 2011 the Ministry of Education in Greece invited stakeholders to write their proposals about SSE. The proposals have been published in ministry's web-site (E-Governance, 2016). The content of this web site is a first-hand material that one can draw upon to make inferences about teachers' attitudes towards SSE. These extracts illustrate the attitudes that teachers had in 2011:

"... in order to implement self-evaluation [the state should bring] absolute transparency from the hirings to the postings, without political favors." (E-Governance, 2016)

"...if from the first week of September all schools would not have any empty teaching position [...], then we could go further to self-evaluation." (E-Governance, 2016)

"What would we say? [...] For teachers that refuse to do anything else than their teaching? For principals that have been selected via interview and they don't know even how to read the relative laws? For school clusters with 5 co-located schools? If you can resolve all these issues then we could talk about self-evaluation." (E-Governance, 2016)

"How can we keep out the personal hatred, the racism, the competitiveness and the blackmailing out of the [self-evaluation] process?" (E-Governance, 2016)

"A necessary requirement for the self-evaluation that you want [the ministry] is the development of co-operative culture and reflective dialogue among school teachers. Teachers have never trained on these two components [...] We are one of the countries with the lower index of co-operative culture." (E-Governance, 2016)

A perception that the problems are out of teachers' responsibility is wide spread across these statements. The lack of training and lack of readiness for SSE is also well stated by many of them. A fear for blackmailing by principal is common concern among teachers. It is crucial to indicate that these opinions come from teachers who are familiar with web-based tools. The older teachers that are not familiar with web-based tools are out of this process. For this reason it is hard to say that these statements are representative enough. However these comments are the most valid, first-hand source I could find regarding teachers' attitudes towards SSE. The anonymity of the process leads to the 'sharpness' of the statements.

“School Self-Evaluation: Improvement Instrument or Bureaucratic Process? Conclusions drawn on the first year of implementation in Vocational Schools”(Avitzis & Mavromatidis, 2012)

This is a small survey on the actual practices of SSE in vocational schools in Greece. It has been presented by Avitzis and Mavromatidis (2012) in a conference about innovative practices on technical education in Greece. Respondents were teachers from 6 vocational secondary schools that had already implemented the first year of the pilot SSE process in Greece. Teachers were cautious to write the real problems in SSE reports. This cautiousness can be observed by several survey’s findings: a) 68% of respondents argue that SSE process was introvert, b) 90% of respondents argue that SSE was a bureaucratic process, c) 69% of respondents point out the existence of deeply entrenched viewpoints of teaching staff, d) 79% of respondents argue that SSE focuses on ‘painless’ aspects.

“Teachers' attitudes towards school evaluation: The case of school self-evaluation of special schools (SMEA) in the prefecture of Piraeus” (Kostoglou, 2012)

This master thesis, despite the fact that the sampling frame was geographically limited, provides also useful findings: a) 85% of respondents argue that outstanding leadership is a quality factor of SSE, b) Teachers who argue that SSE process is differentiated between general schools and special schools, are quite as many as the teachers who argue the opposite (34% and 29% respectively), c) 59% of respondents argue that SSE can enhance teachers’ improvement.

“Development of teams for collective actions and the self-evaluation as their content” (Pavlineri, 2010)

This doctoral dissertation, written by a school principal, is based on the statement that the solution of regular public education’s problems cannot be found from ‘outside’. According to the researcher, appropriate collective initiatives must remove the selfish character of education. Parts of this dissertation are teachers’ views on self-evaluation, which were collected from a sample of 1358 teachers from many regions of Greece. The responses are strongly differentiated when SSE was considered as a collective action process versus when SSE was considered as a process for review and control. The table 3 below illustrates this dichotomy.

Table 3
Perceptions of School Self-Evaluation

Self-evaluation is able to...	Self-evaluation is considered as a collective action process	Self-evaluation is considered as a process of review and control
...ensure teachers' training needs	72.5%	13.6%
...provide feedback and reflection on teaching	73%	14.9%
...strengthen teachers' self-esteem and responsibility	72.9%	13.1%
...improve the supplying education	70.2%	18.3%
...enhance school's capacity for self-control	69.5%	17.2%
...facilitate the critical consideration of school's role	58.5%	25.2%
...ensure teachers' training needs	72.5%	13.6%

Note: Adapted from "Development of teams for collective actions and the self-evaluation as their content", by (Pavlineri, 2010)

3.2.2 Marginally relevant literature

Useful inferences can be drawn on papers from similar research topics. As long as these topics are to some extent interrelated with teachers' attitudes towards SSE, a glance on the relative findings can give an overview of the Greek context.

" A Study of Greek Teachers' Perceptions and Practices of Teacher Self-Evaluation" (Ghoula, 2006)

The researcher triangulates findings for grounded theory with quantitative data form 208 secondary schools in Greece. She finds that "Greek teachers' engagement in self-evaluation was mostly spontaneous, unsystematic and tacit" (Ghoula, 2006, p. 21) and that "the learning acquired via teacher self-evaluation derives from the interaction of teachers' beliefs, thoughts

and dispositions about teaching and learning, with the professional and policy context...” (Ghoula, 2006, p. 14). The final product of the survey is that “...self-evaluation is primarily a learning process and ought to be valued for that learning. Although this is widely accepted, in the Greek context it is far from being understood in real practice” (Ghoula, 2006, p. 21).

“Teachers’ Evaluation and the Evaluation of their Work: Legal Framework and Reactions” (Anastasiou, 2014)

The researcher finds that the resistance of teachers towards evaluation is not related with resistance to any kind of evaluation. On the contrary, it is related with hidden purposes for firings, punishments and handling of teachers. “It seems that there is a general lack of trust towards the possible good intentions of those who facilitate the ΠΔ 215/2013 [the law about evaluation]” (Anastasiou, 2014, p. 72)

“Teachers’ Evaluation: Greek teachers’ views” (Kasimati & Gialamas, 2003)

This survey took place in a period that a legal framework on teachers’ evaluation was implied in Greece. Respondents that had a positive stance over their evaluation used the following terms: ‘status upgrade’, ‘recognition’, ‘efficiency’, ‘self-awareness’, ‘improvement’, ‘training’, ‘motivation’ and ‘prestige’. Respondents that have negative stance over their evaluation used terms like ‘anxiety’, ‘lack of meritocracy’, ‘insecurity’, ‘control’, ‘party-oriented’, ‘criteria’, ‘purpose-oriented’, ‘subjectivity’. The researchers identify five clusters of responses: First cluster was constituted by 37% of respondents. They are in favor of evaluation by a special evaluator’s team. Second cluster was constituted by 18% of respondents. They are in favor of the evaluation by themselves. Third cluster was constituted by 9% of respondents. They are strongly in favor of the evaluation by a permanent evaluator authority. Forth cluster was constituted by 11% of respondents. They are undecided about their view on evaluation and they disagree that the evaluation is related with their professional development. Fifth cluster was constituted by 25% of respondents. They are strongly against any kind of evaluation. It seems that exist a diversity of opinions about the ‘who’ should evaluate teachers’ work.

“Teacher’s Evaluation: Attitudes and Perceptions of Secondary School Teachers from the Prefecture of Thessaloniki” (Kapahtsi, 2007, 2008)

This master thesis, following by a relative book, is written by a school principal in Greece. Its aim was to find the predictors of teachers’ attitudes towards their own evaluation. Teachers from a limited geographically area were the sample frame of the survey. Findings show that teachers are fluctuating because of prior negative experience of the implementation of evaluation in Greece. The majority of the teachers seem to be positive towards evaluation.

Younger teachers are more positive towards evaluation. The researcher explain this finding by stating that younger teacher have never exposed to any kind of evaluation process because evaluation in Greece is absent from 1982. Unmarried teachers are more likely to be positive that married. This is explained by the fact that married teacher have more limited time for evaluation activities. Finally, according to the findings, teachers’ qualifications seem to be related positively to their attitudes towards evaluation: master and doctoral holders are more positive than non-holders.

“Teachers' evaluation and evaluation of educational work” (Zouganeli et al., 2007)

Researchers asked teachers, principal and counselors about their own view about teachers’ evaluation and the evaluation of their work. For the purpose of this study we present only teachers’ views. Teachers’ argue that their evaluation is necessary for the improvement of education (61%); are unsatisfied with the information that they have in regard to evaluation issues (72%); believe that the cooperation with other teachers (72%) and with parents (76%) must be taken into consideration in their own evaluation. Researchers indicate the common concern of teachers about the ‘who’ will evaluate them. They cannot accept evaluation from people that have never been in a classroom. The majority of the respondents have chosen SSE as the appropriate evaluation type (69%). One teacher gave a representative argument that reflects the general condition (according to the researchers): “[evaluation] *is a double-edge knife, it may help in some cases, but it may create conditions that we have heard in past times*” (Zouganeli et al., 2007, p. 402).

“The Evaluation of Teachers' Work: Primary School Teachers' Views from the prefecture of Magnesia” (Polyzos, 2007)

This master thesis, based on 133 responses from primary school teachers, is geographically limited in the prefecture of Magnesia. According to the findings, teachers argue that SSE is the appropriate type of evaluation because they believe that SSE improvises their role. They also believe that many of the problems that Greek education is facing are based on the lack of evaluation. Heads of the school and School counsellors can be considered as the potentials evaluators only after appropriate training. Teachers are positive to a polymorphic evaluation including “evaluation reports, teaching observation with a variety of criteria, evaluation committees, interviews and portfolio” (Polyzos, 2007, p. 71).

“Teachers' evaluation and teachers' work evaluation: Secondary school teachers' attitudes towards evaluation in Macedonia and Thrace” (Kyriazides, 2015)

This master thesis by the University of Pafos in Cyprus draws data form 234 secondary school teachers. The main findings are: a) teachers have positive attitudes towards the evaluation of their work; b) the sex of the teacher is not correlated with teacher’s attitudes towards evaluation; c) the level of teachers’ qualifications is correlated positively with their attitudes towards evaluation.

4 Theoretical Frameworks

Kostas Akselos was a professor of Philosophy in the University of Paris during the 70s, 80s and 90s. The paragraph below is taken by his speech in French Institute of Greece in 1983:

“Current world does not seem to have a need for thought; the technical, science-based, theoretical and practical operation seems suffice for this world, in which colorful theories are being added trying to replace the basic thought. The anxiety, the pain of the modern world does not seem to be big enough, deep enough and radical enough in order to create a necessity for thought... This lack of necessity for thought, which dominates the current world, [...] is not necessarily a negative phenomenon; creates clearness from previous paradigms of thought” (EPT, 1983).

Taking into consideration Akselos’ words, this thesis holds the position that all the ‘colorful’ theories, frameworks and approaches which born and die in or out of academia, although not capable to replace the real thought, are playing their role to fulfil the empty space in terms of thought. Under this limitation, three selected approaches have been chosen to explain and predict teachers’ attitudes towards SSE. The first approach stems from the fundamental question about what are the criteria that the member of an organization uses to judge organizational effectiveness. Its name is Competing Values Framework. The second comes from teachers’ professionalism literature and its name is Professional Capital. The third framework was taken by Kyriakides and Campbell (2004) who identify some value assumptions that SSE is based on. These value assumptions are coming from different fields. Each framework is presented in different section.

4.1 Professional capital

Andy Hargreaves and Michael Fullan (2012) are the authors of the book ‘Professional Capital, transforming Teaching in Every School’. Authors argue that educational systems can boost their teachers’ capacity by ‘invest’ in what they call professional capital. What they define as professional capital can be summarized into a mathematical law:

$$PC = f(HC, SC, DC)$$

In this equation the variables are PC: Professional Capital, HC: Human Capital, SC: Social Capital, DC: Decisional Capital. Briefly, they state that high-quality teachers must share their experience and stay longer in the profession. The term ‘high-quality teachers’ is the human capital element. The phrase ‘share their experience’ represents the social capital. Finally the phrase ‘stay longer in the profession’ is what they call *decisional capital*. In the next three sections we will explain better these three elements and the way they will be used in this study in order to predict teachers’ attitudes towards SSE.

4.1.1 Human capital

Before 60’s capital perceived as money or as material goods like machines, land, buildings and products. Then an American economist, Gary Becker (1964), holder of a Nobel prize in economic science, showed that investing in people’s capabilities and skills can have substantial return. Pil and Leana define human capital as “an individual’s cumulative abilities, knowledge, and skills developed through formal and informal education and experience” (2009, p. 1103). According to Hargreaves and Fullan (2012) the first argument about human capital was made by Adam Smith in 1776 who describes it as “the acquired and useful abilities of all the inhabitants and members of the society” (Smith, 2008, p. 202).

Regarding the teaching profession, human capital “is about having and developing the requisite knowledge and skills” (Hargreaves & Fullan, 2012, p. 89). Evidence on the correlation between student’s achievement and teacher’s quality has been presented by many studies. Some of these studies are presented hereafter.

Sanders and Rivers (1996) observed that students who have received teaching by low-performing teachers have significantly poorer results in mathematics and science than students who have received teaching by high-performing teachers. The observation period was three years. In the end, the difference between those two groups was more than 53% (Hargreaves & Fullan, 2012).

Pil and Leana (2009) investigated the correlation between teachers’ qualification and student achievement in a sample of 1013 teachers. They found that teachers’ qualification have significant positive correlation to students’ achievements.

Felch et al. (2010) research study was about teachers' quality in Los Angeles. They found that "there is a substantial gap (...) between students whose teachers were in the top 10% in effectiveness and the bottom 10%" (Felch et al., 2010, p. 3).

Taking into consideration the financial crisis of 2008, Andrew Hill and Rebecca Chambers (2015) explore the factors that can facilitate the competencies and the knowledge of personal finance in high school students in US. Based on a sample of 486 K-12 students, they found that teachers' human capital is positively correlated to student knowledge about personal finance.

Ehrenberg and Brewer (1994) found that "the average "selectivity" of the undergraduate institutions that teachers in a school graduated from has an important influence both on students' gain scores and their base year test scores" (p. 14).

Golhaber and Brewer's (2000) conducted a research study about teachers' certification. They found that "teachers who have a standard certification have a statistically significant positive impact on student test scores relative to teachers who either hold private school certification or are not certified in their subject area" (p. 129).

Early Childhood Longitudinal Study (ECLS) is a program that examine child development in US through longitudinal studies. Croninger et al. (2007), who draw data from this program, found that there are "positive effects for teachers' degree type and experience on reading achievement" (p. 312).

There are several other studies that have found a positive relationship between teachers' human capital and student achievements. For this reason this study seeks to predict teachers' attitudes towards SSE using teachers' human capital as predictor.

4.1.2 Social capital

The second element of professional capital is the social capital. Social capital has been defined in different ways:

"..the quantity and the quality of interactions and social relationships among people..." (Hargreaves & Fullan, 2012, p. 90),

“a resource reflecting the character of social relations within the organization, realized through members' levels of collective goal orientation and shared trust” (Leana & Van Buren, 1999, p. 540),

“the class-linked personal contacts or network ties that can be crucial to organizational and professional advancement” (Useem & Karabel, 1986, p. 185).

Social capital has been described as an attribute of nations, communities, industry networks and as an organizational phenomenon (Leana & Van Buren, 1999). According to Hargreaves and Fullan (2012), the importance of social capital in education has received the first focus by James Coleman's studies (1988). Coleman, based on a data set of 1004 high schools, showed that Catholic schools had better outcomes and lower drop out rates than non-religious schools. The stronger intergenerational closure and the tighter social bonds among parents that are member of a religious group explained these differences. Hargreaves and Fullan (2012) go one step further and argue that the American society builds its own social capital through the interaction between parents in the schools of their children. If the parents in a school have a weak bond then the social capital of the school would be low.

Hargreaves and Fullan (REF), in order to support the necessity of social capital, present the findings of Carrie Leana, a business professor in the University of Pittsburgh. Leana conducted a research on more than 1000 teachers in New York city's public schools in order to find “how much each student's knowledge of mathematics advanced in the year of he or she spent with a particular teacher” (Leana, 2011, p. 33). The findings suggest that “students showed higher gains in math achievement when their teachers reported frequent conversations with their peers that centered in math, and when there was a feeling of trust or closeness among teachers” (Leana, 2011, p. 33). Moreover, in the same study teachers report that they prefer to seek advice from their peers than to seek advice from the experts who provided by the school district or from the principal. In order to measure the social capital, Leana has used the frequency of conversations and interactions and the feeling of trust among teachers. Students who have been taught by teachers with high social capital have 5.7% higher scores in mathematics than student who have teachers with low social capital. As a result she argues that increased teachers' qualifications are not capable to build a healthy school system. It is necessary to build strong social capital in order to make the existing human capital circulate and be shared in the school.

Leana and Van Buden identify two components of social capital: associability and trust. Associability is ‘the willingness and ability of participants in an organization to subordinate individual goals and associated actions to collective goals and actions.’ (1999, p. 541). They argue that associability is not only sociability and interdependence; is the collectivistic culture that enables members of a group to subordinate their personal goals to the collective goals. In this master thesis associability is measured by asking teachers the following three questions:

- To what extent do you have collective goals with other teachers in your school?
- To what extent collective goals are prioritized than individual's goals in your school?
- How often other teachers give you feedback about the way you teach?

It seems profound that is not capable to conceptualize social capital only by measuring the extent of collective goals setting, the prioritization of goals and the frequency of feedback by peers. This insufficient measuring of social capital is based on the purpose and the nature of this study. This study seeks to find predictors of teachers’ attitudes towards SSE. SSE is a process that requires collective goals to be set, requires teachers who share experience on teaching and requires collective goal setting. In order to keep the data collection tool simple and easy to be handled within the limitations of a master thesis, the social capital would be measured only by the previous items.

The second component of social capital is the trust. Two types of trust are identified by Leana and Van Buren: Dyadic and Generalized. Dyadic is the “trust between two parties who have direct knowledge of one another” (Leana & Van Buren, 1999, p. 543). Generalized trust is “the degree to which individuals may trust one another without much direct information and/or previous interaction, simply by virtue of being in the same social system” (Leana & Van Buren, 1999, p. 543). According to Putnam (1995) as cited by Leana and Van Buren (1999) this generalized trust is the characteristic of organizations with high social capital. This study seeks to find whether this generalized trust is existed or whether the trust exist only between some members of the school. In order to find this the following question was asked:

- To what extent do you trust the staff of your school (as partners)?

The possible answers were: none of them, some of them, half of them, the majority of them, all of them.

Leana and Van Buren suggest that both components of social capital must be to some extent present in an organization: “Without some degree of associability, even the most trusting employees will be unable to realize the benefits of organizational social capital, since they cannot agree upon nor coordinate their common activities. Associability without some level of trust, however, seems largely impossible...” (Leana & Van Buren, 1999, p. 544). The degree that these two components are existing is an interesting point that would be answered in the ‘results’ section.

4.1.3 Decisional capital

The third element of professional capital according to Hargreaves and Fullan (2012) is the decisional capital. Based on the assumption that judges, doctors, teachers and many other crucial occupations have to make judgements in an ‘unavoidable uncertainty’. This uncertainty requires the consideration of multiple factors concurrently. In order to effectively make judgements a teacher has to teach year after year. The capacity to make good judgement seems to be a gift for some people, but in the majority of teachers is something that can be acquired through years of experience. Gray zones are embedded in teaching; standard recipes are not so usual in practice. Reflective practice, a term that was presented by Donald Schon (1983) can raise the effectiveness of the teaching profession according to Hargreaves and Fullan. Donald Schon distinguishes two kinds of reflection: reflection *in action* and reflection *on action*. The former is about thinking what you are doing while you are doing it. The latter is about the reflection after the ‘job’. Schon argues that technical rationality cannot provide answers for all the problems that professions face. Schools that have teachers with experience can accumulate decisional capital and by this way increase their collective professional capital. Decisional capital is measured in this study through the years of experience. The capacity for a teacher to make good decisions cannot be taught in teacher training courses. It has to be acquired through real teaching.

4.1.4 The adaptation of Professional Capital Theory in this study

The three elements of professional capital have been presented briefly. More evidence can be supplied to strengthen the arguments made in this section. However this is not the aim of this study. Hargreaves and Fullan conclude that:

‘Teachers will be short on professional capital if they are underqualified, if they come from the lower end of graduation range, and if they have not been screened for their emotional capability and for their previous experiences of working with young people. Teachers will be short on professional capital if they spend most of their professional time alone, if they do not get feedback and support from colleagues, and if they are not connected to teachers in other schools. And teachers will be short on professional capital if they do not put in the years required to perfect their practice, and if they are not provided with the coaching, mentoring, and time that help them reflect on that practice’ (Hargreaves & Fullan, 2012).

The previous extract summarizes the professional capital theory as it is used in this study. The variables and their values are presented in the the three following tables.

Table 4
Variables and Values that Measure the Human Capital of the Respondent

Variables	Values				
Foreign languages	0	1	2	3 or more	
Degree level	Secondary	Bachelor	Master	Phd	
Second bachelor degree	yes	no			
Graduation grade	5-6	6-7	7-8	8-9	9-10

Table 5

Variables and Values that Measure the Social Capital of the Respondent

Variable	Values				
Interaction with pupils	Excellent	Good	Typical	Moderate	Problematic
Frequency of collective goals	Every day	Often	Sometimes	Rarely	Never
Priority of goals	Collective goals	Individual goals	There are no goals		
Feedback by other teachers	Every day	Often	Sometimes	Rarely	Never
Trust to other teachers	All	The majority	Some	Few	None

Table 6

Variables and Values that Measure the Decisional Capital of the Respondent

Variable	Values						
Years of experience	0-5	6-10	11-15	16-20	21-25	26-30	31-35

4.2 Competing Values Framework

4.2.1 Introduction to the Competing Values Framework

Jaap Scheerens is the leader of the Department of Educational Organization and Development in the University of Twente. In its review study about the educational effectiveness literature states that: "From an international review of 109 school effectiveness research studies only 6

could be seen as theory driven” (Scheerens, 2013, p. 1). One of these very few theories that are used in school effectiveness literature is the Competing Values Framework. Competing Values Framework is recognized as one of the 40 most important frameworks in the history of business (K. Cameron, 2009; Jeff, 2016). The Competing Values Framework is based on the values that determine the selection of criteria that should be used in order to judge the effectiveness of an organization; in particular the effectiveness of a school. ‘Whenever an organization is to be evaluated, investigators must consciously choose a precise set of criteria upon which to base their assessment’ (Quinn & Rohrbaugh, 1983, p. 365). These criteria are often based on underlying values of the people. According to these values the Competing Values Framework has identified four different organizational cultures.

The first author of this framework, Robert Quinn is Professor of Management and Organizations at the State University of New York at Albany and is expert in the fields of organization effectiveness and organizational change. John Rohrbaugh, the second author, is also professor at the State University of New York at Albany and he is expert in the efficiency and effectiveness of organizational decision making. The framework proposed in 1983 and was based on the perceptions of 52 experts in the area of organizational effectiveness. The authors argue that as long as effectiveness is a construct, and not a simply concept (Quinn & Rohrbaugh, 1983), one cannot be sure about the criteria that people use in order to judge a particular organization’s effectiveness. Based on this assumption they argue that no one can be sure about what concepts must be used to construct effectiveness. This was the motivation for the creation of the framework. Moreover, they argue that the selection of the criteria reflects the values that the setter has in his/her mind. ‘This personal values that motivate the choice of particular criteria ultimately underlie the resulting effectiveness dimensions...’ (Quinn & Rohrbaugh, 1983, p. 365). For example a teacher may believe that flexibility is what a school should have in order to be effective. Another one may perceive stability and order as predictors of effectiveness. “The specific content of an individual culture will vary widely...” (Denison & Spreitzer, 1991). In order to map these differences they create a two dimensions schema that illustrates four different models of effectiveness.

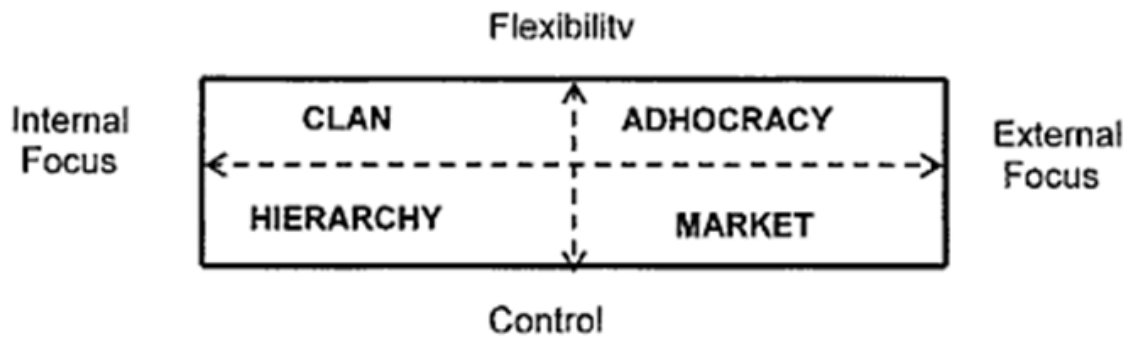


Figure 3. Competing Values Framework

Note: Reprinted from “*Competing Values Framework: Introduction*” (Dudovskiy, 2013).

The first dimension is illustrated by the vertical axis. It represents the continuum from flexibility to control and represents a debate around order, control, integration on the first side and differentiation, innovation and change on the other. If the perception of effectiveness is in favor of flexibility, it should be higher on the map. If the perception of effectiveness is in favor of stability and order it should be lower. Similarly, the horizontal axis represents a debate between “internal, micro emphasis on the well-being and development of people in the organization to an external, macro emphasis on the well-being and development of the organization itself” (Yu & Wu, 2009, p. 37). If the perception of effectiveness focuses on the organization itself then the right side should be used. If the perception of effectiveness focuses on individual’s development then the left side should be used.

This mapping of effectiveness perceptions provides four different orientations of effectiveness perception. Scheerens (2012) argues that:

‘The four orientations to organizational effectiveness can easily be interpreted as different strategies to school improvement. (...) Each is oriented towards a specific effectiveness criterion: RG [Rational Goal Model] towards primary production, OS [Open System Model] towards adaptability [...], HR [Human Relation Model] towards staff job satisfaction, and IP [Internal Process Model] towards formal structures and procedures.’ (Scheerens, 2013, p. 8).

These four orientation or culture types or models can be expressed in individual level by four different profiles: the Collaborative Profile, the Create Profile, the Control Profile and the Compete Profile. The figure below illustrates the mapping of these profiles.

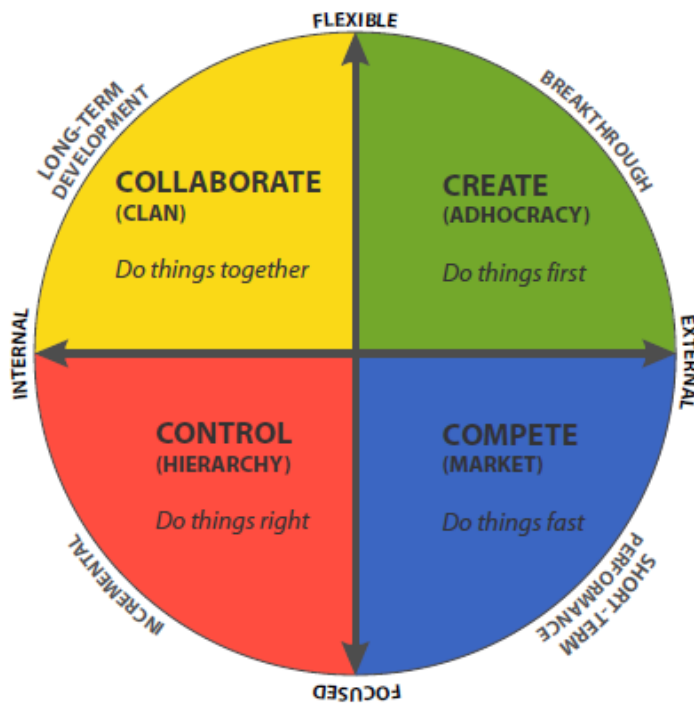


Figure 4. The four different profiles of Competing Values Framework

Note: Reprinted from "An Introduction to the Competing Values Framework:" by (K. Cameron, 2009).

In the next sections each profile will be explained further.

4.2.2 Clan culture

Clan Culture (K. S. Cameron & Quinn, 2006) or Group Culture (Denison & Spreitzer, 1991) or Human Relations Model (Quinn & Rohrbaugh, 1983) or the Collaborative Profile (Jeff, 2016) is the model of effectiveness which represented by values mapped in the upper left quadrant. The focus is internal, in the development of people within the organization. The model focuses on the collaboration among staff. People who have this culture are “the kind of people who believe in something greater than the business itself” (Jeff, 2016, p. 2). “Effectiveness criteria include the development of human potential and commitment” (Denison & Spreitzer, 1991, p. 5). The next figure illustrates this culture.

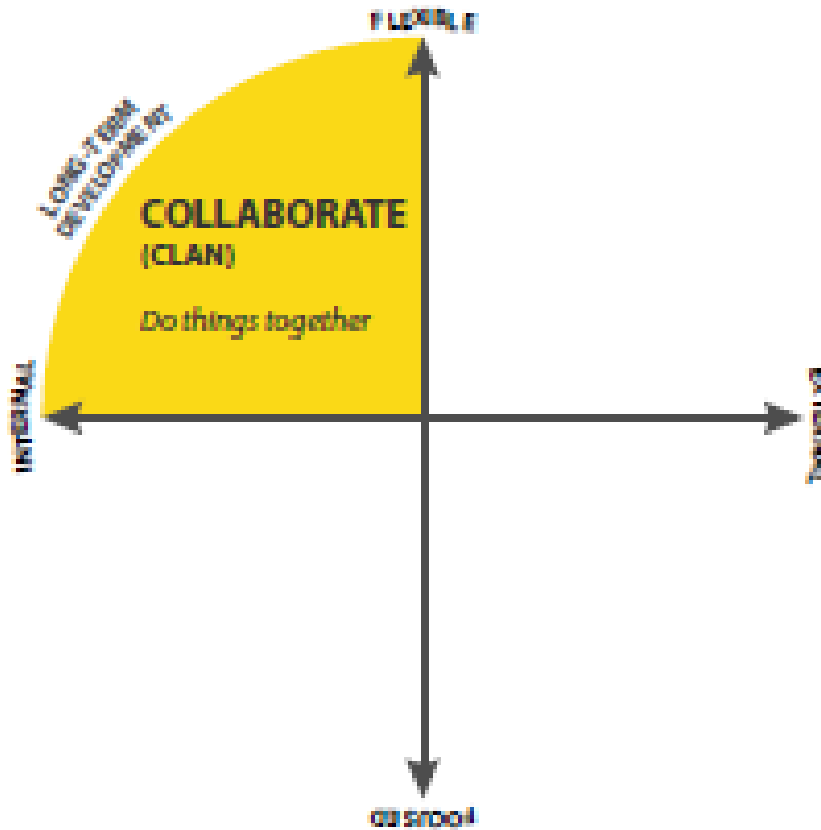


Figure 5. The Collaborative profile

Note: Reprinted from “An introduction to the Competing Values Framework” by (K. Cameron, 2009)

4.2.3 Adhocracy Culture

Adhocracy Culture (K. S. Cameron & Quinn, 2006) or Developmental Culture (Denison & Spreitzer, 1991) or Open System Model (Quinn & Rohrbaugh, 1983) or the Create Profile (Jeff, 2016) is the model of effectiveness which is mapped in the upper right quadrant and it is the most used according to Quinn and Rohrbaugh (1983). Values of this model are flexibility and readiness, growth and resource acquisition. The model stresses the innovation as effectiveness factor. Experimentation and breakthrough ideas are key words to describe people with adhocracy culture.



Figure 6. The Create profile

Note: Reprinted from “An introduction to the Competing Values Framework.” by (K. Cameron, 2009).

4.2.4 Hierarchy Culture

Hierarchy Culture (K. S. Cameron & Quinn, 2006) or Hierarchical Culture (Denison & Spreitzer, 1991) or Internal Process Model (Quinn & Rohrbaugh, 1983) or the Control Profile (Jeff, 2016) is the model of effectiveness which is in favor of stability, control, the feeling of security in the staff and the bureaucratic execution of regulations (Denison & Spreitzer, 1991). The model stresses control and order as effectiveness factors. Taken to an extreme the control profile becomes a bureaucracy (Jeff, 2016, p. 2).

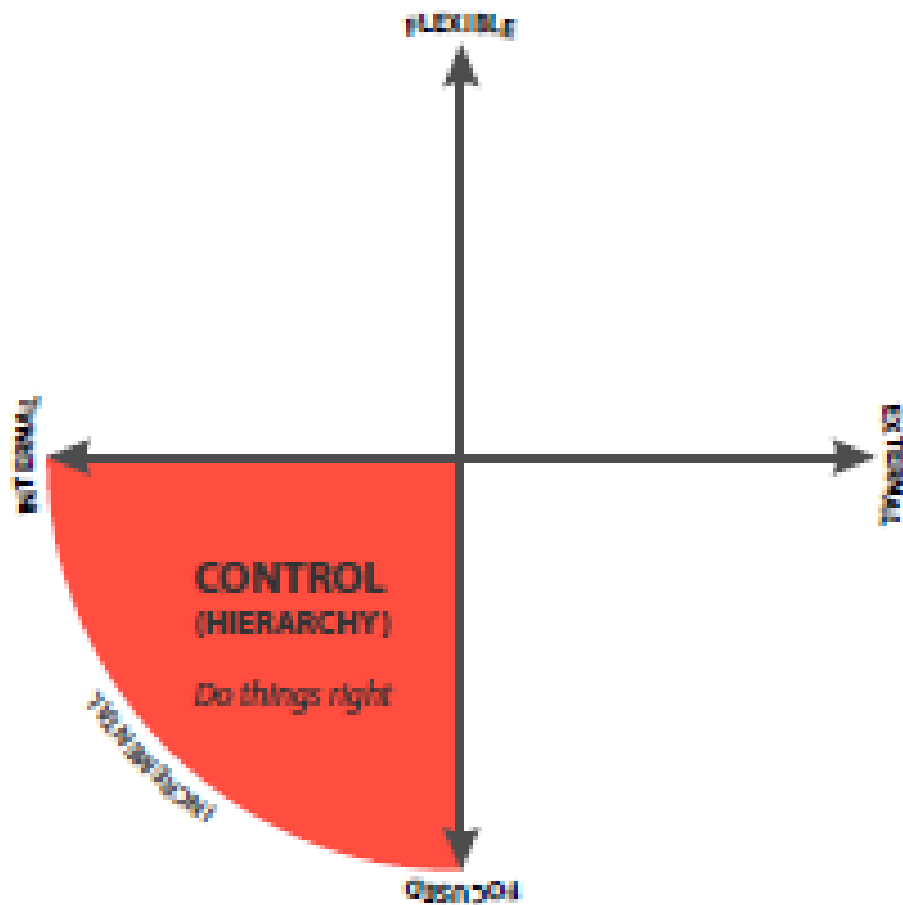


Figure 7. The Control profile

Note: Reprinted from “An introduction to the Competing Values Framework” by (K. Cameron, 2009).

4.2.5 Market Culture

Market Culture (K. S. Cameron & Quinn, 2006) or Rational Culture (Denison & Spreitzer, 1991) or Rational Goal Model or the Compete Profile (Jeff, 2016): Productivity, efficiency, planning and goal setting are the basic values in this model. The model stress competition as an effectiveness factor. People with this culture are motivated towards speedy, profitable outcomes. They are people “who appreciate the intensity of competition and achievement” (Jeff, 2016, p. 2).

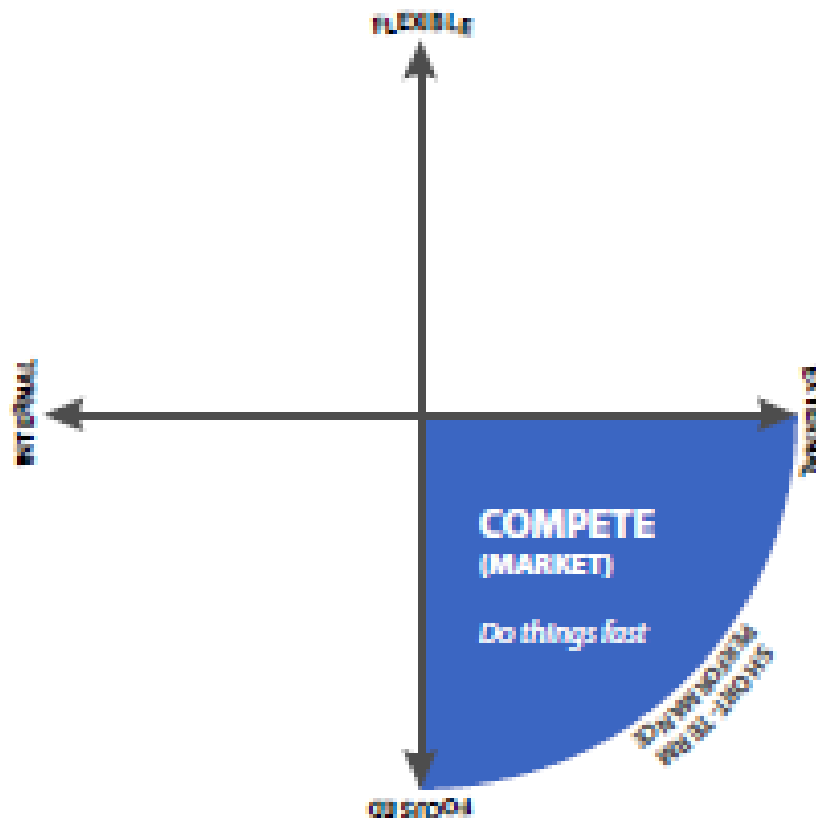


Figure 8. The Compete profile

Note: Reprinted from “An introduction to the Competing Values Framework:” by (K. Cameron, 2009)

4.2.6 The adaptation of Competing Values Framework in this study

In this study the four different organizational cultures are used in individual level and not in school level as previous studies have done (Vanhoof et al., 2009). As individual level I mean that this study tries to identify the teacher's effectiveness perspective and not the perspective of the school as organization. Previous studies have also used the framework in individual level, mainly to describe leadership style (Geraki, 2014; Zafft, Adams, & Matkin, 2009). This adaptability of the framework is one of its advantages (Denison & Spreitzer, 1991). Reasons for the selection of individual level are two:

Schools in Greece cannot decide about the recruitment of their teachers because the recruitment of the teachers is centrally driven and based on teachers' preferences that are mostly based on the proximity between school and home. Consequently teachers with completely different views come to work together. The homogeneity of the staff is often absent. My personal experience in several schools in Greece gives me the opportunity to identify that the schools have not a unique attitude towards several aspects of schooling. This opinion can also be supported by the statement of the head of commission for the national dialogue for education in Greece: "...each school must acquire its own identity (...). Prerequisite is to reduce the frequent change of the staff" (Liakos, 2016). Research findings have already shown that attitudes towards SSE are not differentiated among schools but within schools (Vanhoof et al., 2009).

One interesting characteristic of the framework is that the cultures co-exist (K. Cameron, 2009; Jeff, 2016; Vanhoof et al., 2009). Denison and Spreitzer (1991) argue that the actual effectiveness profile of an organization is different than the ideal. They illustrate this difference in the figure below, which shows a profile that tends to be hierarchical but that also includes the other cultures:

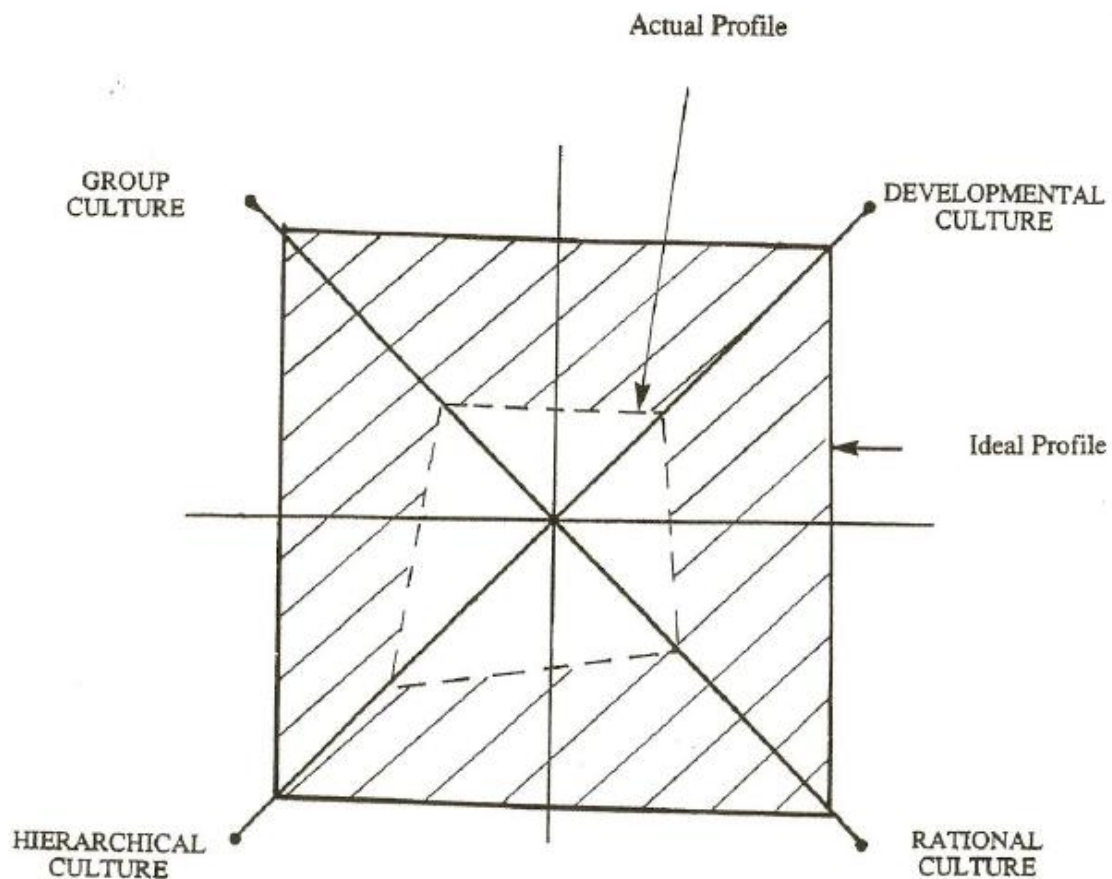


Figure 9. Profiles of organizational culture

Note: Cultures co-exist but in different proportions. Reprinted from “*Organizational Culture and Organizational Development: A Competing Values Approach*” by (Denison & Spreitzer, 1991).

Quinn and Spreitzer (1991) present research findings that correlate organizational culture with the quality of life. They found that an overemphasis on the hierarchy model is associated with a lower quality of life of organization’s members. Furthermore “balance across the four culture orientations seems to be an important predictor of quality of life” (Denison & Spreitzer, 1991, p. 18).

Using a full-structured questionnaire this study tries to find the profile of the respondent regarding the effectiveness perspective; in other words: the culture of the teacher. In order to measure the degree to which a respondent have a particular culture, respondents were asked to rate some statements. The table below illustrates these statements (items).

Table 7
Items Used for the Measurement of the Variables “Clan Culture”, “Adhocracy Culture”, “Hierarchy Culture”, and “Market Culture”

Variable	Items
	Teachers have similar views regarding the function of their school
Clan culture	All teachers participate in school activities. Teachers are socially close each other
	Teachers are encouraged to take risks and try new teaching methods
Adhocracy culture	School provides web-based or technology-based services. School is flexible enough in order to accept ‘alternative’ teachers.
	School has stability; changes are not encouraged.
Hierarchy culture	School has clear rules for everyone. School has clear structure and hierarchy.
	School compete other schools of the same region.
Market culture	School participates in many programs. Pupils’ achievements are traditionally good in this school.

4.3 Value assumptions that school self-evaluation is based on

The third way that is used to compare primary and secondary school teachers and to predict their attitudes towards SSE is the acceptance of 4 basic values that SSE based on Kyriakides and Campbell (2004).

4.3.1 1st value assumption

The first value is about the self-reflection on our actions: the “Commitment to treat human beings as natural learners” (Kyriakides & Campbell, 2004, p. 25). Schools are places where learning takes place. This learning not only for students but teachers, parents, local community, principals and authorities as they have also to learn from the prior experience. This value assumption is simple enough: Education stakeholders must educate themselves as well. SSE is a process to improve their practices. If someone does not accept this value assumption then the SSE seems meaningless. This value assumption was expressed in the questionnaire with the following way: “*People who are involved in education are expected to reflect on their own practice*”.

4.3.2 2nd value assumption

The second value assumption is based on the emancipation imperative. People must change their lives themselves. The change must come from within. The imposed changes are never as strong and permanent as the changes that are generated from within. The value is the *Commitment to change from within the organization*. In this study two statements express this value assumption: The first is “Changes in school’s functioning must be generated from within the school” and the second is “Things must never viewed as ‘good enough’ and people must continuously look for improvement”.

4.3.3 3rd value assumption

The third value is based on the idea that the feel of ownership strengthens teachers’ ability for change. By this way school improvement is easier because someone out of school does not impose the necessary actions. The value is expressed by Kyriakides and Campbell as the “Commitment to developing ownership”, in this study the statement was “Ownership of initiatives must be located in the school”.

4.3.4 4th value assumption

The last value has to do with the rationality of the educational act. Teachers should try to find evidence about their actions. Schools must plan their actions according to research evidence. This value according to Kyriakides and Campbell is the “Commitment to gathering evidence”

and in the questionnaire expressed, as “In modern education practice must be informed by evidence”.

4.3.5 The adaptation of the value assumptions to this study

The task is to find whether the teachers who accept these value assumptions are more likely to have a positive attitude towards SSE than teachers who do not accept these values.

Respondents are asked to rate their agreement about these 5 values that SSE is based on.

- People who are involved in education are expected to reflect on their own practice
- Changes in school’s functioning must be generated from within the school
- Things must never viewed as ‘good enough’ and people must continuously look for improvement
- Ownership of initiatives must be located in the school
- In modern education practice must be informed by evidence.

5 Methodology

5.1 Research Approach

This study follows quantitative research approach. The reasons for choosing quantitative approach are: Data based reasons, sampling based reasons, ethical reasons, purpose-oriented reasons and sociological paradigm oriented reasons. Each category is described below:

Firstly, the nature of the research question requires the collection of quantitative data. For example, in order to specify the human capital of each respondent one has to collect data, which describe adequately the human capital. Many of those characteristics like graduation grade and number of spoken foreign languages are numerical data. Quantitative research is associated with “the collection of numerical data which are then subjected to analysis using statistical routines” (Bray, 2014 p 40).

A second reason for choosing quantitative approach is the sampling process limitation. As far as the researcher decide to use multiple areas in his sample frame it was impossible to travel all around Greece to interview people with limited budget. Two possible solutions to overcome this problem were a) to limit the sampling process in a geographically reduced area or b) to use web-based tools for interviewing the participants. If the first solution had been followed, the inferential power of the study would have been reduced in one limited geographically area. Greek educational system is one of the most centralized system in Europe; therefore educational policy is implemented to all areas of Greece concurrently. Thus, it would be meaningless to make inferences for one specific area while the changes in policy cannot be localized. In regard to the second solution: There is no prior experience of the researcher in interviewing people in a face-to-face physical contact. Furthermore there are also ethical considerations on Skype usage in interviews and they will be discussed further.

A third reason is the several debates about ethical violations that implied from the nature of Skype. The lack of anonymity when interviewing people via Skype has been identified: “[...] it is very possible to track conversations, locations, and identities on the Internet. Skype even has the right to record your conversations although they don’t make that clear when you sign up’ (Sullivan, 2013, p. 58). Moreover, more practical ethical issues cannot be guaranteed thought Skype. For instance, the interviewee is not able to know if someone is sitting near

interviewer's camera: 'using videoconferencing would only be appropriate for certain topics. It would not be advisable to discuss someone's illegal behavior with the slight chance that someone else is paying attention' (Sullivan, 2013, p. 58). As long as school evaluation is a debatable issue in Greece and as long as evaluation is a 'hot' word in public sector of Greece, a probable respondent's nonconformity in answers may be unable to emerge during the interview (via Skype) because of his/her wariness about anonymity. Consequently the filling of an unnamed questionnaire has been considered as a better approach than the interview. In addition, research on ethical issues of qualitative web-based interviews is very limited (Sullivan, 2013, p. 59).

Fourthly, there is also one reason related to the purpose of this study. An implicit purpose of this study is to explain teachers' attitudes from several explanatory variables like teachers' professional capital and teachers' effectiveness perspective. This is similar to Bray's argument about the purpose of quantitative approaches: "The overarching purpose of quantitative research methods in education is the development of laws which contribute to the explanation and prediction of educational phenomena" (Fairbrother, 2007, p. 72). This similarity contributes further to the selection of quantitative approach.

5.2 Assumptions of social science

Regarding common strands of sociological debate around social research, this study relies on specific epistemological, ontological, human nature and methodological opinions that described below.

5.2.1 Epistemological assumptions

Positivist epistemology seeks "to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements" (Barell, 1979, p. 5). This holds true in this study because its purpose is to explain why these teachers have these attitudes and why other teachers have different attitudes. The antipositivism opinion, that "...there is always a vantage point when an observer frame the research in his/her own eyes..." (Ibid) is accepted as well. The researcher does not expect to validate positivism by explain teachers' attitudes in a quantitative way. On the contrary, this study leaves space for a qualitative design or for a mixed method design that may explain better the

same attitudes. Researcher's point of view and researcher's prior experience on the field of school self-evaluation have left observable 'footprints' in questionnaires' construction and sampling procedure. But this does not limit the positivist nature that this study seeks to encapsulate. The implicit presence of researchers' "eye" counterpoints the necessity for positivism while exploits researcher's prior knowledge on the specific field. The paragraph below describes a similar situation using animal's observation:

An animal in flight sees roads to escape and hiding places. . . . Generally speaking, objects change... according to the needs of the animal.' We may add that objects can be classified, and can become similar or dissimilar, only in this way-by being related to needs and interests. This rule applies not only to animals but also to scientists. For the animal a point of view is provided by its needs, the task of the moment, and its expectations; for the scientist by his theoretical interests, the special problem under investigation, his conjectures and anticipations, and the theories which he accepts as a kind of background: his frame of reference, his 'horizon of expectations' (Popper, 1963, p. 21).

5.2.2 Ontological assumptions

Researcher's point of view regarding the ontological debate is a kind of weak agnosticism. Agnosticism believe that one cannot know whether or not a God exist. The weak agnosticism does not reject the probability to know one day (Kowalczyk, 2015). Graham Oppy (2015) describes weak agnosticism as 'the view, which is sustained by the thesis that it is permissible for reasonable persons to suspend judgment on the question of God's existence'. Paraphrasing Oppy's words, I extend the meaning of weak agnosticism to the social world and by this way I hold the assumption that it is permissible for reasonable persons to suspend judgment on the question of social world existence. This may described as an eclectic personal position regarding the ontological debate between realism and nominalism (Barell, 1979, p. 5). This personal position can be summarized into two phrases:

- I am not able to know whether the social phenomena really exist or whether it is just my subjective view that creates the social phenomena.
- I am not able to reject the possibility to know one day.

5.2.3 Human nature assumptions

Barell's (1979) positions the man's view in a continuum. In the one side of the continuum Barell places the deterministic view while at the other side places the voluntarism view. This study holds the opinion that a particular event has always a reason in other words this study holds a deterministic view. Also the researcher has the opinion that if one knows a priori the reason is not always able to predict the event. This opinion can be categorized as soft causality (Doyle, 2011) and it is a kind of determinism. On the other hand the researcher believes in moral responsibility of human being. The combination of free will and determinism is known as compatibilism: 'Compatibilism is the thesis that free will is compatible with determinism' (McKenna, 2015).

5.2.4 Methodological assumptions

Ideographic-nomothetic approach is the dipole of the methodological debate (Barell, 1979). This study seeks to identify if a correlation exists between teachers' attitudes towards school self-evaluation and several teachers' characteristics. Despite the fact that this task requires a nomothetic approach the researcher does not reject ideographic supplements of this study. The limitation of time and budget, as well as the large teachers' population (150000 teachers) is not in favor of an ideographic approach. A second reason for choosing nomothetic approach is the centralized nature of Greek educational system. While the existence of different views among schools is possible, there is no capability to be reflected in a policy paper when the Ministry of Education leaves no space at individual schools to adapt a policy document in the specific local context. Thus, it is (again) meaningless to ideographically explore school-based attitudes when policy documents would be produced once and for all.

To sum up, this study seeks to predict teachers' attitudes using several explanatory variables. Attitudes have been used to predict behavior consistency (Kellgren & Wood, 1986). This series of causal relationships implies a nomothetic epistemology. The fact that in Comparative Education Research 'varied research philosophies, designs, and methods could be used in a single study' (Teklu, session 6, 2015) implies flexibility in the interpretation of the findings in the conclusion part.

Regarding the four paradigms of Comparative Education Research (CER) this study holds a functionalist approach. Indicator of approach is the usage of human capital approach as

analytical framework in this study. Human capital approach is mapped also in Paulston's (1997, p. 57) schema about the four paradigms in CER.

5.3 Research Design

According to Bryman (2012) there are four different designs of social research: Case study, longitudinal, experiment, comparative and cross-sectional. The fact that this study is a master thesis implies limitations to the available time for research. This means that longitudinal design is not applicable because of time limitations. Similarly experimental design is not frequently undertaken by students in a master degree level because of experiments' extended requirements (Teklu, lecture 2015). This study seeks to identify possible associations between teachers' attitudes and several explanatory variables. This is the case for cross-sectional design. Cross sectional design can be characterized by four basic elements (Bryman, 2012). These elements are met in this study in a way that is described below:

- More than one case: The researcher takes into consideration more than one case. Specifically 87 valid questionnaires have been collected.
- Single point in time: The selection of questionnaires has been done at once. The first filled questionnaire collected in 31 of October 2015. The last questionnaire was collected in 9 of December 2015. The overall time of data collection was 40 days. Teachers' attitudes towards school self evaluation considered as a concept that cannot be significantly changed in such a limited period.
- Quantitative data: Variation in attitudes and other teachers' variable has been checked using quantitative data and qualitative ranked data.
- Association between variables: As stated before, this study seeks to explain teachers' attitudes by looking for association with several explanatory variables such teachers' human capital characteristics.

5.4 Research Method

The selected method is the self-completion questionnaire. Cheapness and quickness of self-completion questionnaires are two advantages (Bryman, 2012) that have been taken into

consideration for the selection of the method. Moreover the absence of an interviewer during the filling of the unnamed questionnaire considered as a wariness reduction factor in terms of anonymity.

5.5 Comparison Issues

According to Gray's and Tomas's Cube, the levels of comparison can be described by 3 ways: geographic\location level, demographic level, and aspects of education and of society. This study compares two demographic\non-locational groups: Primary schools teachers versus secondary school teachers. The unit of comparison is the attitude of a teacher towards school self-evaluation.

Teklu (2015, session 6) signifies several challenges for the quality of comparison. Below is presented the elaboration of the most crucial challenges for this study:

5.5.1 Start and end dates

Data were collected during autumn of 2015. The previous year was the first year that schools are obligated to formulate a SSE process. This indicates that the topic was time-relevant and in line with the current policy. Furthermore, other types of teachers' evaluation were implied in the same period for first time in Greece. This policy leads to resistance in teachers' population that has been analyzed in prior chapters. For this reason it is expected that respondents might have been charged emotionally on the topic. Attitudes consist, among other characteristics, from feelings. This implies that attitudes towards school self-evaluation might have been influenced by the ambient 'zeitgeist'.

5.5.2 Duration of data collection

The duration of data collection was 40 days. An attitude towards school self-evaluation cannot be changed in such a limited period with the exception that something significant would take place. The researcher worked in Greek educational system during the data collection process. This involvement with education gives the researcher the opportunity to observe that there was nothing important around this topic during the period of data collection. By this way one can say that duration of data collection has not an impact in the comparison quality.

5.5.3 Meaning of words

Words like school self-evaluation and effective school was not defined. This was not happened accidentally. On the contrary, it was a planned fact in order to acquire the relevant perception from the respondent. In such cases, what is describing from Teklu (2015, session 6) as challenge has been transferred into advantage. For instance, while respondent answer the question “To what extend do you agree that the criteria below are valid indicators of effective schools?” they was giving their definition of effective school. By this way, the controversial meaning of the phrase 'effective school' was helpful for the research process.

5.6 Statistical Analysis and Levels of Measurement

Statistical techniques are part of our interaction with research findings. Reasons for involving statistical analysis can be seemed both in the post research period and during the research period. Regarding the post research period, the need for decision upon research findings makes statistical analysis a necessary component of each research study. One cannot have adequate decision capacity if a dataset is not followed by any statistical analysis. As long as researchers are motivated by the potential dynamics of their research, statistical analysis would supply to the reader the capacity to understand and evaluate the meaning of each research. On the other hand, a researcher needs to “[...] decide whether existing information is adequate or whether additional information is required” (Devore & Roxy, 1994, p. 5).

The selection of statistical method “is dictated by levels of measurements and nature of research question” (Teklu, 2015, p. 22). In the paragraphs below the level of measurements is presented for each research question.

5.6.1 1st Research Question

The first research question is: To what extend primary schools and secondary schools are different regarding (a) teachers’ culture, (b) teachers’ professional capital and (c) teachers’ acceptance of assumptions? The variables, the levels of measurement and the statistical methods for each of these three elements of the first question will be presented in the next paragraphs.

Teachers’ culture

Teachers' cultures have been measured using 12 Likert type questions. These 12 questions have been grouped into 4 sets of 3 questions. Each set of 3 questions was dedicated to measure a particular culture. The grouping of the questions was not observable by the respondents in order to remain unbiased in their decisions. This means that respondents were not able to know which culture was measured by each question.

The range of the answers in Likert type questions was from 1 (Strongly disagree) to 5 (Strongly agree). There are contrasted arguments in relevant literature about the type of data that Likert type questions provide: interval or ordinal (Brown, 2011). "[...] Much of this ordinal/interval confusion arises from the fact that many authors use Likert scale to refer to both the Likert item type [...] and Likert scales (sums or averages of the results on sets of Likert items) [...] (Brown, 2001, p. 11)". In this case the summated score of 3 Likert type questions was used in order to handle them as scales. The reason for choosing to handle them as scales is that "the Likert type scales are often reliable and valid" (Shaw and Wright, 1967, p. 24 as cited in Teklu, 2003, p. 49) and also because 'several papers have shown that Likert scales can indeed be analyzed effectively as interval scales' (Brown, 2011, p. 11).

The nature of the research question indicates that the differences between two independent groups (primary and secondary school teachers) have to be found. In order to choose the appropriate test we have to know if the variables are normal or not normal distributed. T-test is implied when we have a normal distribution while Mann Whitney U test is used for not normal distributed variables (Leeper, 2016). Both of these tests 'determine whether there is a statistically significant difference between the means in two unrelated groups' (Lund, 2013). The primary and secondary school teacher are unrelated groups in this study because if someone is working in secondary school is not able to work in primary schools (at least not at the same year). In order to test for normality this study uses 3 different ways:

Firstly, all the independent variables were tested for normality using the Kolmogorov-Smirnov (known as K-S test) test. The p-values of K-S test are below 0.05 for all the variables. This means that the variables are not normal distributed. The second way of testing for normality is the z-values. Z-values produced from skewness and kurtosis levels and shows that the distribution is not normal (skewness and kurtosis levels of all variables are provided in the appendix). The last way to test for normality is the visual check of histograms. The Kolmogorov-Smirnov test results as well as the histograms for each variable are provided in the appendices B and C respectively.

The visual check of the histograms of the four effectiveness perspectives shows that only the market culture perspective seems to have relatively normal distribution but even for this, the z-values and the K-S values are not showing any normality. Thus, we assume that none of the four culture variables is normal distributed. The Mann Whitney U test is the appropriate test for differences between two unrelated groups when the variable is not normal distributed (Nachar, 2008).

The scores are grouped further in order to give easy interpretable results. The table below illustrates the way that scores are grouped. The lower score could be $3 * 1 = 3$ (Strongly Disagree to all 3 items). The higher score could be $3 * 5 = 15$ (Strongly Agree to all 3 items).

Table 8
Score and Characterisation

Score	Characterization
From 3 to 6	Weak culture (low score)
From 7 to 11	Moderate culture (medium score)
From 12 to 15	Strong culture (high score)

Teachers' professional capital

Professional capital was measured using 10 variables that are illustrated in the tables 15, 16 and 17. Two methods for statistical analysis were implied: Mann Whitney U test and Chi-square test.

For the interval and the ordinal variables one has to use the criterion of normality in order to choose between T-test and Mann Whitney U test. The Kolmogorov-Smirnov test shows that none of the ordinal and interval variables has p-value more than 0.05. The skewness and kurtosis levels as well as the histograms (provided in the appendices B and C) are also indicators of limited normality. This limited normality of interval and ordinal variables leads to the selection of Mann Whitney U test. The Mann Whitney U test 'is used to compare differences between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed' (Lund, 2013).

In some case the Chi-square test could not be used. The reason is that Chi-square test requires at least 5 observations in each cell in order to give valid results. This was the main criterion

for the selection of Chi-square test. For the following variables the Chi-square test was not used: “number of spoken foreign languages”, “existence of 2nd degree”, “interaction with pupils”, “frequency of collective goals”.

The variable “years of experience” was not implied in any kind of test. It was just compared using a population pyramid chart. The reason for this limited comparison is that the years of experience are highly influenced by the attitude of younger teachers to respond in emails and to fill in questionnaires more than older teachers. Thus, it was not valid to generalize the findings. However the population pyramid would give the opportunity for some important discussions about the career stage of the teachers.

Teachers’ acceptance of assumptions

The acceptance of assumption was measured using the summated score of 5 Likert type statements. Each statement describes one assumption. The Kolmogorov-Smirnov test for normality shows that the variables are not normal distributed (p-values < 0.05). The histograms that are provided in the appendix show also that the distribution is not normal at any case. Again, because of the lack of normality, the selected method is the Mann Whitney U test. The summated score was grouped further in order to give easy interpretable results. The table below illustrates the way the score was grouped. The lower score could be $5 * 1 = 5$ (Strongly Disagree to all 5 items). The higher score could be $5 * 5 = 25$ (Strongly Agree to all 5 items).

Table 9
Scores and Characterisations of the Variable “Acceptance of Assumptions”

Summated score	Characterization
From 5 to 11	Weak acceptance (low score)
From 12 to 18	Moderate acceptance (medium score)
From 19 to 25	Strong acceptance (high score)

5.6.2 2nd Research Question

The second research question is: To what extent teachers’ attitudes towards school self-evaluation can be predicted by knowing (a) teachers’ perceptions of effectiveness, (b)

teachers' professional capital and (c) teachers' acceptance of assumptions that school self evaluation is based? Dependent variable now is teachers' attitudes. Teachers' attitudes were measured using 7 Likert type questions. The mean score of 7 Likert type question was calculated. The number of independent variables is 15.

The nature of this research question indicates that a correlation statistic is needed. The number of the independent variables in this research question is large. When the variables are only two, Spearman's rho or Pearson's r are appropriate methods to test for association. In this case the appropriate statistical method must hold all other variables constant while searching for association between two variables. This characteristic can be found in regression analysis (Devore, 1994; module 5, 2015). Thus a multiple regression analysis method was employed. Multiple regression analysis is used when the researcher has '[...] more than one predictor variable in the equation' (Leeper, 2011). There are many types of multiple regression analysis. The main criterion to choose regression type is the level of measurement of the dependent and independent variables: continuous, binary or ordinal. In the second research question the dependent variable is "teacher attitudes towards SSE" which is the mean score of the 7 Likert type questions. Respondents have to choose between 1 (Strongly Disagree) to 5 (Strongly Agree). The title of this thesis is "Characteristics of teachers with positive attitudes towards school self-evaluation in Greece". Thus, the aim of the dependent variable is to identify the teachers with positive attitudes towards SSE. An assumption was implied in this point: Teachers with mean score equal or higher than 4 considered as teachers who have positive attitudes towards SSE. On the other hand, teachers with mean score lower than 4 considered as teachers with moderate or negative attitude towards SSE. Thus a binary variable was created. The value "0" represents teachers with negative or moderate attitude towards SSE, while the value "1" represents teachers with positive or neutral attitude towards SSE. The same logic was implied to all the independent variable. These variables are called dummy variables in the relevant literature because they don't represent real data. They are processed data. This kind of data is used in binary logistic regression. Thus the selected method for the second research question is the binary logistic regression. The table 10 presents the values of the dummy variables.

Table 10
Dummy Variables

Variables	Values	
Does the respondent have strong clan culture?	yes	no
Does the respondent have strong adhocracy culture?	yes	no
Does the respondent have strong hierarchy culture?	yes	no
Does the respondent have strong market culture?	yes	no
Does the respondent speak only 1 foreign language?	yes	no
Does the respondent speak 2 or more foreign languages?	yes	no
What is the graduation grade of the respondent?	5.00 - 7.00	7.01 to 10.00
Does the respondent have a second degree?	yes	no
The higher degree the respondent holds is...	bachelor	master or PhD
Do collective goals have priority over personal goals?	yes	no
Does the respondent's receive feedback often or every day?	yes	no
Do respondent's peers give him/her feedback sometimes?	yes	no
Do respondent set collective goals frequently in school?	yes	no
Do respondent set collective goals sometimes in school?	yes	no
How many teachers does the respondent trust in the school?	nobody or some of them	the majority of them or all of them
How good is respondent's interaction with pupils?	Good	Excellent
What is the career stage of the respondent?	non-early career stage (11 to 35 years)	early career stage (1 to 10 years)

Assumptions of binary logistic regression

Now that the type of the dependent variable has been cleared it is easier to decide what type of regression analysis is appropriate for: Binary logistic regression analysis. Logistic regression is not assumption free. The required assumptions are elaborated below:

Dependent variable must be at dichotomous level: This assumption as already said is met.

Linearity: The assumption of linearity in ordinal and logistic regression has to be met between all the explanatory (independent) variables and the logit of the outcome (dependent) variable. In order to check this one has to look at the pseudo R and the model fit statistics that SPSS provide (module 4, 2012). In the general case a large pseudo R indicates a desirable model (Devore, 1994). Small pseudo R indicates that the explanatory variables cannot predict adequately the outcome variable (module 5, 2012). Big pseudo R-values indicates that the outcome variable can be predicted adequately. In this study the pseudo R is equally to 1 (the maximum value) for all the 7 items because the number of the explanatory variables are big (15 explanatory variables). This is quite logical: as long as the researcher adds explanatory variables in the model the prediction would become better and better. SPSS provides three version of pseudo R: Cox and Snell R, Nagelkerke R and McFadden R. In this study the Nagelkerke pseudo R is used to evaluating the effectiveness of the model. The model fit statistics show whether the regression model explains data in an accurate way. Specifically, the -2 log likelihood (-2LL) statistic helps in this way by calculating the deviance. 'The deviance is basically a measure of how much unexplained variation there is on our regression model – the higher the value the less accurate the model' (module 4, 2012). As it is profound is uncertain to have zero unexplained variation in teacher's attitudes. The real question here is how many variables is needed to improve model's predictive power. This implies that the researcher have to use step by step each variable in order to find a model with good predicted power. In this study the explanatory variables are 15. But the number of explanatory variables is limited by the sample size (module 3, 2012). For each explanatory variable in the model 15 cases of data are require (Field, 2009, pp. 645-647). The sample size in this study is 87 cases. This means that the maximum number of variables that can be used in the final model is approximately 6 ($87/15=5.8$). In the final model [...] only the meaningful variables should be included, but also all meaningful variables should be included (assumptions of logistic regression, 2012). The 6 variables that can best predict teachers' attitudes towards SSE are presented in the next chapter about results.

Independent errors: This assumption means that errors in prediction should not be correlated (module 2, 2012). This could be the case when in the same sample different measurements are taken in different times. In this study there is no repeated measurement so this assumption is met.

Multicollinearity: Multiple logistic regressions require all independent variables to be uncorrelated, at least as less as possible. In case that two or more variables are highly correlated ($r > 0.8$) the multicollinearity assumption is not met and the particular variable must not participate in the logistic regression model. In order to check for multicollinearity, the 15 independent variables are implied in a bivariate analysis using SPSS. Results show that none of the independent variables are highly associated with each other. Pearson's r coefficients can be found on appendix A.

5.7 Sampling

The overall teachers' population in Greece is 157552 excluding all the tertiary educational institutes. This population is spread across different regions. Attitudes may differentiate across different regions. The economic background, the local geography and the culture are different across different regions of Greece. For example teachers from regions that their economy is based on tourism (like islands with popular holiday resorts) are expected to have more positive attitudes than the teachers from regions that are isolated thought mountainous landscape.

Another source of differentiation across regions is that teachers' population in agricultural areas is less aged than the bigger cities' population. The reason for that is that the hiring process of Greek educational system is highly centralized. For a young teacher is difficult to be hired in urban schools. Young teachers have to spend many years in rural areas waiting for elder teachers to be retired in the bigger cities. Schools and local authorities have not any right to hire teachers. As a consequence of this hiring system some regions are filled with younger teachers and some others with elder. It is expected that younger teachers' attitudes are different than elder teachers' attitudes towards SSE, thus the need for sampling among different regions is necessary.

For the previous reasons the sample frame was the entire teachers' population of Greece. After contacting the ministry of education, the researcher was not able to access data on the

teacher population of each region. In order to overcome this difficulty the researcher made use of the assumption that the population of each region is relative to the population of the teachers that are working to each region. Some regions are overrepresented while some others were underrepresented. In order to eradicate this sampling bias, collected data have been weighted using n/N ratio. Weighening adjustment assigns an adjustment weight to each survey respondent. Respondents who are underrepresented get a weight smaller than 1. Respondents who are overrepresented get a weight that is larger than 1. By this way the answer from a respondent from a region that is underrepresented counts more than an answer from a respondent who is from a region that is overrepresented. The table below presents the weighing process.

Table 11
Weights

Administrative regions of Greece	Population* (N)	Population proportion	Sample (n)	Sample proportion	Population proportion/ Sample proportion	Weight
Attica	3828434	0.354	14	0.161	0.354/0.161	2.1988
Central Greece	547390	0.051	4	0.046	0.051/0.046	1.1087
Central M.	1882108	0.174	16	0.184	0.174/0.184	0.9457
Crete	623065	0.058	6	0.069	0.058/0.069	0.8406
East M. Thrace	608182	0.056	9	0.103	0.056/0.103	0.5437
Epirus	336856	0.031	5	0.057	0.031/0.057	0.5439
Ionian Islands	207855	0.019	2	0.023	0.019/0.023	0.8261
North Aegean	199231	0.018	3	0.034	0.018/0.034	0.5294
Peloponnese	577903	0.053	6	0.069	0.053/0.069	0.7681
South Aegean	309015	0.029	13	0.149	0.029/0.149	0.1946
Thessaly	732762	0.068	3	0.034	0.068/0.034	2
Western Greece	679796	0.063	3	0.034	0.063/0.034	1.8529
Western M.	283689	0.026	3	0.034	0.026/0.034	0.7647
Greece (total)	10816286	1	87	1		

* Population data are taken by the 2011 census

Sampling method

Probability sampling is more acceptable in terms of validity and reliability than non-probability sampling at least in quantitative research. In order to distribute questionnaires to teachers that are currently working in Greece one has to ask permission from the Ministry of Education. The time that the data collection process had to be started, that was September of 2015, Greek elections were immediately set due to a political and financial stick period (like the 'capital control' in banking system). Consequently, the dissemination of the questionnaires via the Ministry of Education was impossible. In Greece, the period between the announcement of the election and the moment that a new government will be elected is a period that all the ministries (excluding the Ministry of Defence) run with limited administrating staff and most of the processes that require permissions from administrative staff are postponed until the post-election period. Due to this difficulty the researcher had to use non-probability sampling method. The selected method was a mix of quota method and snowball method.

5.8 Recruiting of participants

In order to recruit teachers to answer the questionnaire two different ways have been used: Teachers' unions and friends of friends.

Greece is divided into 52 prefectures. Each prefecture has its own teachers' union. Emails had been sent to each union asking from them to distribute the questionnaire to their members. In addition social networks like Facebook have also informed some unions.

In some regions teacher unions were not collaborative enough and the questionnaires were not distributed. For example, there were not any responses from North Aegean and South Aegean. In those cases a network of friend of friends did the distribution of questionnaires. This path was especially used in the weighting adjustment stage.

The task was to collect responses from each region in proportion to their population. For this reason the researcher resend emails to specific regions that they were not enough represented by their responses. As the total amount of the collected responses was increased the proportional responses from each region had to be increased as well. For this reason a

responses calculator was created using Microsoft excel. The responses calculation in the end of the data collection process had the appearance below:

Table 12
Responses Calculator

Regions of Greece	Populatio		Desired	Collected	Remaining
	n (2011)	%	Responses	Responses	Responses
Attica	3828434	35	31	14	17
Central Greece	547390	5	4	4	0
Central Macedonia	1882108	17	15	16	-1
Crete	623065	6	5	6	-1
E. M. & Thrace	608182	6	5	9	-4
Epirus	336856	3	3	5	-2
Ionian Islands	207855	2	2	2	0
North Aegean	199231	2	2	3	-1
Peloponnese	577903	5	5	6	-1
South Aegean	309015	3	2	13	-11
Thessaly	732762	7	6	3	3
Western Greece	679796	6	5	3	2
W. Macedonia	283689	3	2	3	-1
Greece (total)	10816286	100		87	

5.9 Validity and Reliability

5.9.1 Validity

Validity is “the extent to which a concept is accurately measured in a quantitative study” (Heale, 2015). It can be further classified to content validity, construct validity and criterion validity. Each of the three types of validity will be discussed in the next sections.

Content validity

Content validity refers to “whether an instrument covers adequately covers all the content that it should with respect to the variable” (Heale & Twycross, 2015). The aim of this thesis was to find characteristics of teachers who have positive attitudes towards SSE. Thus, the items were selected with a pick-berry approach. For example the questionnaire requires from respondent to fill in the years of teaching experience that they have. This item is not part of construct but it is a simple variable. The aim of this thesis was not to create constructs or theories but to identify teachers’ characteristics that are positively associated with a positive attitude towards SSE.

Construct Validity

This type of validity refers to the extent of which a questionnaire measures the concepts that is dedicated to measure. In this research 15 independent variables and one dependent variable were used. The first four variables measure the culture that a teacher has. For these four variables a new questionnaire was created (see appendix D). The rationale for the creation of a new tool is that the context is different than other contexts. A review study about instruments that measure cultures reports that “The degree to which any measure is seen as “fit for purpose” depends on the particular reason for which it is to be used and the context within which it is to be used” (Jung, et al., 2009). Following this argument, I created my own items to measure the culture of the teachers. The measurement focused on the way that the teachers perceive the *effective school*, for instance it was assumed that teachers who focused more on some aspects of hierarchy could be characterized as teachers who have a hierarchy culture. This is not valid in a general way, therefore it cannot be generalized, but in this way one can say that this study has a lack of construct validity.

The construct validity of the questionnaire is low because the intention was not to create items in order to measure a concept. The intention was to measure at least one item for each concept. In the second level, the intention was to measure at least one concept for each construct. In the third level, the intention was to measure at least one construct for each theory. More studies are required to measure the concepts and the constructs that are illustrated in the Appendix H.

Regarding facing validity, which is a subset of content validity, the questionnaire was distributed to a limited number of master degree holders as well as to professors of the University of Oslo. The suggested corrections were implied.

Criterion Validity

No prior questionnaire was found to measure the same variables. Thus, criterion validity is not relative to this data collection tool.

5.9.2 Reliability

Stability

In order to decide for the stability of a data collection tool one has to test and retest the respondents. Retest was impossible because the respondents were anonymous.

Homogeneity

The scales that were used in this questionnaire were 5. The first scale measures the variable “attitude towards SSE”. The Cronbach’s α of this 7 items scale was 0.916. Thus one can say the homogeneity of this scale is high (>0.7). The other four scales measure the 4 cultures of the respondent. These scales found to have limited homogeneity. In particular, the Cronbach’s α of the variables “clan culture”, “adhocracy culture”, “hierarchy culture”, and “market culture” were 0.553, 0.642, 0.401, and 0.225 respectively. The inter-item correlation matrixes of these 5 scales can be found on the appendix F. To sum up, there is adequate homogeneity of the scale that measures the attitude but the items that measure the cultures do not have the required homogeneity.

5.10 Ethical considerations

The questionnaire was completely anonymous. The respondents were informed with a consent request text that was sent via email. It can be found in the Appendix G.

6 Results

In this section the findings are presented along with the relevant statistical analysis techniques that were used in order to answer each research question. The purpose of this study is to find predictors of positive teachers' attitudes towards SSE and the extent to which these predictors are differentiated between primary and secondary school teachers. Data were collected from pre-primary, primary, lower secondary and upper secondary school teachers from all regions of Greece. From 89 returned questionnaires the 87 were valid. The tables below present the allocation of the valid questionnaires regarding the type of school (primary, pre-primary, lower secondary, upper secondary) and the region of Greece that teachers are working (13 administrative regions).

Table 13
Allocation of Valid Questionnaires Regarding the School Type

School type	Valid Questionnaires	%
Primary and pre-primary schools	41	47.1
Lower and upper secondary schools	46	52.9
Total	87	100

Table 14
Allocation of Valid Questionnaires Regarding the Region

Regions of Greece	Valid Questionnaires	%
Attica	14	16.1
Central Greece	4	4.6
Central Macedonia	16	18.4
Crete	6	6.9
Eastern M.& Thrace	9	10.3
Epirus	5	5.7
Ionian Islands	2	2.3
North Aegean	3	3.4
Peloponnese	6	6.9
South Aegean	13	14.9
Thessaly	3	3.4
Western Greece	3	3.4
Western Macedonia	3	3.4
Greece (total)	87	100

The presentation of the findings is spitted into two sections: the comparison and the prediction. The comparison section presents the differences and similarities of thee two groups of teachers regarding the 15 variables that have chosen according to the three theoretical frameworks that have used.

6.1 Comparison between primary and secondary school teachers

This section is dedicated to answer the first research question:

To what extend primary schools and secondary schools are different regarding (a) teachers' culture, (b) teachers' professional capital and (c) teachers' acceptance of assumptions?

First the differences of teachers' cultures are presented, secondly the differences of professional capital and thirdly the differences on the acceptance of assumptions.

6.1.1 Differences in teachers' culture

General overview

As stated in the methodology chapter the culture types which are used in this study are four: clan culture, adhocracy culture, hierarchy culture and market culture (K. S. Cameron & Quinn, 2006). Each teacher has to some extent all the cultures. For example a teacher might have weak clan culture, moderate adhocracy culture, strong hierarchy culture and strong market culture. The words weak, moderate and strong were implied in order to name a lower, a moderate and a higher score on the Likert type items, which were dedicated to measure the degree in which a teacher has a particular culture. The terms 'weak', 'moderate' and 'strong' means has been already explained previously in the methodology chapter.

Results show that school type (primary or secondary) cannot determine the extent to which teachers have a culture. The Mann-Whitney U test result shows that the cultures are not differentiated between primary and secondary school teachers. The table 15 contains the results of the Mann-Whitney U test.

Table 15

Mann Whitney U Test Results of the Variables “Clan Culture”, “Adhocracy Culture”, “Hierarchy Culture”, “Market Culture”

Test type	Clan culture	Adhocracy culture	Hierarchy culture	Market culture
Mann-Whitney U	925.500	917.000	935.000	874.000
Wilcoxon W	1786.500	1998.000	2016.000	1735.000
Z	-.178	-.347	-.078	-.893
p	.858	.728	.938	.372

Note: Grouping Variable: School type

The culture with the highest score for both primary and secondary school teachers is the adhocracy culture: The culture that both primary and secondary school teachers have the lowest score is the market culture. The table 10 below illustrates the mean scores and the standard deviations for the two groups of teachers.

Table 16

Mean scores and Standard Deviations of the Variables “Clan Culture”, “Adhocracy Culture”, “Hierarchy Culture”, “Market Culture”

Culture type	Primary school teachers	Secondary school teachers
Clan culture	3.95 (SD 0.71)	3.91 (SD 0.62)
Adhocracy culture	4.38 (SD 0.56)	4.23 (SD 0.53)
Hierarchy culture	3.92 (SD 0.66)	3.71 (SD 0.60)
Market culture	3.08 (SD 0.72)	2.88 (SD 0.51)

Each culture type is presented in a different paragraph. For the simplification of the text, primary school teachers and pre-primary school teachers are referred both as primary school teachers. Similarly, lower secondary school teachers and upper secondary school teachers are referred both as secondary school teachers.

Clan culture

The percentages of primary school teachers that have weak clan culture are 2.4% while the percentage of secondary school teachers that have weak clan culture is 2.2%. The same similarity is also true for moderate clan culture, 34.1% versus 32.6%; and strong clan culture, 63.4% versus 65.2

Table 17
Percentages of the Variable "Clan Culture"

Value	Primary school teachers	Secondary school teachers
Strong	63.4%	65.2%
Moderate	34.1%	32.6%
Weak	2.4%	2.2%

A second way to decide about the association between the school type and the culture type is the comparison of means. The mean score for primary school teachers regarding the clan culture is 3.95 (SD: 0.71) while the mean score for secondary school teachers is 3.91 (SD 0.62). Both standard deviations are much higher than the difference of the two means so one can argue that there is no differentiation between the two groups of teachers.

Finally a third way to find whether there is effect of school type to the degree that teachers have clan culture is the Mann-Whitney U test. The statistical significance of the Mann Whitney U test shows the lack of significant effect between school type and clan culture ($p=0.858$).

Adhocracy culture

Neither primary school teachers nor secondary schools teachers seem to have weak adhocracy culture (0%). The percentage of primary school teachers who have moderate adhocracy culture is 14.6%. The same percentage for secondary school teachers is 17.4%. The same similarity is also true for teachers who have strong adhocracy culture, 85.4% versus 82.6%.

Table 18
Percentages of the Variable "Adhocracy Culture"

Value	Primary school teachers	Secondary school teachers
Strong	85.4%	82.6%
Moderate	14.6%	17.4%
Weak	0%	0%

It is useful to remove the dummy variable weak-moderate-strong and analyze the hard data as they are. In that case the mean score for primary school teachers is 3.95 (SD: 0.71) while the mean score for secondary school teachers is 3.91 (SD 0.62). The means are very close to each other and the standard deviation is much higher than the slight difference between the means. This shows also the lack of differentiation between the two groups.

Finally a third way to find whether there is any effect of school type to the degree of adhocracy culture is the Mann Whitney U test. The statistical significance of the Mann Whitney U test shows the lack of significant effect between school type and clan culture ($p=0.858$).

Hierarchy culture

The 53.7% of primary school teachers found to have moderate hierarchy culture while the 46.3% have strong hierarchy culture. On the other hand the percentage of secondary school teachers with moderate hierarchy culture is the same with those that have strong hierarchy culture (47.8%). There were not found secondary school teachers with weak hierarchy culture while only the 4.2% of the primary school teachers found to have weak hierarchy culture.

Table 19
Percentages of the Variable "Hierarchy Culture"

Value	Primary school teachers	Secondary school teachers
Strong	46.3%	47.8%
Moderate	53.7%	53.7%
Weak	0%	4.2%

Primary school teachers' mean score is 3.92 (SD 0.66) while secondary school teachers' mean score is 3.71 (SD 0.60).

The Mann Whitney U test ($p = 0.938$) shows that there is no statistical significant effect of school type on the degree that teachers have hierarchy culture.

Market culture

Market culture is the only type of culture that school type seems to have a slight impact. The percentage of primary school teachers that have weak market culture is more than double than the same percentage for secondary school teachers (17.1% versus 6.5%), although that both are low. The percentages for moderate market culture are 75.6% versus 89.1% respectively, while the percentages for strong market culture are 7.3% and 4.3% respectively. It seems that market culture is the type of culture that both primary and secondary school teachers are not in favor of. More than three quarters of them have moderate score in this type of culture.

Possible reasons may be the nature of the teaching profession (cannot follow market imperatives as good as other occupations do), the fear of the firing, the current Greek financial context and others. This topic will be covered extensively in the discussion part.

Table 20
Percentages of the Variable "Market Culture"

Value	Primary school teachers	Secondary school teachers
Strong	7.3%	4.3%
Moderate	75.6%	89.1%
Weak	17.1%	6.5%

The mean score for primary school teachers is 3.08 (SD 0.72) while the mean score for secondary school teachers is 2.88 (SD 0.51). Both are the lower means score of all the culture types. The standard deviations is also much bigger than the difference between the two means and this can be seen as an indicator of lack of differentiation between the two groups of teachers.

The statistical significance provided by the Mann-Whitney U test shows also the lack of significant effect between school type and clan culture ($p=0.372$). It is worthy to observe that secondary school teachers hold a more moderate stance over market culture than primary school teachers because the latter group are more polarized in the 'strong' and the 'weak' categories.

6.1.2 Differences in teachers' Professional Capital

As it is already stated, professional capital is divided into three kinds of capital (Hargreaves & Fullan, 2012): human capital, social capital, and decisional capital. Each kind of capital consists of several variables. The comparison's findings will be presented separately for each variable.

The number of spoken foreign languages

The Mann-Whitney test indicated that the number of spoken foreign languages was the same for primary school teachers (Mdn = 2) and for secondary school teachers (Mdn = 2), $U(41,45) = 804.0, p = .264$. The Chi-square test of independence was also calculated comparing the number of spoken foreign languages for primary and secondary school teachers. A significant association between the two groups was not found, $\chi^2(2)=1.539, p=0.463$. The table below provides the relevant percentages.

Table 21
Percentages of the Variable "Spoken Foreign Languages"

Value	Primary school teachers	Secondary school teachers
0 foreign languages	19.5%	23.9%
1 foreign language	46.3%	52.2%
2 or more foreign languages	34.1%	21.7%

The most popular category both for primary school teachers and for secondary school teachers is the category with those who speak only one foreign language. Some slight differences show that primary school teachers have the tendency to learn more foreign languages than secondary school teachers. To conclude, although it seems that a tendency exists for primary school teachers to learn more languages, is not statistically significant. The Mann-Whitney U test results can be found in the appendix A.

The level of the higher degree

This variable is in ordinal level of measurement with four ranked values: secondary education degree, bachelor's degree, master's degree and doctoral degree. This categorization had two

limitations: Firstly, teachers with only secondary education's degree are not allowed to work in Greece. They must have at least a higher education degree. Secondly none of the respondents claim that has only secondary education degree. For those reasons this category has been deleted from SPSS datasets and is not included in the presentation and interpretation of the results. The only interesting result from this category is that none of the respondents found to have only secondary education degree. Also, the category 'doctoral degree' has very few observations and therefore violated the Chi-square test's assumption that all cells must have at least 5 observations. For this reason the Chi-square test was not implied for this variable and the findings are based only on the Mann-Whitney U test.

Briefly one can say that there is no differentiation between the two groups. The majority of both primary and secondary school teachers have only bachelor's degree, while approximately one third of them have master's degree. The percentages are illustrated in the table below.

Table 22
Percentages of the Variable "Degree Type"

Value	Primary school teachers	Secondary school teachers
Bachelor	63.4%	60.9%
Master	34.1%	37.0%
PhD	2.4%	2.2%

A Mann-Whitney U test was conducted to evaluate the null hypothesis that there will be no difference in the variance of degree's level between primary school teachers and secondary school teachers. The result of the test indicates that the null hypothesis is accepted, $U(41, 46) = 920.50$, $p = .821$. The Mann-Whitney U test results can be found in the appendix A.

The graduation grade from their basic degree

Grades in tertiary education in Greece are varying between 5.01 and 10.00. The relevant item in the questionnaire has five options: 5.01 to 6.00, 6.01 to 7.00, 7.01 to 8.01, 8.01 to 9.00 and 9.01 to 10.00. The table below shows the percentages of each category.

Table 23
Percentages of the Variable "Graduation Grade"

Value	Primary school teachers	Secondary school teachers
5.01 to 6.00	0%	8.9%
6.01 to 7.00	9.8%	53.3%
7.01 to 8.01	36.6%	28.9%
8.01 to 9.00	51.2%	8.9%
9.01 to 10.00	2.4%	0%

It is easily observable that the distributions are not the same. Primary school teachers seem to have higher graduation grades than secondary school teachers. The Chi-square test of independence was not used because there were empty cells (for example there are zero observations at the category 9.01-10.00 in secondary schools), which violate the necessary assumptions of a Chi-square test. The Mann-Whitney U test indicates that the graduation grade was greater for primary school teachers (Mean Rank=58.30) than for secondary school teachers (Mean Rank=30.01), $U(41,45) = 315.50$, $p = .000$. Hence, the graduation grade is the first variable of human capital that is found to be different between the two groups. It is crucial here to point that a comparison of graduation grades between different universities in Greece is questionable due to different criteria that universities are using to evaluate their students. More on this issue will be presented in the discussion part. The Mann-Whitney U test results can be found in the appendix A.

The existence of a 2nd bachelor degree

The relevant item in the questionnaire is whether the respondent holds a second bachelor degree. As we can see in the table below the majority of the respondents do not hold a second degree. The pattern seems the same between primary and secondary school teachers.

Table 24
Percentages of the Variable “2nd Bachelor Degree”

Value	Primary school teachers	Secondary school teachers
No	75.6%	72.1%
Yes	24.4%	27.9%

A Mann-Whitney U test could not be used because one of the assumptions of this test is that the dependent variable (in this case the existence of a second degree) must be at least in ordinal level. Both variables here are at nominal level. On the contrary Chi-square does not have this limitation. A Chi-square test for independence was conducted to evaluate the null hypothesis: H_0 : the possibilities for teachers to have second degree are the same between primary and secondary school teachers. The result of the test indicates that the null hypothesis is accepted, $\chi^2(1) = 0.134$, $p=0.714$.

To sum up, the three of the four variables, which measure the human capital, was found to be independent from the school level. The graduation grade was the variable that was found to be significantly different between the two groups. In the next paragraph the findings of the second kind of professional capital, the social capital, are presented.

The quality of the interaction between teachers and pupil

The relevant item in the questionnaire was stated in this way: “How good is your interaction with your pupils?” The options were six: problematic, moderate, typical, good, excellent, and other. The four of them are not chosen by anyone: problematic, moderate, typical and other. As we can see in table below all the observations were consecrated on excellent and good.

Table 25
Percentages of the Variable “Teacher-Student Interaction”

Value	Primary school teachers	Secondary school teachers
Good	43.9%	71.7%
Excellent	56.1%	28.3%

A Chi-square test of independence was performed to examine the relation between the (perceived by the teacher) quality of teacher-pupils interaction and the school level that teacher is working. The relation between these variables was significant, $\chi^2 (1) = 6.925$, $p = 0.008$. Primary school teachers were more likely to report better teacher-pupil interaction than secondary school teachers. The relevant tables can be found in the appendix A.

Frequency of collective goals

The relevant item in the questionnaire was ‘How often do you set collective goals with other teachers in your school?’ The possible answers are three: ‘never’, ‘sometimes’ and ‘frequently’. The percentages of the answers are presented in table below.

Table 26
Percentages of the Variable “ Frequency of Collective Goals”

Value	Primary school teachers	Secondary school teachers
Never	0%	21.7%
Sometimes	59.2%	52.2%
Frequently	41.0%	26.1%

We cannot find primary school teachers in the category ‘never’ while one out of five secondary school teachers report that they never set collective goals. Moreover, primary school teachers who report that they set collective goals frequently are double compare to the secondary school teachers who argue the same. A Chi-square test of independence was performed to examine the relation between the (perceived by the teacher) frequency of collective goal setting and the school level that teacher is working. The relation between these variables was significant, $\chi^2 (2) = 10,085$, $p = 0.006$. Primary school teachers were found to set more frequently collective goals than secondary school teachers. The relevant tables can be found in the appendix A.

Frequency of feedback by other teachers

The relevant item in the questionnaire was ‘How often your colleagues are giving you feedback about the way you teach?’ The possible answers were five: ‘never’, ‘rarely’,

‘sometimes’, ‘frequently’ and ‘every day’. The percentages of the answers are presented in the table below.

Table 27
Percentages of the Variable “Frequency of Feedback by Other Teachers”

Value	Primary school teachers	Secondary school teachers
Never	12.2%	17.4%
Rarely	46.3%	37.8%
Sometimes	31.7%	34.8%
Frequently	7.3%	10.9%
Every day	2.4%	0%

The mode value (the value which has the most observations) is the ‘rarely’ for both primary and secondary school teachers. A Mann-Whitney U test was conducted to determine whether there was a difference between primary and secondary school teachers regarding their statements about the frequency that they receive feedback from their colleagues. Results of that test indicated that there was not a difference, $z = -0.036$ $p = 0.971$. The relevant tables can be found on appendix A.

Trustiness to other teachers

The question that respondents answer was ‘To what extend do you trust the staff of your school’. The possible answers were: ‘I don’t trust anyone’; ‘I trust some of them’; ‘I trust half of them’; ‘I trust the majority of them’; ‘I trust all of them’. The mode value for both groups was the statement ‘I trust the majority of them’ while the second most popular statement was ‘I trust some of them’. The table 28 presents the percentages for each answer.

Table 28
Percentages of the Variable "Trustiness to Other Teachers"

Value	Primary school teachers	Secondary school teachers
I don't trust anyone	0%	0%
I trust some of them	24.4%	43.5%
I trust half of them	7.3%	6.5%
I trust the majority of them	56.1%	45.7%
I trust all of them	12.2%	4.3%

Due to the existence of empty cells (zero observation in the statement 'I do not trust anyone') the Chi-square test was irrelevant for this variable. A Mann-Whitney U test was conducted to determine whether primary school teachers have more trust on their colleagues than secondary school teachers have on their colleagues. Results of that analysis indicated that the statements of trust were greater on primary school teachers (Mean Rank=49.29) than secondary school teachers (Mean Rank=39.28), $z = -2.027$, $p = .043$. Thus, the null hypothesis that the groups have equal distributions was rejected. The relevant tables can be found on the appendix.

Priority of goals

Respondent have to answer the following question: What kind of goals is prioritized in the school you are working: collective or personal? The possible answers were four: 'personal goals have priority over collective goals', 'collective goals have priority over personal goals', 'there are no goals', and 'other'. The percentages of the two groups are very similar. The majority of the teachers state that the priority is on collective goals, 65.9% for primary school teachers and 65.2% for secondary school teachers. The table 29 shows the percentages.

Table 29

Percentages of the Variable ‘Priority of Goals’

Value	Primary school teachers	Secondary school teachers
Personal goals have priority	24.4%	28.3%
Collective goals have priority	65.9%	65.2%
There are no goals	0%	4.3%
Other	9.8%	2.2%

A Mann-Whitney U test was conducted to determine whether the priority of goals was the same between primary and secondary school teachers. The results of the test indicated that the priority is the same, $z = -0.528$, $p = 0.597$. The relevant tables can be found on the appendix.

To conclude, in this section the findings for the five variables of social capital have been presented. Three of them were found to have different variances between the two groups of teachers. Primary school teachers were found to be more likely than secondary school teachers to report better teacher-pupil interaction, to set more frequently collective goals and to trust more their colleagues. The other two variables, the priority of the goals and the frequency of feedback were found to have equal variance between the two groups of teachers. In the next section, the third kind of professional capital, the decisional capital is presented.

Years of experience

Respondent are asked about their years of experience. The range was from 1 to 35 years of teaching experience. There were seven categories: 1-5 years, 6-10 years, 11-15 years, 16-20 years 21-25 years, 26-30 years, and 31-35 years. The figure 10 illustrates a population pyramid according the teaching experience of the participants.

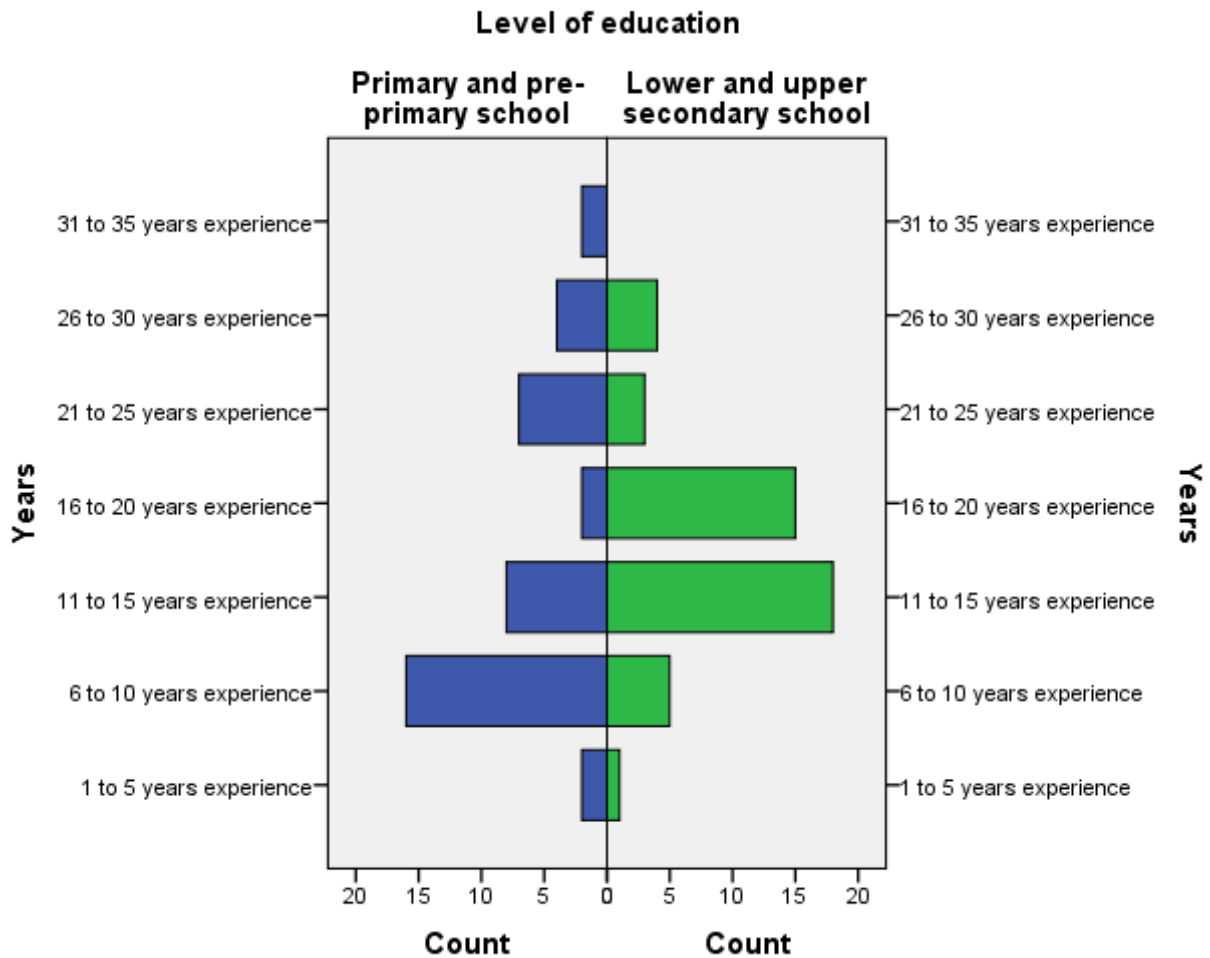


Figure 10. Years of experience of respondents

According to Hargreaves and Fullan (2012) there are three stages in the career life of a teacher: early career, mid-career and late career. Each stage has different characteristics regarding the commitment to the job and the capability to do this job. Early career is characterized by high commitment but low capability. Mid-career is the ‘golden cell’ of a teacher career: both commitment and capability are high. Late career is the stage that teachers have low commitment because of the forthcoming retirement (Hargreaves & Fullan, 2012) and their capability varies between low and high.

The career stages for both groups of teachers are illustrated in the figure 11.

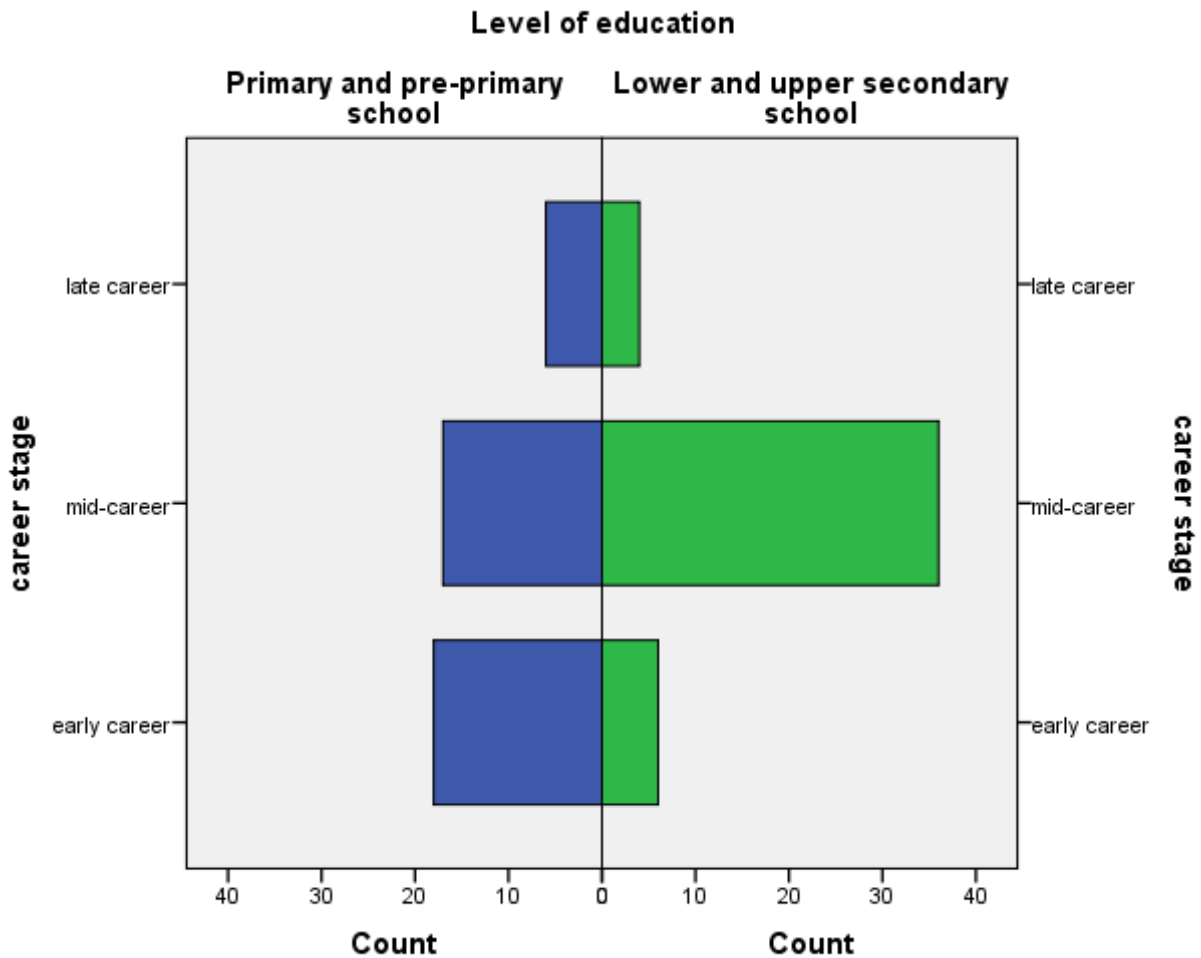


Figure 11. Career stage of respondents

Secondary school teachers that participate to the survey were mainly in their mid-career stage while primary school teachers are divided between early career and mid-career stages. This distribution has similarities with the real distribution of the whole population of teachers in Greece: Primary school teachers are younger. More analysis of these trends and differences can be found on the discussion chapter.

To conclude, primary school teachers that respond to this survey seem to have less decisional capital than secondary school teachers. This holds true to the extent that one accepts the following assumption: the more the years of teaching experience, the more the capacity for right decisions during the lesson.

6.1.3 Differences in teachers' values

A Mann-Whitney U test was conducted to determine whether the acceptance of values was the same between primary and secondary school teachers. The results of the test indicated that the acceptance of values is the same, $z = -0.402$, $p = 0.687$. Therefore the two groups of teachers are not differentiated regarding the acceptance of values that SSE is based on.

6.2 Predictions

In this section the results of the logistic regression are presented. Five different models have been compared in order to find which of them can predict better teachers' attitudes towards SSE. The first model is dedicated to predict teachers' attitudes using the four different organizational culture types that teachers have. The next three models are using the three types of professional capital that teachers have: the human capital, the social capital and the decisional capital. The last model is using the degree of acceptance that teachers have to five basic assumptions that SSE is based. A comparison of these five models is provided based on the Nagelkerke R squares, the $-2\log$ likelihoods and the p-values of the independent variables of each model. Finally, the statistically significant variables from each model implied in order to create an overall model for prediction.

6.2.1 1st model: Prediction based on culture type

A logistic regression analysis was conducted to predict teacher attitudes towards school self-evaluation using four organizational cultures as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between teachers with positive attitudes and teachers with moderate or negative attitude towards school self-evaluation (Chi square = 19.680, $p = .001$, $df = 4$).

A relatively weak relationship between predictor variables and 'attitude towards school self-evaluation' indicated by Nagelkerke's R^2 of .291. Prediction overall success was 72.2% (100% for moderate or weak attitude and 0% for positive attitude). The Wald criterion demonstrated that only clan culture made a significant contribution to prediction ($p = .029$). Adhocracy culture, hierarchy culture and market culture were not significant predictors ($p = .998$, $p = .460$ and $p = .596$ respectively). The odds ratio of clan culture indicates that when a teacher has strong clan culture is 7.16 more times likely to have positive attitude towards

school self-evaluation than a teacher who has moderate or weak clan culture. The table below summarizes some of the results.

Table 30
Results of the 1st Prediction Model

Predictors	B	SE	P	β
Clan culture	1.968	.901	.029	7.156
Adhocracy culture	20.323	10147.761	.998	
Hierarchy culture	.430	.581	.460	1
Market culture	-.583	1.099	.596	-.185

6.2.2 2nd model: Prediction based on human capital

A logistic regression analysis was conducted to predict teacher attitudes towards school self-evaluation using four variables of human capital as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between teachers with positive attitudes and teachers with moderate or negative attitude towards school self-evaluation (Chi square = 35.343, $p = .000$, $df = 5$).

A moderate relationship between predictor variables and attitude towards school self-evaluation indicated by Nagelkerke's R^2 of .490. Prediction overall success was 87.2% (90.4% for moderate or weak attitude and 79.3% for positive attitude). The Wald criterion demonstrated that only level of degree made a significant contribution to prediction ($p = .000$). The existence of a second bachelor's degree ($p = .160$), the number of spoken foreign languages ($p = .185$) and the graduation grade ($p = .061$) were not significant predictors at 0.05 level. The odds ratio of degree's level indicates that when a teacher has a master or a doctoral degree is 21.73 more times likely to have positive attitude towards school self-evaluation than a teacher who has only bachelor degree. The table 31 summarizes some of the results.

Table 31
Results of the 2nd Prediction Model

Predictors	B	SE	p	β
Foreign languages (1 spoken)	-.073	.945	.939	.930
Foreign languages (2 spoken)	-1.344	1.056	.203	.261
Degree level (master or PhD)	3.079	.767	.000	21.728
Second bachelor degree (yes)	-1.047	.745	.160	.351
Graduation grade (> 7)	1.487	.794	.061	4.425

6.2.3 3rd model: Prediction based on social capital

A logistic regression analysis was conducted to predict teacher attitudes towards school self-evaluation using five variables of social capital as predictors. A test of the full model against a constant only model was not statistically significant, indicating that none of the predictors can reliably distinguished between teachers with positive attitudes and teachers with moderate or negative attitude towards school self-evaluation (Chi square = 8. 256, p = .409, df = 8). The table below summarizes some of the results.

Table 32
Results of the 2nd Prediction Model

Predictors	B	SE	p	β
Foreign languages (1 spoken)	-.073	.945	.939	.930
Foreign languages (2 spoken)	-1.344	1.056	.203	.261
Degree level (master or PhD)	3.079	.767	.000	21.728
Second bachelor degree (yes)	-1.047	.745	.160	.351
Graduation grade (> 7)	1.487	.794	.061	4.425

6.2.4 4th model: Prediction based on decisional capital

A logistic regression analysis was conducted to predict teacher attitudes towards school self evaluation using the career stage as predictor. A test of the full model against a constant only model was not statistically significant, indicating that the predictor cannot reliably distinguished between teachers with positive attitudes and teachers with moderate or negative attitude towards school self-evaluation (Chi square = 3.648, $p = .056$, $df = 1$). The table below summarizes some of the results.

Table 33
Results of the 4th Prediction Model

Predictors	B	SE	p	β
Years of experience (early career stage)	-2.078	.747	.005	.125

6.2.5 5th model: Prediction based on acceptance of assumptions

A logistic regression analysis was conducted to predict teacher attitudes towards school self-evaluation using the degree of acceptance of the assumptions that school self-evaluation is based as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictor reliably distinguished between teachers with positive attitudes and teachers with moderate or negative attitude towards school self-evaluation (Chi square = 25.7244, $p = .000$, $df = 5$).

A moderate relationship between predictor variables and attitude towards school self-evaluation indicated by Nagelkerke's R^2 of .219. Prediction overall success was 72%. The Wald criterion demonstrated that only the second assumption made a significant contribution to prediction ($p = .002$). The odds ratio of the degree of teachers' acceptance indicates that when a teacher has a strong acceptance is 9.3 more times likely to have positive attitude towards school self-evaluation than a teacher who has moderate or weak acceptance. The table below summarizes some of the results.

Table 34
Results of the 5th Prediction Model

Predictors	B	SE	p	β
Acceptance of assumptions (strong acceptance)	2.230	.730	,002	9.302

6.2.6 A final prediction model

We have already checked five models for prediction of teachers' attitudes towards SSE. The first model was using four different organizational cultures as predictors. The second was using four variables of human capital as predictors. The third was using five variables of social capital as predictors. The fourth was using one variable as predictor. The fifth was using one variable as predictor. The third and the fourth was not found to be statistically significant. The first, the second and the fifth model found to have one variable that was statistically significant. In this final overall model, the three statistically significant variables are implied. The stepwise backward method is used. In the stepwise backward method all the variables are implied to the model and then the statistical software exclude step-by-step variables that are not significant enough. In this model SPSS has calculated 2 steps.

A logistic regression analysis was conducted to predict teacher attitudes towards school self-evaluation using 3 variables as predictors. A test of the full model against a constant only model was statistically significant, indicating that the predictors of the final model reliably distinguished between teachers with positive attitudes and teachers with moderate or negative attitude towards school self-evaluation (Chi square = 30.771, $p = .005$, $df = 2$).

A moderate relationship between the two predictor variables of the final model and teachers' attitudes towards school self-evaluation indicated by Nagelkerke's R^2 of .450. Prediction overall success was 86.80% (88.6% for moderate or weak attitude and 82.3% for strong attitude). The Wald criterion demonstrated that the variable 'degree level' and the variable 'degree of teachers acceptance of assumptions (that SSE is based)' made a significant contribution to prediction ($p = .000$ and $.013$ respectively). The odds ratio of the degree of teachers' acceptance indicates that when a teacher has a strong acceptance is 7.07 more times likely to have positive attitude towards school self-evaluation than a teacher who has

moderate or weak acceptance. The odds ratio of the degree's level indicates that when a teacher has a master or doctoral degree is 11.42 more times likely to have positive attitude towards school self-evaluation than a teacher who has moderate or weak acceptance. The table below summarizes some of the results.

Table 35
Results of the Final Prediction Model

Predictors	B	SE	p	β
Degree level (master or PhD)	2.435	.651	.000	11.420
Acceptance of assumptions (strong acceptance)	1.956	.787	,013	7.072

7 Discussion

In this study a comparison was made between the two main groups of teachers who teach at compulsory education in Greece: Primary school teachers and secondary school teachers. Three theoretical frameworks were used for this comparison: Professional Capital (Hargreaves & Fullan, 2012), Competing Values (Quinn & Rohrbaugh, 1983), and Value Assumptions (Kyriakides & Campbell, 2004). Moreover these three frameworks were used in order to predict teachers' positive attitudes towards SSE.

The regression analyses, the Mann-Whitney U tests, the Chi-square tests and the frequency tables show that the most important characteristics of a teacher that has positive attitude towards SSE are three and they are not differentiated between primary and secondary school teachers:

1. Teachers who have strong clan culture are more likely to have a positive attitude towards SSE than teachers with moderate or weak clan culture. Primary and secondary school teachers have found to be equally likely to have the clan culture.
2. Teachers with master or doctoral degree are more likely to have a positive attitude towards SSE than teachers who only have bachelor degree. Primary and secondary school teachers are equally likely to have a master or a doctoral degree.
3. Teachers who strongly accept the value assumptions that SSE is based are more likely to have positive attitude towards SSE than teachers who have moderate or weak acceptance of these value assumptions. Primary and secondary school teachers have found to be equally likely to have a strong acceptance of the value assumptions.

In the next three paragraphs each of the three characteristics will be discussed. The interpretation, the elaboration and the comparison of the findings with other studies' findings are also presented.

7.1 The 1st characteristic: The 'clan culture'

Teachers who share a collaborative culture contribute to a positive climate for school self-evaluation. The regression analysis results show that when a teacher has strong clan culture is 7.16 more times likely to have positive attitude towards school self-evaluation than a teacher

who has moderate or weak clan culture. The other three cultures that were measured through the questionnaire did not correlated to teachers' attitudes towards SSE. The question is: Why teachers with a strong collaborative culture are more positive to SSE than teachers with moderate or weak collaborative culture? A possible answer is deriving from the nature of the work that SSE requires to be done: collaborative work. 'Collective' is the very common word in books and articles about SSE. "Collective wisdom" is the phrase that MacBeath (1999) uses in order to describe the outcome of a good SSE. The creation of a collaborative climate is one of the necessary procedures for SSE (Kyriakides & Campbell, 2004). "The nature of the organizational reaction that occurs when a school implements an innovation depends on the existing culture and determines to a large degree the success or failure of the innovation" (Staessens, 1993, p. 111).

It seems useful to understand the specific characteristics of a person with a clan culture. The clan culture can be often met in groups of people that come together to fulfill their need to be part of a team. Theatrical groups, activists, political parties, churches, social networks groups are consisted by people with collaborative culture, in other words with clan culture. The main task is not to compete with other teams (as the market culture person does), not to maintain a bureaucracy (as the hierarchy culture person does), not to think something out-of-the-box (as the adhocracy culture person does). The main task is to do something together. It is true that millions of years ago people were living in small to medium teams (50 to 90 members) trying to find their food and to survive. Collaboration was a vital skill for them in order to stay alive. Inherent in the human nature the collaborative sprit can be found in several professions. However the teaching profession was not always in favor of collaboration. Hargreaves (2000) in his article 'Four Ages of Professionalism and Professional Learning' describes the post-war era in terms of teachers' professionalism. According to Hargreaves this was the era that teachers had a extended autonomy in their classroom (Hargreaves, 2000). This autonomy practical means that when the door is closed the teacher is alone with his/her students. This isolation from other teacher has also been found in this study. In the question 'How often do you receive feedback from other teachers?' the majority of the respondents answer 'never' and 'rarely'.

Prior studies have found that collaborative culture in school has a positive impact on students' achievements (DuFour & Marzano, 2009; Jessie, 2007; McTighe; Styron & Nyman, 2008; Wilhelm, 2010). Johnson et al (2007) found that students' achievements in science was

correlated positively with teacher collaboration (Johnson, Kahle, & Fargo, 2007). Gruenert measured the extent to which schools have collaborative culture and found that when schools have a strong collaborative culture, the achievements are better (Gruenert, 2005). CfBT, in its report about SSE, indicates the importance of the collaborative practice in SSE (Chapman & Sammons, 2013). A review study about the importance of teachers' collegiality found that "teacher collegiality plays a vital role in augmenting teacher professional growth and development, job satisfaction, organizational and professional commitment as well as school quality and student performance" (Shah, 2012, p. 1242).

Collaboration does not only exist within schools but also among schools. School networks in the Netherlands and the UK and similar polycentric systems are emerged. Consequently new inspection schemes are now under investigation (Ehren, 2016). The collaboration among schools may leads to a new SSE approach because until now the SSE was a school driven process. Under the new circumstances, the process will be based in multiple schools. Thus a new SSE approach would be emerged.

7.2 The 2nd characteristic: The 'master degree'

The findings of this thesis indicate that teachers with master or doctoral degree are 11 times more likely to have a positive attitude than teachers who only have bachelor degree. This finding is similar with other research studies in Greece. A similar survey in 2008 found that the average score of teachers who have post-graduate studies is higher than the teacher without post-graduate studies (Kapahtsi, 2008). A possible interpretation of this finding is the following: Although a master degree is not an obligation for the teacher, it opens new paths of collaboration: master students meet new people that are experts in their field, create networks that are so valuable in the recent job market and in general are more likely to be promoted in the hierarchy than other teachers without master degrees. Qualifications are valued and give more opportunities in the job market. School self-evaluation is not only "self" but it is also "evaluation". Every evaluation process is an opportunity for teachers to show that they are good enough and they deserve a better position or a better salary. On the other hand, teachers with limited qualifications are possibly afraid of this evaluation. Better-qualified teachers may lose their position. It is a defense stance over evaluation that can provide an explanation for the negative attitude towards evaluation.

Another possible point of arguing is based on the emancipation of teachers. Teachers that have already earned a post-graduate degree are more ‘hungry’ to implement what they learn on their job. On the other hand teachers that are stacked into their first bachelor degree may feel better when they just implement what the ministry requires from them. It is a good reason to hide their responsibilities for school improvement: The ministry or the ‘system or the government is the responsible, not themselves. It is an easy excuse to avoid public criticism about your job. When a teacher face the parents’ gossips about his/her quality of teaching it is easily to blame the ‘system’. On centralized systems as the Greek educational system, the regulations about the function of the school, the recruitment of the staff, the financial issues, the curriculum, the timetable, the books, the punishments and almost every aspect of the schooling is implied form the top to the bottom. The most educated person is tending to avoid jobs that have limited space for maneuver. SSE carries the essence of school autonomy, even if this autonomy is usually not capable to transform public bureaucracies into local autonomies. To conclude teachers that know how to search for evidence are more likely to be positive for this process; SSE requires searching for evidence.

7.3 The 3rd characteristic: The ‘acceptance of basic value assumptions’

According to Kyriakides and Campbell (2004) SSE is based on 4 value assumptions:

The first assumption is the “commitment to treating human beings as natural learners” (p. 25). What is supposed here is that school community must reflect in its own practices. This is not isolation from academia; it is rather an ongoing process to combine research findings with practical solutions in the emerged problems that the teachers face every single day. The practitioners know more than they can express (Schon, 1983). This implicit knowledge is necessary to be updated, to be self-evaluated and to be used in a moral way. Respondent were asked to agree or disagree to the following statement “Assumption 1: *People who are involved in education are expected to reflect on their own practice*”. The majority of the respondents (83.8%) agreed or strongly agreed to this statement. Moreover a regression analysis that is not published in this thesis is that the second statement found to be a statistically significant predictor of a positive attitude towards SSE. Respondents who agree or strongly agree to this statement found to be 26 times more likely to have a positive attitude towards SSE than respondents that disagree, strongly disagree or remain neutral.

The second assumption is “*the commitment to change from within the organization*” (Kyriakides & Campbell, 2004). This assumption was spited into two assumptions in the distributed questionnaire: “*Changes in school’s functioning must be generated from within the school*” and “*Things is never viewed as ‘good enough’ and people must continuously look for improvement*”. A regression analysis that is not published in this thesis shows that the first of these two assumptions is a statistically significant predictor of a positive attitude towards SSE. In particular, respondents who agree or strongly agree to this statement found to be 37 times more likely to have a positive attitude towards SSE than respondents who disagree or strongly disagree, or further more state that they don’t know. Despite the fact that the other assumption was not found to be a statistically significant predictor, the 74.2% of the respondents state that they agree or strongly agree.

The third assumption according to Kyriakides and Campbell is the “*Commitment to ownership*”. This was expressed in the questionnaire with the phrase: “*Ownership of initiatives must be located in the school*”. Respondent who agree or strongly agree to this statement are of 86%.

The fourth assumption is the “*commitment to gathering evidence*”. Teachers are supposed to look always for evidence about the practices they use in the classroom. The relevant statement in the questionnaire was “*In modern education practice must be informed by evidence*”. The number of respondents who agreed or strongly agreed to this statement was of 74.9%.

It is clear that the majority of the respondents accept these basic value assumptions that SSE is based according to Kyriakides and Campbell. The mean score of the five answers found to be a statistically significant predictor of a positive attitude towards SSE. The explanation of this finding is based on the nature of SSE. Profoundly SSE is based on these values. Teachers who do not believe and who must gather evidence for their teaching have difficulties to accept the self-evaluation process. Teachers who are not searching for improvement are not expected to self-evaluate their job because the recognition of their fails may create a difficult situation for them. Teachers who are stacked in a Monday-to-Friday routine are not capable to offer solutions to permanent problems. They have accepted the problems and they deterministically wait for the retirement. These teachers can be found in every school. What the director can do for those teachers is not to rely on them for SSE. A good example is Israel, where every school have its own SSE team (MacBeath, 2005). A number of teachers that have trained in SSE process are fully undertaking the process in their school. This team of the teachers is not

permanent but it can be changed when a teacher expresses his/her interest, all this stacked and negative attitude can be bypassed.

7.4 Possible implications of the findings

What the findings revealed is that teachers training must focus on the values that teachers acquire during their studies. These values are determinants of teachers' attitudes towards SSE in Greece. Teachers must be informed about the importance of a set of values that facilitate their work in the school. The commitment to develop ownership of initiative, the commitment to gather evidence in their teaching plans, the commitment to change the school from within and the commitment to threading human beings as natural learners (Kyriakides & Campbell, 2004) can be taught in teacher training institutes. Moreover teachers training seminars can facilitate the acceptance of these assumptions by new teachers. The findings show that these value assumptions are acceptable by the vast majority of the teachers who respond to the questionnaire. This encouraging fact is supplemented by another finding of this thesis: Teachers who don't accept these value assumptions are not in favor of SSE. If a policy maker wishes to alter the negative attitude of the teachers towards SSE, a focus on the dissemination of these values must be applied to every teacher in Greece. This can be done through seminars, through initial teacher training programs, through school counsellors and most importantly through the teacher unions. During a personal communication with an ex-secretary of a local teacher union, he admitted that the teachers in Greece are playing *catenaccio*. Catenaccio is an Italian football term, which describes a very defensive football system. "We try to survive right now" he added. If this opinion is true, then the negative attitude towards SSE is easily interpreted. Teachers after 2010 in Greece are living with the fear of a new salary cut, a new firing or a new school closing. This climate is reflected in their opinions about SSE. It is difficult to pursue a teacher (who has lose the 30% or 40% of his salary) to implement any kind of evaluation. The fear leads to a defensive attitude. And the defensive attitude is easily transformed to a negative attitude. Within the context of the current financial situation in Greece little can be done to change the attitudes of the teachers. Some of them according to the findings of this study is to recruit teachers with post-graduate studies, to transit them the basic value assumptions that SSE is based (Kyriakides & Campbell, 2004) and to strengthen the collaboration among teachers within schools. To sum up, these three actions may change the climate for SSE:

1. Recruitment of teachers with post-graduation studies.
2. Transmission of values that SSE is based via teacher training programs.
3. Policy making that enables and promotes teachers' collaboration within schools.

Further qualitative research on the same topic is able to identify aspects that were not observable using a questionnaire

8 Recommendations and Conclusions

This study focuses on a very specific topic: The characteristics of teachers who have a positive attitude towards SSE. Fifteen characteristics have been tested using binary regression analysis and three of them found to be significantly associated to a positive attitude towards SSE. Further research is needed to identify more characteristics.

8.1 What the findings of this study suggest?

In order to implement school self-evaluation it is crucial and necessary to have a positive attitude towards the process of change (MacBeath, 2005c). Especially in Greece the attitudes towards evaluation tend to be negative (Kapahtsi, 2008; Kasimati & Gialamas, 2003; Kyriazides, 2015; Polyzos, 2007). School self-evaluation is highly mistrusted in Greece (Avitzis & Mavromatidis, 2012; E-Governance, 2016). The reason for this mistrusting is not the topic of this thesis. In this master thesis 15 independent variables were tested in order to find which of them are able to predict the positive attitude that a teacher may have towards school self-evaluation. The findings suggest that teachers who have positive attitudes towards school self-evaluation also have:

1. Collaborative culture
2. Master or PhD
3. Acceptance of the following values:
 - Commitment to treat human beings as natural learners.
 - Commitment to change from within the organization.
 - Commitment to developing ownership.
 - Commitment to gathering evidence (Kyriakides & Campbell, 2004).

Another finding of this study is that primary and secondary school teachers are not differentiated significantly regarding the previous three characteristics. Hence, the recommendations that are provided below can be applied both for primary and secondary school teachers.

8.2 How can the findings of this study be used?

Based on the findings of this study recommendations are provided to four different stakeholders: Institute of Educational Policy of Greece, teacher training institutes, school directors and teachers. Moreover some recommendations about further research on the topic are provided.

8.2.1 Recommendations for the Institute of Educational Policy in Greece

In the previous attempts for the implementation of SSE in Greece problems emerged from the negative attitudes of teachers towards SSE (Avitzis & Mavromatidis, 2012). Teachers' union's brochures are a primary source for researchers to observe these negative attitudes. Some extracts of teachers' unions brochures are provided in the appendix E. These negative attitudes would be undermining the implementation of SSE if they would not be faced as soon as possible. The Institute of Educational Policy (IEP) in Greece is dedicated to provide guidance and recommendation about "issues relating to the evaluation of the administrative and educational structures of primary and secondary schools and teachers" (IEP, 2015). IEP is able to take into account these negative attitudes in order to plan better policy recommendations to the Ministry of Education. One possible way for this is to undertake a research in order to find the reasons for these negative attitudes. Moreover the staff that has faced the problems and the bureaucracy of SSE has to be used in the next attempt because its experience is valuable as long as there are not SSE specialists in Greece. Finally, based on the findings of this thesis, the implementation of SSE-related policy in Greece has to rely on teachers and directors who have the following characteristics: a) post-graduate studies, b) collaborative culture, and c) accept the values that SSE is based on. But how these characteristics will be found in among 150,000 teachers? The first characteristic can be easily checked: teachers with master or doctoral studies can be used as coordinators of SSE activities in schools. The second characteristic is the culture; but who can say what culture has each of the teacher? The director of the school knows the culture of the teacher more than central authorities. This is the reason that the next paragraph is dedicated to recommendations for school directors. The third characteristic is about values. There are 4 values that have found to be correlated to positive teachers attitudes towards SSE:

1. Commitment to treat human beings as natural learners.

2. Commitment to change from within the organization.
3. Commitment to developing ownership.
4. Commitment to gathering evidence (Kyriakides & Campbell, 2004).

How these values can be transmitted? A possible way is seminars for professional and personal development. Another way is to adapt the initial teacher-training curriculum in order to include the research studies that these values are based on. Kyriakides and Campbell (2004) provide in their article the relevant literature that these values are based on. When these values would be successfully transmitted to the young teachers, the implementation of SSE would be easier because the attitude towards SSE may be more positive.

8.2.2 Recommendation for school directors

School directors have a large influence in the way that school undertake SSE (Devos & Verhoeven, 2003). The competing values approach provides an understanding on how different cultures co-exist in the same organization. In this study we found that adhocracy culture, the market culture and the hierarchy culture are not significant associated to a positive attitude towards SSE. On the contrary, clan culture found to be positively correlated to positive attitudes towards SSE. This means that directors who want to facilitate SSE in their schools have to focus on the climate of the school. A competitive climate, a market oriented climate and a bureaucratic climate seems not in favor of SSE. Teachers who have a strong collaborative culture found to be 11 more likely to have a positive attitude towards SSE than teachers who do not have strong collaborative culture. School directors may act in a parallel way. First, they must identify the teachers who have a collaborative culture. These teachers are able to undertake the SSE process of the school. Second, they can build a collaborative climate. Relevant research about the ‘how’ to implement these two actions is needed.

8.2.3 Recommendations for teacher training institutes

Teacher training institutes can facilitate the creation of an evaluation culture in Greek schools. The 4 values expressed by Kyriakides and Campbell (2004) can be disseminated through universities’ courses. One study in Croatia shows that “teachers who have had training in the area of self-evaluation have significantly more positive attitudes towards the relevance of self-evaluation for the development of quality in kindergartens” (Drvodelić & Domović, 2016). Moreover, in the same study the findings suggest that the duration of the course is positively

associated to positive teachers' attitudes towards SSE. Teacher training institutes in Greece can add a relevant course about SSE. During this course the 4 values that illustrated in the section "Recommendations for Institute of Educational Policy" can be taught.

8.2.4 Recommendations for teachers

Teachers are the lifeblood of school and the main actors of SSE. The current situation of public sector in Greece is not appropriate for changes that are not in line with the teachers' desires. The budget cuts in teachers' salaries lead to the legitimating of resistance to evaluation. Teachers' unions argue that evaluation will be the trap for firings and political handling. A culture of resistance to anything that includes the word evaluation is widespread in teachers' unions. What teachers have to admit is that if they would not propose and support any kind of evaluation the society will not support them. Taxpayers are not in favor of people that are not willing to be evaluated. Society requires quality assurance in education in order to be pursuing that, its money is not spent in unethical way. SSE provides teachers the way to deliver school accountability in Greece without losing their professional autonomy. In other words, if teachers would not propose any kind of quality assurance, then managers, politicians or private consultants, will come and provide their type of evaluation.

To sum up, I argue that it is better for teachers to be internal evaluators of their work than to let external evaluators play this role. Furthermore, it is crucial to admit that the parallel shadow education system in Greece is an indicator of the limited quality of public education. A recent survey in Greece (Analysis, 2015) shows that 7 out of 10 high school students attend private paid lessons. In the same study the aggregate overall demand for private lessons estimated in 250 million euro. These data are indicators that the Greek families spend money in what is called *free education*. The gap of the quality in education is covered by private lessons. The trust between Greek family and Greek public schools has to be reconciled. One possible way is the SSE. A prerequisite for SSE is the positive attitude of the teacher towards SSE. Teachers have to reflect into their practice and find ways to secure the quality of education. SSE is one way; maybe other possible ways can also be used.

8.2.5 Recommendations for further research

While measuring the attitude towards SSE, a concern arises about what exactly is being measured: The content of SSE or the label 'SSE'. In Mediterranean cultures that the 'new' is

not easily acceptable (Theoharis, 2011), people tend to avoid personal responsibility for collective tasks. School self-evaluation requires collective goals not to be undermined by personal goals. A suggested research about characteristics of teachers that have positive attitude towards SSE should include factors that promote teachers' collegiality. It is important to find facilitators of collegiality in Greek schools. The qualitative approach seems more relevant to find collegiality factors.

8.3 Why school self-evaluation is important?

The father and the mother, the teacher, the doctor and the hospital (as a building), the school (as a building), the dress of the teacher, the flags of the countries, the national anthem, the ring of the marriage, the way of socializing and the way that humans are building their houses, they are all parts of a symbolic network (Castoriadis, 1997). The technical rationality is only partially the reason for the current civilization. According to Castoriadis, this symbolic network is based in our current *common imaginary*. He argues that this imaginary has become autonomous in our society. We don't have the power to change our institutions but paradoxically our institutions have the power to change our lives. For example, it is obvious that there are several other ways for the function of a school, or for the way that people are married or for the way that family is structured or for the political system of a country. Despite of these possibilities schools, marriages, families, countries, and schools are remaining almost the same year by year. The lack of imagination for different structures is based, according to Castoriadis, on the alienation of people with their institutions. People cannot recognize themselves as creators of their institutions and consequently they cannot change them substantially. People's institutions are loosely connected with people; this looseness is called alienation according to Castoriadis. This is the point that the writer of this master thesis identifies a capability: School self-evaluation is perceived as a tool for teachers, students and parents to emancipate themselves and change its own institution, the school. I perceive school self-evaluation as a possible way to overcome the autonomy of the institution that is called 'school'. We as parents, we as students, we as teachers and we as policy makers tend to avoid a thoroughly changing of the current structures and functions of the school. Teachers, parents and students can evaluate what they are doing, and consequently they can change it.

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Appendix A: Tests for multicollinearity

An assumption of the multiple regression is that the explanatory variables (the predictors) must be unrelated. In case that two variables are related, the Pearson's r coefficients must be lower than 0.7. In the following tables the Pearson's r coefficients are provided for each variable of each model.

Table 36

Pearson's r Coefficients for the 1st Prediction Model

Variable	Clan culture	Adhocracy culture	Hierarchy culture	Market culture
Clan culture	1			
Adhocracy culture	.094	1		
Hierarchy culture	.260*	.169	1	
Market culture	.154	.111	-.185	1

*p > .05

Table 37

Pearson's r Coefficients for the 2nd Prediction Model

Variable	Foreign languages	Degree level	Second degree	Graduation grade
Foreign languages	1			
Degree level	.238	1		
Second degree	-.056	.249*	1	
Graduation grade	.144	.317**	-.168	1

*p > .05, **p > .01

Table 38

Pearson's r Coefficients for the 3rd Prediction Model

Variable	Interaction	Collective goals	Priority of goals	Feedback	Trust to peers
Interaction	1				
Collective goals	.108	1			
Priority of goals	.268*	.113	1		
Feedback	.253*	.423**	.016	1	
Trust to peers	.047	.305**	-.299**	-.388**	1

*p >.05, **p >.01

Table 39

Pearson's r Coefficients for the Final Prediction Model

Variable	Acceptance	Degree level	Clan culture
Acceptance	1		
Degree level	.278*	1	
Clan culture	.388**	.184	1

The forth and the fifth model contain only one variable; hence the Pearson's r coefficient is not applicable

Appendix B: Histograms and normality curves

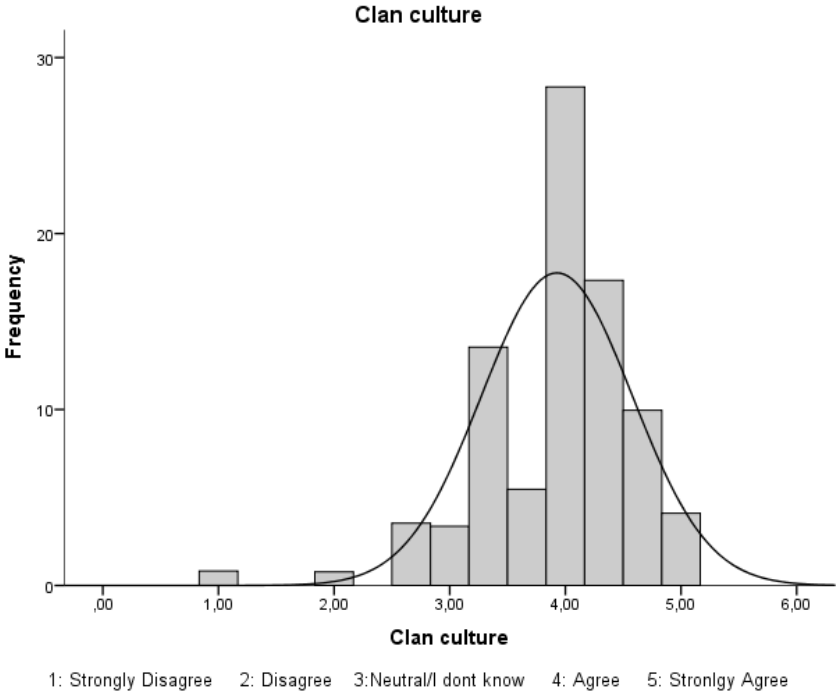


Figure 12. Histogram of the variable “Clan culture”

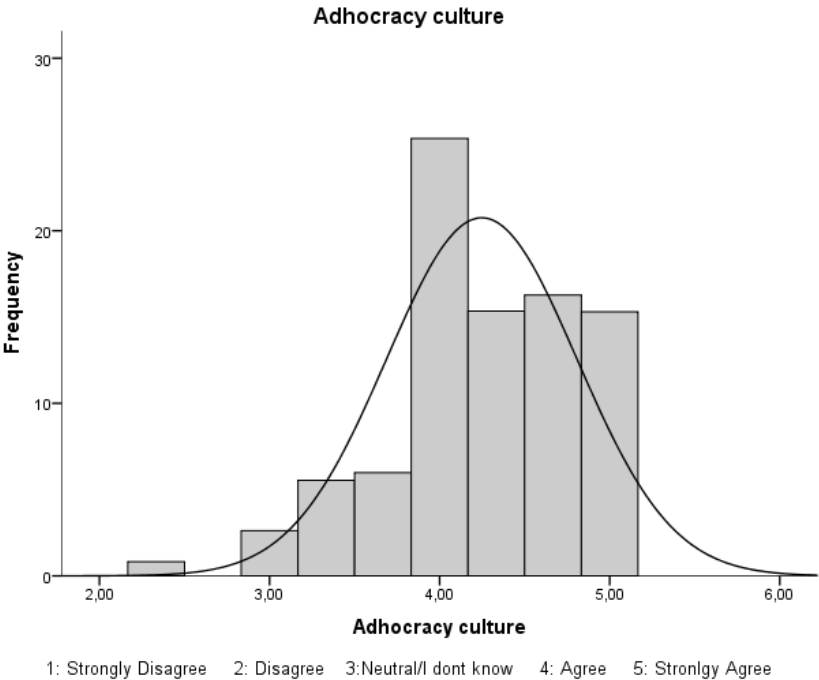


Figure 13. Histogram of the variable “Adhocracy culture”

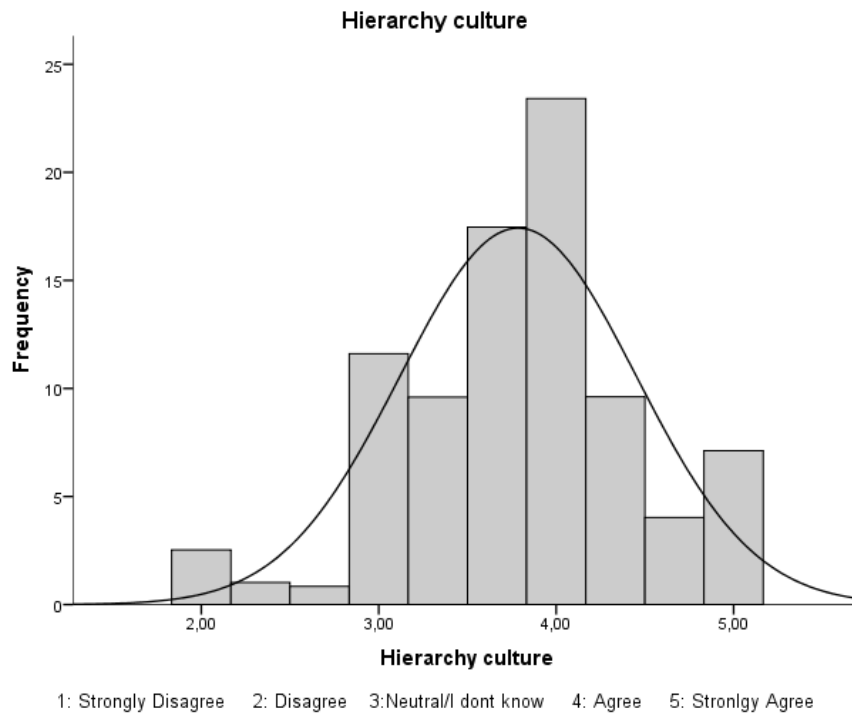


Figure 14. Histogram of the variable “Hierarchy culture”

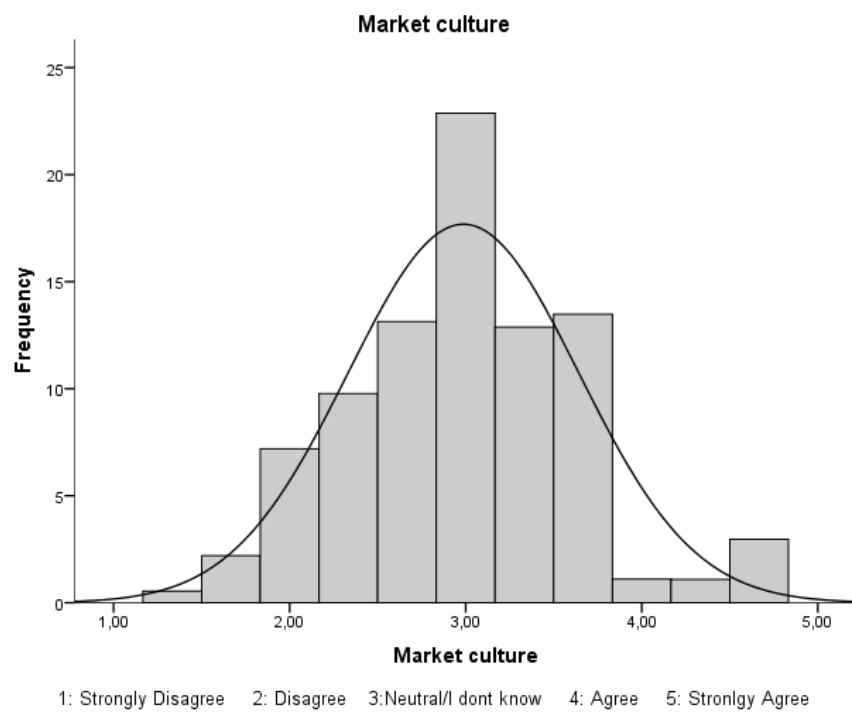


Figure 15. Histogram of the variable “Market culture”

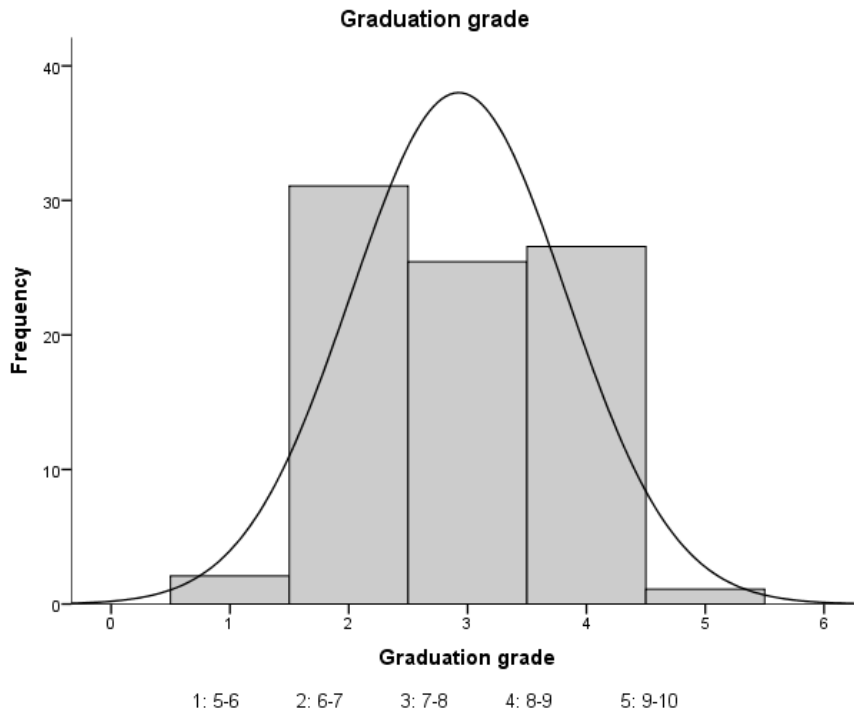


Figure 16. Histogram of the variable "Graduation grade"

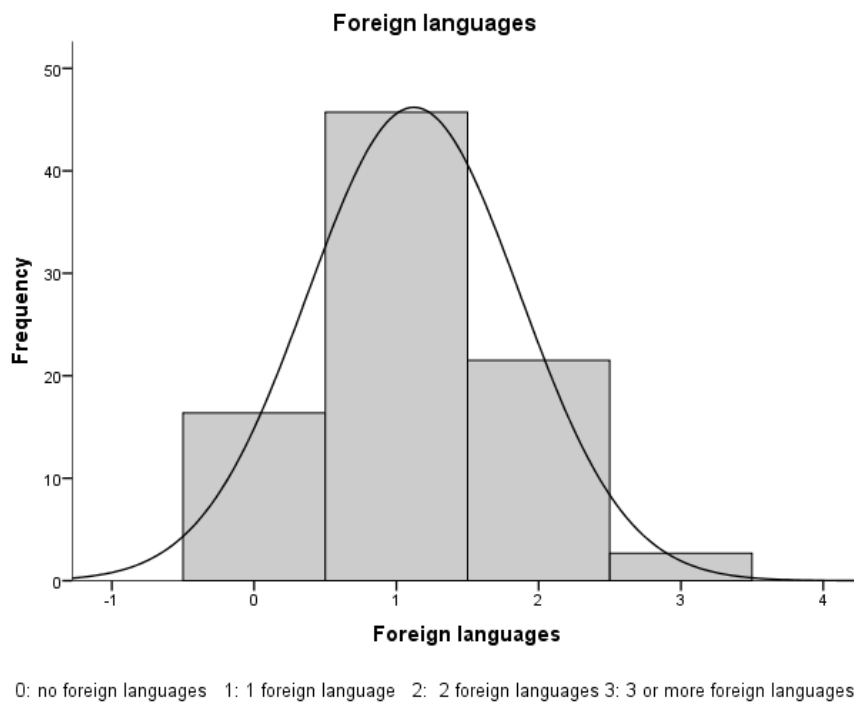


Figure 17. Histogram of the variable "Foreign languages"

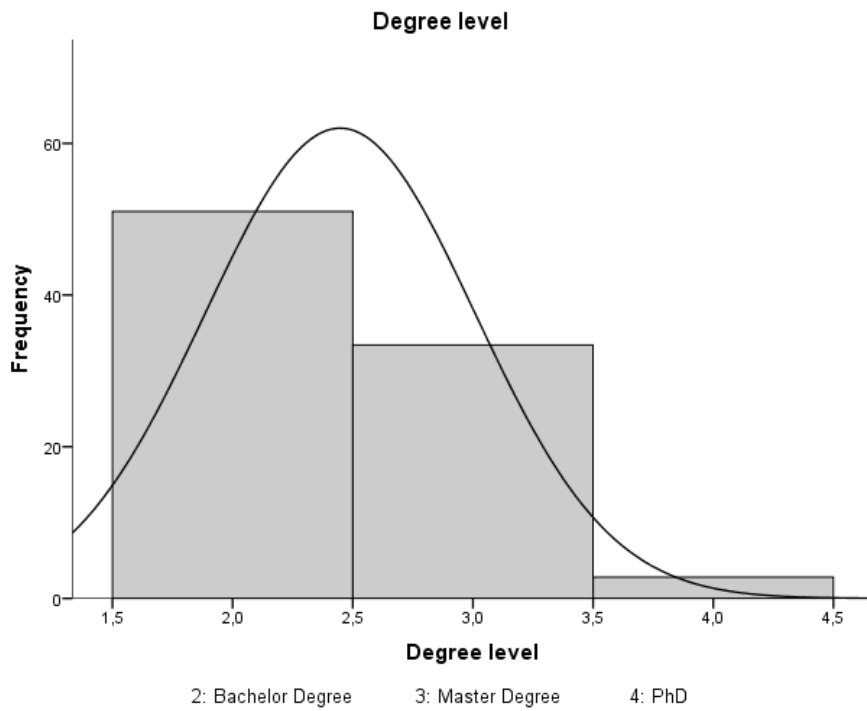


Figure 18. Histogram of the variable “Degree level”



Figure 19. Histogram of the variable “Years of experience”

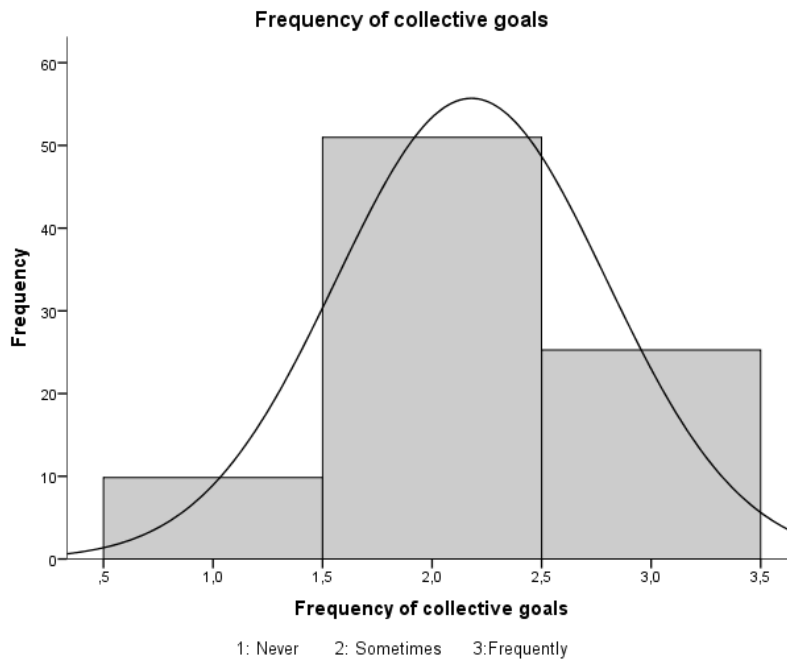


Figure 20. Histogram of the variable “Frequency of collective goals”

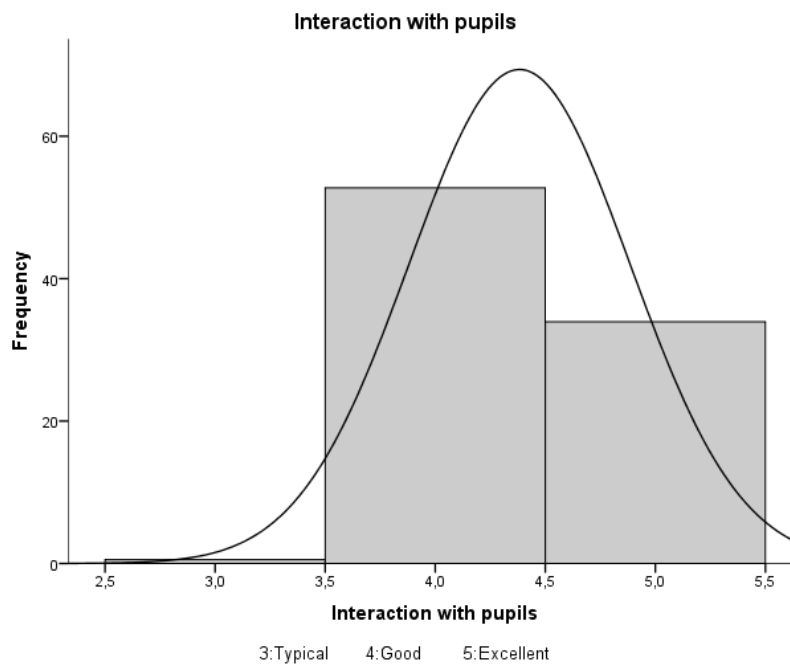


Figure 21. Histogram of the variable “Interaction with pupils”

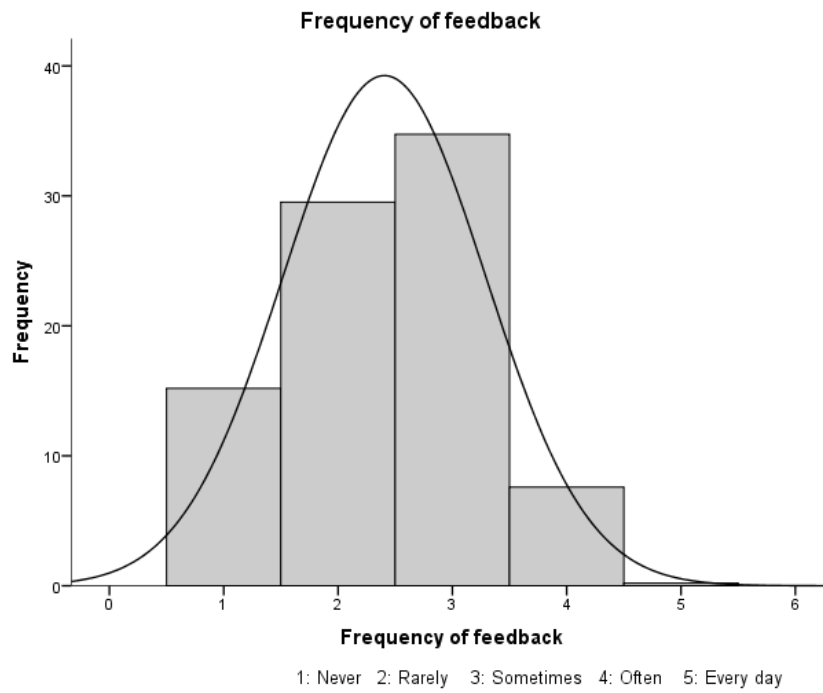


Figure 22. Histogram of the variable “Frequency of feedback”

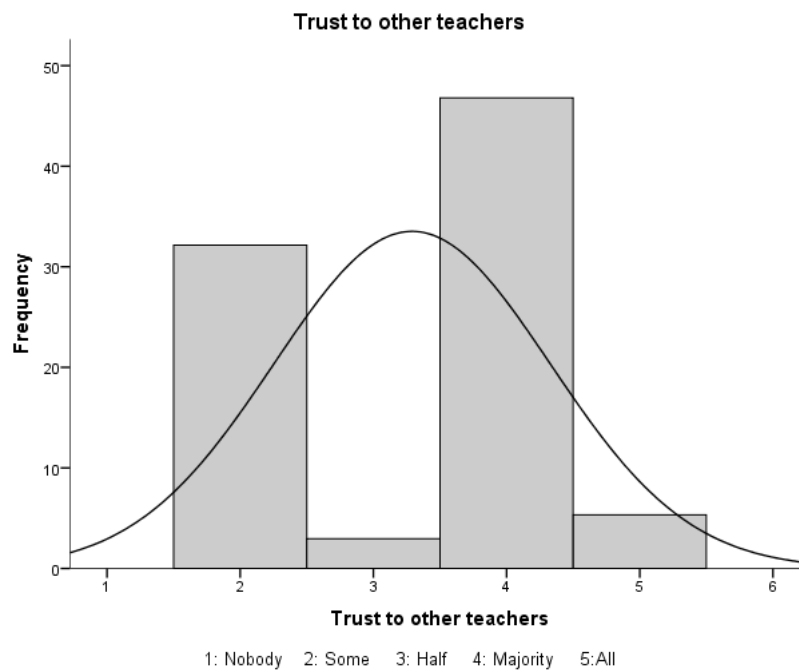


Figure 23. Histogram of the variable “Trust to other teachers”

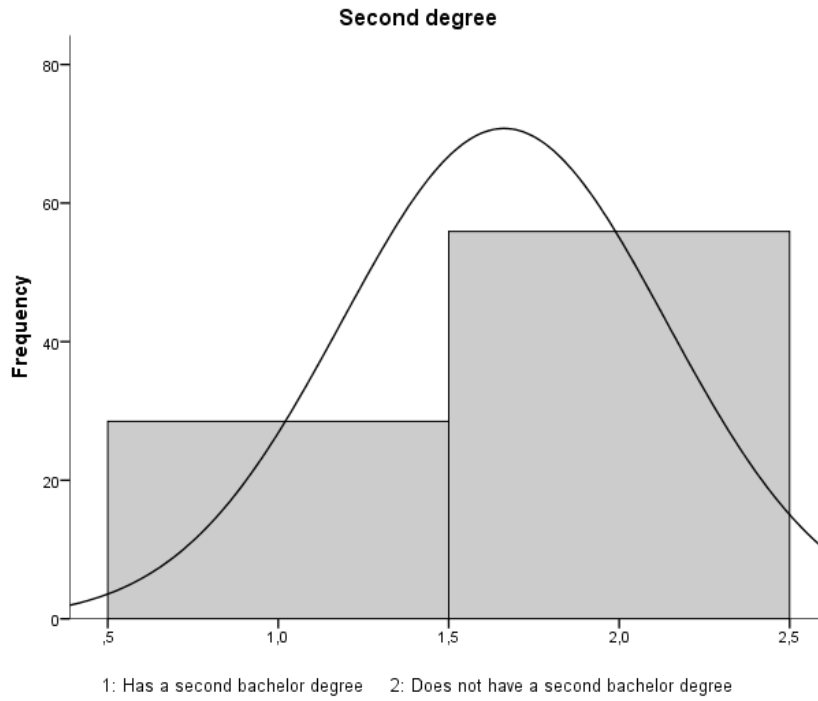


Figure 24. Histogram of the variable “Second degree”

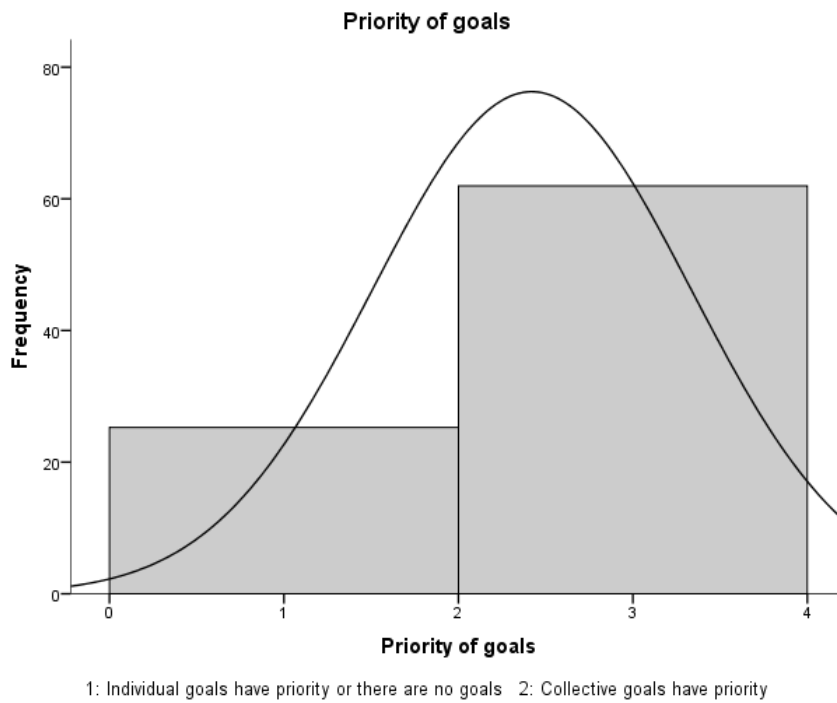


Figure 25. Histogram of the variable “Priority of goals”

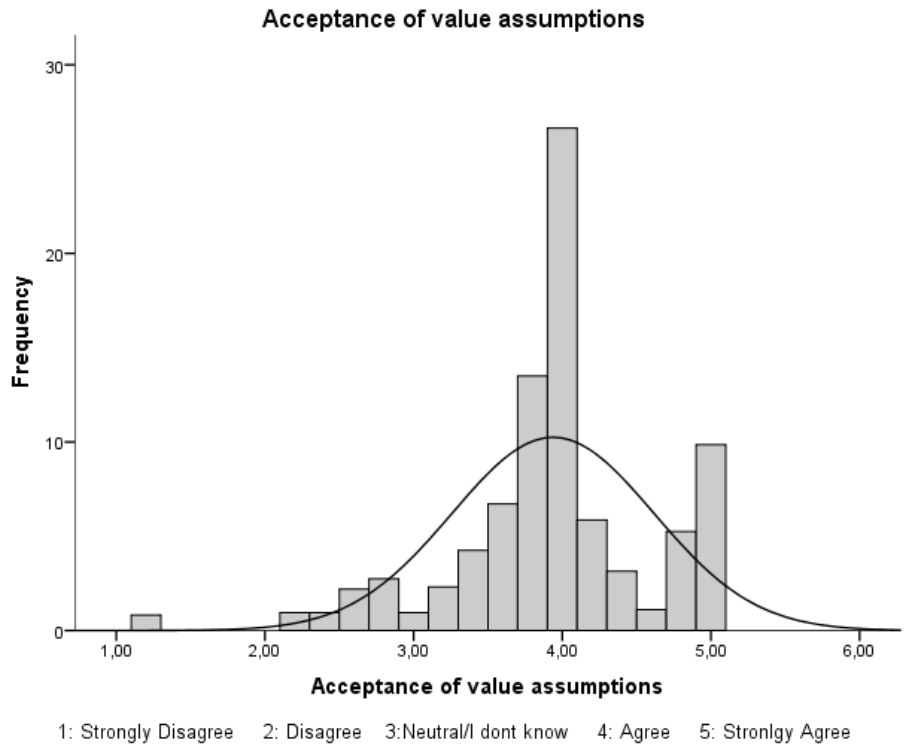


Figure 26. Histogram of the variable “Acceptance of value assumptions”

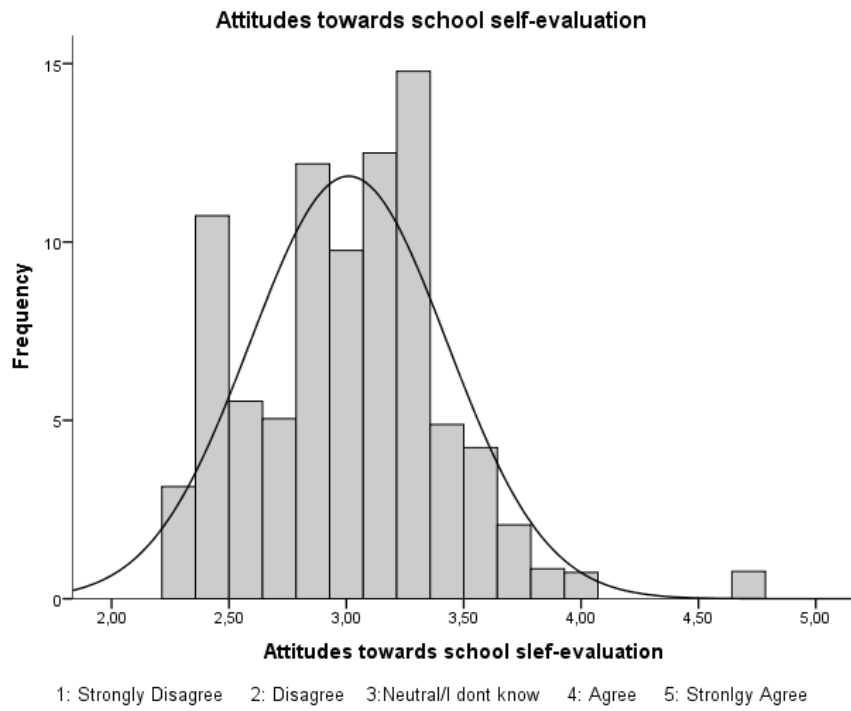


Figure 27. Histogram of the variable “Attitudes towards school self-evaluation”

Appendix C: Kolmogorov-Smirnov test results

Table 40
Kolmogorov-Smirnov test

Variable	Mean		Skewness		Kurtosis	
	Statistic	S.E.*	Statistic	S.E.	Statistic	S.E.
Years of experience	3.60	.162	.275	.278	-.953	.550
Degree level	2.41	.057	.372	.278	-1.914	.550
Graduation grade	2.93	.106	.028	.278	-1.026	.550
Second degree	1.67	.055	-.714	.278	-1.532	.550
Foreign languages	1.18	.089	.322	.278	-1.482	.550
Frequency of collective goals	2.16	.071	-.106	.278	-.399	.550
Frequency of feedback	2.41	.103	-.013	.278	-.727	.550
Trust to other teachers	3.30	.120	-.309	.278	-1.543	.550
Priority of goals	2.35	.109	-.767	.278	-1.452	.550
Acceptance of assumptions	3.9113	.07819	-.780	.278	2.253	.550
Clan culture	3.9567	.07419	-1.567	.278	4.839	.550
Adhocracy culture	4.2719	.06443	.224	.278	.154	.550
Hierarchy culture	2.9469	.07756	.064	.278	.164	.550
Market culture	3.8085	.06978	-.748	.278	.828	.550

*S.E.: Standard Error

Appendix D: Questionnaire

The questionnaire consists of 6 sets of questions :

- I. Demographics
- II. Professional capital
- III. Culture type
- IV. Attitudes towards school self-evaluation
- V. Acceptance of value assumptions that school self-evaluation is based on.
- VI. Call for interview

Section I: Demographics

1. In which region are you currently working?
 - A. Attica
 - B. Sterea Ellada
 - C. East Macedonia and Thrace
 - D. Central Macedonia and Thrace
 - E. West Macedonia and Thrace
 - F. Thessaly
 - G. Epirus
 - H. Ionian Islands
 - I. West Greece
 - J. Peloponnese
 - K. Crete
 - L. North Aegean
 - M. South Aegean
2. In which level of education are you working?
 - A. Pre-Primary
 - B. Primary
 - C. Lower secondary
 - D. Upper secondary

Section II: Professional Capital

3. How many years have you been teaching?
 - A. 0 – 5
 - B. 6 – 10
 - C. 11 – 15
 - D. 16 – 20
 - E. 21 – 25
 - F. 26 – 30
 - G. 31 or more
4. What is your higher degree?
 - A. Bachelor
 - B. Master
 - C. Doctoral
5. What was your graduation grade?
 - A. 5 – 6
 - B. 6 – 7
 - C. 7 – 8
 - D. 8 – 9
 - E. 9 – 10
6. Do you hold a second bachelor degree?
 - A. Yes
 - B. No
7. For how many languages do you hold a certificate?
 - A. 0
 - B. 1
 - C. 2
 - D. 3 or more
8. How good is your interaction with your pupils?
 - A. Excellent
 - B. Good
 - C. Typical
 - D. Moderate
 - E. Problematic

9. How often do you set collective goals with other teachers in your school?
- A. We don't have collective goals. We work individualistically.
 - B. Sometimes
 - C. Often
 - D. Other
10. How often your peers provide you feedback about your teaching?
- A. Never
 - B. Rarely
 - C. Sometimes
 - D. Often
 - E. Every day
11. To what extend do you trust the staff of your school?
- A. I don't trust anyone
 - B. I trust few of them
 - C. I trust half of them
 - D. I trust the majority of them
 - E. I trust all of them
12. To what extend collective goals are prioritized than individual's goals in your school?
- A. Individual goals have priority
 - B. Collective goals have priority
 - C. There are no goals
 - D. Other

I. *Section III: Culture type*

13. To what extent do you agree that the statements below are very important to enhance effectively the school conditions?

	Strongly disagree	Disagree	I don't know \ Neutral	Agree	Strongly agree
Teachers who work in the same school are sharing similar views about school functioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All the teachers are participating in school activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teachers are socially closed to each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teachers are encouraged to take risk and try new teaching methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet and technology based facilities are used in the school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School is flexible enough for alternative/different students and teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
school has stability (almost nothing changes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
clear rules for everyone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
school has clear structure and hierarchy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School is competitive to other schools in the region	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School is participated in several programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students' achievements in the school are traditionally good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section IV: Acceptance of value assumptions that school self-evaluation is based

14. To what extent do you agree with the following statements?

	Strongly disagree	Disagree	I don't know / Neutral	Agree	Strongly agree
People who are involved in education are expected to reflect on their own practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes in school's functioning must be generated from within the school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Things must never be viewed as 'good enough' and people must continuously look for improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ownership of initiatives must be located in the school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In modern education practice must be informed by evidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section V: Attitudes towards schools self-evaluation

15. To what extent do you agree with the following statements:

	Strongly disagree	Disagree	I don't know / Neutral	Agree	Strongly agree
School self-evaluation can be useful tool for the improvement of the school I am currently working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School self-evaluation could have positive impact in schools in Greece	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School self-evaluation is just another phrase for teachers' evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School self-evaluation is a bureaucratic process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If it is possible, I would avoid to participate in school self-evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even if school self-evaluation was not obligatory, I will try to establish a similar process in the school I am working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that school self-evaluation cannot improve Greek education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section VI: Call for Interview

Do you like to be interviewed (for 20 minutes) around these topics in order to explain your way of thinking?

A. Yes

B. No

If the answer in the previous question is 'Yes', kindly provide your email or Skype address or your telephone number. Confidentiality and anonymity will be applied in any case.

.....

Thank you for your participation in this study.

In case you are interested about the findings of this study please contact me:

Ilias Mavromatidis

iliasma@student.uv.uio.no

Appendix F: Inter-item correlation matrixes

Table 41
Inter-Item Correlation Matrix of the Variable "Attitudes towards SSE"

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Item 1	1.000						
Item 2	.888	1.000					
Item 3	.552	.595	1.000				
Item 4	.443	.473	.535	1.000			
Item 5	.634	.740	.574	.430	1.000		
Item 6	.596	.706	.565	.397	.579	1.000	
Item 7	.741	.754	.642	.701	.698	.646	1.000

Table 42
Inter-Item Correlation Matrix of the Variable "Clan Culture"

	Item 1	Item 2	Item 3
Item 1	1.000		
Item 2	.365	1.000	
Item 3	.269	.247	1.000

Table 43
Inter-Item Correlation Matrix of the Variable "Hierarchy Culture"

	Item 1	Item 2	Item 3
Item 1	1.000		
Item 2	.073	1.000	
Item 3	.134	.433	1.000

Table 44

Inter-Item Correlation Matrix of the Variable "Adhocracy Culture"

	Item 1	Item 2	Item 3
Item 1	1.000		
Item 2	.366	1.000	
Item 3	.375	.389	1.000

Table 45

Inter-Item Correlation Matrix of the Variable "Market Culture"

	Item 1	Item 2	Item 3
Item 1	1.000		
Item 2	.039	1.000	
Item 3	.096	.153	1.000

Appendix E: Teacher Unions' brochures against school self-evaluation

Teachers' Unions send regularly brochures. Teachers can read them in the announcement table of the school or in their emails. During the period 2010 and 2014 dozens of that type of documents have been send in schools in order to call for resistance to this new trend in Greek education: the school self-evaluation. The following extracts indicate the negative climate around SSE.

- We take the opposite stance over this kind of evaluation. [...] It is the 'back door' for our evaluation. [...] This law has been imposed to legitimize salaries' plateau and firings. [...] We should make clear that we are not opposite to any kind of self-evaluation but only to this kind of self-evaluation [...]. (Unpublished brochure)
- "Our presence is necessary in order to effectively organize our efforts to overcome self-evaluation" (Unpublished brochure)
- "[We require] the immediate recall of all illegal laws about school self-evaluation" (Unpublished brochure).
- "... qualitative data such interpersonal relationships and pedagogical climate are transformed into quantitative using simple and unscientific methods..." (Unpublished brochure)
- "We complaint about the terrorizing and intimidation methods that were used in order to pursue school director to participate in school self-evaluation" (Unpublished brochure)
- "We call all the school directors to stay together with teachers ... we call them to abstain ...from all the processes of school self-evaluation..." (Unpublished brochure)
- "It is understood that we should refrain from the trap of evaluation...it would lead us to competitive relations among teachers in each school..." (Unpublished brochure)

Appendix G: Request for Consent

The following text was sent to participants of the survey.

Consent for participation in the study

By fill in the questionnaire you declare that you have received information about the project and you were willing to participate.

Background and Purpose

My personal involvement in the pilot phase of school self evaluation in Greece and the existence of relevant literature that clearly indicates that school self evaluation is worldwide spread as a tool to improve schooling are the two reasons that underlie the overall purpose of this study:

To identify and explain teachers' attitudes towards school self-evaluation in Greece in order to better inform policies and practices in the field of school self-evaluation.

In order to explain these attitudes this study uses the professional capital theory written by Hargreaves and Fullan (2012) and aims to identify if professional capital are related to the attitudes towards schools self evaluation.

It is a master thesis, which will be published by the University of Oslo, Norway. Participants are informed through teachers unions. Mails have been sent to teachers unions of Greece and with snowball process participants to request to fill in the questionnaire and to participate in an interview process.

What does participation in the project imply?

Both quantitative and qualitative data will be collected. Quantitative data will be collected through the questionnaire, which is the same for all participants. Qualitative data will be collected by interviewing participants that have already filled in the questionnaire. In the end of the questionnaire you will find a call to provide your Skype address or telephone number if you want to participate in the qualitative part of the study.

Required time for fill in the questionnaire is 5 to 10 minutes. Questionnaire consists of four sections.

The first section is about demographics like region and educational level.

The second section is your professional capital (human capital, social capital and decisional capital).

The third section requires your opinions about the circumstances that lead in an effective school.

In the fourth part opinions about the school self-evaluation are collected.

In the fifth section the questionnaire requires your perspective about some assumptions that self-evaluation is based.

What will happen to the information about you?

All data will be treated confidentially. Questionnaire's data will be available only to me, Ilias Mavromatidis and will be stored in my personal hard disc in my house in Preveza city in Greece in November 2015 and December 2015. After the 25th of December the questionnaires will be deleted. After that point the data will be processed only using SPSS software. The interview participants are not required to provide their name. If they do it accidentally or voluntarily during the recording, the transcripts will be anonymized using a completely different name. Sensitive personal data such as names, gender, etc. are not required and will not be collected neither by questionnaire nor by interview. Participants will not be recognizable in the publication of the study.

Voluntary participation

It is voluntary to participate in the project, and you can at any time choose to withdraw your consent without stating any reason. If you would like to participate or if you have any questions concerning the project, please contact me or my supervisor:

Ilias Mavromatidis

iliasma@student.uv.uio.no

Dr. Zehlia Babaci-Wilhite

zehlia.babaci-wilhite@nchr.uio.no

The study has been notified to the Data Protection Official for Research, Norwegian Social Science Data Services.

Appendix H: Theories, Constructs, Concepts and Items

Table 46
Theories, Constructs, Concepts and Items used in this Master Thesis

Theories	Constructs	Concepts	Items
			Degree level
	Human capital	Qualifications	Graduation grade
			Second degree
			Foreign languages
Professional Capital (Hargreaves & Fullan, 2012)		Teacher-student interaction	Teacher's perception
		Collegiality	Frequency of collective goals
	Social capital	Feedback by other teachers	Frequency of feedback
		Trust to other teachers	Teacher's perception
		Priority of goals	Teacher's perception
	Decisional capital	Career stage	Years of experience
		Teacher's perception of effectiveness	3 Likert type questions
Competing Values (Quinn & Rohrbaugh, 1983)	Clan culture	Teacher's perception of effectiveness	3 Likert type questions
	Adhocracy culture	Teacher's perception of effectiveness	3 Likert type questions
	Hierarchy culture	Teacher's perception of effectiveness	3 Likert type questions
	Market culture	Teacher's perception of effectiveness	3 Likert type questions

