The role of teacher self-efficacy in students’ achievement

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Abstract

The master thesis is about the role of teacher self-efficacy in students’ achievement in developing post-Soviet country such as Georgia. The research reviews evaluation strategies of teachers, different practices and theory. Nature of low achievement is discussed related to socio-economic status, importance of parenting, good teaching, SEN skills, and social environment and health issues. Another large topic is a part of teacher self-efficacy in the evaluation process of teachers’ effectiveness. The quantitative research was held in Tbilisi schools. Respondents were teachers of the classes from 6 to 10th grades. The mean of their self-efficacy was not different with the mean of their colleagues, despite correlation between self-efficacy and students’ achievement could not be confirmed. Only the one factor – efficacy in student engagement was correlated with students’ low achievement. Difference was not significant among the number of low achiever students in central and suburban schools but in private schools there were less low achiever students than in public schools which was mainly explained by the difference of socio-economic status of the families. The length of experience and holding professional certificates did not have influence on their self-efficacy. Class size did not matter with the number of low achiever students in the classroom.

Georgian Social-economic and historical context and Educational politics was discussed in the context of the variables listed above. The researchers were advised to inquire low achievement and its factors since 2020-22 when the Government of Georgia will provide scientific data about teachers and students in Georgian schools.
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1. Introduction

The countries, which understand the role of education in the developing process, try to concentrate more and more on the quality of education system. The first and very important is a law and the Governmental policies about education (Henry, Lingard, Rizvi & Taylor, 2013). General view and clear connection of the educational policy with other fields of politics such as economics, equal accessibility of education for students, responsibilities on children rights, effective referral system of social services and an effective enforcement mechanism are the main aspects of the good educational policy. There is a poor infrastructure at schools from developing countries and the same is in Georgia but as researches show, in case of high quality policy and human resources, infrastructure does not play important role in students’ education (Gil-Flores, Rodríguez-Santero, & Torres-Gordillo, 2017). Last but not least, teachers’ qualification is considered to be a most important aspect of the education system (Uline & Crampton, 2009).

There are three kind of descriptors which explain who is a good teacher. They are: competent teacher, charismatic teacher and reflective teacher (Moore, 2004). Accordingly, the one agreed evaluation system of good teaching all over the world does not exist. Even the articulation of good teaching differs from country to country. In different societies there are different criteria for evaluation quality and performance of teachers. For example, national document of Australia (ALTC) contains five criteria for teacher’s evaluation:

1. Teachers’ approaches to make students interested, motivated and involved in learning process;
2. Adapting and developing curricula according to updated demands according to the field they teach;
3. Using developing evaluation strategies, creating assessment and feedback in order to encourage independent learning skills;
4. Making supportive and trustful personal relationships, developing tolerant and friendly environment;
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5. Scholarly activities to inquire and develop teaching-learning environment based on scientific methods (Devlin, & Samarawickrema, 2010).

Different experience of various countries in educational politics can be sum up as a systems which evaluate teachers with two general directions – different kind of assessment of teachers’ education or evaluate and analyze students’ achievement in each teacher’s class (Jacob, & Lefgren, 2008).

In addition, the educators and principles from various educational systems try to form different predictors for teachers’ success. Studies about teachers’ effectiveness are divided in three groups:

1. presage-product studies which measure psychological characteristics and their correlation with teaching quality;

2. Process-product model which studies teacher’s behavior at the lesson;

3. Beyond classroom behavior which includes subject knowledge, knowledge of pedagogy, teacher’s beliefs and teacher self-efficacy (Kyriakides, Campbell, & Christofidou, 2002, p. 293).

The presage-product studies are not used in political documents of educational systems. Personal features such as IQ or emotional intelligence are not assessed during their selection process. However awareness raising about the importance of empathy and supportive communication is a main topic for their trainings and development programs.

Process-product model is the one aspect Georgian educational system uses for teachers’ evaluation in addition. Teachers prepare three lessons per semester which should be attended, observed and evaluated by the assessment group of the school (Ordinance of the Government of Georgia N241, 2019). After they get feedback and recommendations to develop their teaching strategies by the school administration or they get evaluation: acceptable and continue their working.

The central part of the politics Georgia use toward teachers is the one side of the Beyond classroom model to evaluate teachers. Teachers pass exams in the subject they teach and in pedagogic abilities (Preparation for teacher national exams, 2015). Consistently, this thesis is
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an investigation about the other side of the Beyond Classroom model: teacher’s self-efficacy as a contributing factor of good teaching and how self-efficacy is associated to students’ low achievement in a developing Post Soviet countries such as Georgia.

Graph.1.1 The role of teacher self-efficacy in teacher’s evaluation scheme

Teacher self-efficacy has been defined as a teacher’s belief that his or her behavior has an influence on students’ performance (Bandura, 1994). Various researches consider teacher’s self-efficacy as a descriptor which is associated with job satisfaction (Luthans, Zhu & Avolio, 2006), prevention from emotional exhaustion (Zee & Koomen, 2016) and students’ low achievement (Lee Bridget, Cawthon Stephanie, Dawson Kathryn, 2013).

However, we still do not know how self-efficacy is related to students’ achievement in the environment of developing countries where poverty and unstable social systems make physiological and safety needs more prior than education and self-actualization (Maslow, 1987).

As mentioned above, in 2010 the Ministry of Education and Science of Georgia started to organize two types of professional certification exams for teachers - exams in the subject they are teaching and exams in pedagogic abilities (The National Assessment and Examination Center, 2015). Exams take place annually, some of the teachers have already
been certified and others have a chance to pass later or re-pass their exam. They are preparing for it, learning and exercising. But self-efficacy is not a descriptor which is directly attached to informational knowledge and informational knowledge itself is not a guarantee for effective teaching process. Considering this fact the educators still ask questions: Does this certificate implies that they are good teachers? What does it mean to be a good teacher? Can the teachers affect students’ achievement?

The teachers have motivation to prepare and pass exams as they get increased salary afterwards. But it does not mean that their certificates are associated with their high influence on students’ behavior. The factors of teacher self-efficacy does not contain theoretical knowledge which teachers are demanded to know to pass exams. In this thesis I will investigate and discuss whether this certificate correlates with higher self-efficacy.

After declaring independence from the Soviet Union in 1991, Georgia did not have any log frame toward elementary and secondary education until 2010. As a result, teaching at schools became unpopular profession. It was associated with low salaries and conservative attitudes toward children (strict discipline, strong formal relationships, vague rules) with minimum role of information technology and updated information in the educational process, soviet intolerant style of teaching methods (Burkhalter, & Shegebayev, 2012) and high focus on traditional subjects such as mathematics, history, biology (Burton, 2010). Talent, individual approaches, ideas about modern professions, transition programs from school to higher levels of education and special needs education were neglected in this environment.

While talking about Soviet experience, there are teachers in Georgia who tend to be resistant to modern changes in the Educational system trying to keep their conservative attitudes and strategies. After 30-40 years of working experience in an authoritarian environment they have to face new demands of educational system they cannot handle. Thus, in this research I anticipated that their length of experience must be negatively correlated with beliefs that can make influence on students’ achievement and behavior.

On the other hand, it can be vice-versa; if Soviet past does not affect teachers’ worldview, maybe changing educational environment cannot change their beliefs about their own capabilities, so self-efficacy can be only strengthened with length of experience (Penrose,
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Perry, Ball, 2007). In third version there will be no correlation, because self-efficacy tends to be a stable pattern after once it has been formed (Bandura, 1997) or at least nonlinear correlation as it happened in a by Klassen and Chiu (2010), when self-efficacy increase to 23-year of experience and then starts to decrease. We will see which from these four alternatives worked in this investigation.

In Georgia, social inequality is high. Statistical Index of income inequality called the Gini Index is 40.1 (National statistics office of Georgia, 2015). To compare the same index is above 37.89 in some African and Asian countries (e.g. Congo, China, Vietnam) while it’s below 27.99 in Scandinavian and Central Europe (e.g. Norway, Finland, Czech Republic) (The Gini Index (World Bank estimate), 2012). In general, significantly richer people live in central prestigious districts, and their children go to private schools. Low achievement is significantly affected by socio-economic status of family and neighborhood (Cassen & Kingdon, 2007). Data analysis in this research can show whether more students from public schools are low achievers than private schools or not. On the other hand it is also interesting whether there is difference between the number of low achievers in the central and suburban schools.

Class size is one more aspect the public schools are different from private schools with. Class size is not a universal predictor of student’s achievement (Ehrenberg, Brewer, Gamoran & Willms, 2001). In some researches bigger size of the class leads to less effectiveness of both teacher and students. Instructions are not so clear anymore and performance is weaker (Monks, Schmidt, 2010). Besides, in the big class clear evaluation of the students is more difficult. It is also challenging to define each student’s role in the group works. In other cases it has slight influence on achievement when it is in the group with other stronger variables, such as teaching method (Sanders, Wright & Horn, 1997), but otherwise, there has not been found any correlation between class size and student achievement (Hoxby, 2000). It will be logical if we assume that if a teacher possesses instructional strategies and helps students in independent learning skills, number of students in the classroom will not be determined value. The teachers in Georgia still complain that their effectiveness is decreased because of high number of students in the classroom. The maximum number of the students they teach
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per class according to the collected data is 35 and minimum number 5. In this thesis I have a chance to test how class size is related with the achievement of students in Georgia.

The students in Georgia do not have unified exams during school period. They are evaluated by teacher’s grades. Because of lack of standard measurement students’ grades were calculated according to their teachers’ biased attitudes toward them. Considering this fact the number of low achiever students may contain various reasons of their low achievement including their teacher’s tendency to give a low evaluation. Despite the issue I did not change the concept of low achievement in my Research purpose, because low achievement is a social construct and teachers as the examiners form this construct in each class. In this context there is no standardized results but teachers’ biased attitudes form student’s idea about their achievement and their self-esteem.
2. Research purpose and hypotheses

Thus, the purpose of this master thesis is to find out the role of teacher self-efficacy in students’ achievement in developing post-soviet context.

The main hypothesis is:
- There will be a negative correlation between teacher self-efficacy and the number of low achiever students (1).

There are a few more hypotheses which were checked during the data analyses to show the nature of self-efficacy and low achievement better. In order to find how socio-economic status and neighborhood associates with low achievement, second and third hypotheses are tested:
- In Tbilisi central schools there are lower per cent of students with low achievement than in suburbs (2);
- In Tbilisi private schools there are lower per cent of students with low achievement than in public schools (3);

In order to investigate reasonability of Georgian educational policy toward teachers fourth and fifth hypotheses are tested:
- Holding certificates has no impact on teacher self-efficacy (4);
- There is a negative correlation between length of experience and self-efficacy (5);

In order to check teachers’ negative attitude toward class size, sixth hypothesis is tested:
- There is no correlation between the total number of children in the classroom and per cent of low-achieved students there (6).
3. Literature Review

3.1. Low Achievement

Aremu & Sokan (2003) describe poor academic performance as being below the expected standard which was held by the examiner. In Georgian schools, teachers are one and only examiners who evaluate students until the graduation year. The goal of the examiners in the traditional teaching-learning process is to check knowledge—how students can memorize facts and rules. But knowledge is the lowest level in the hierarchy of cognitive-learning process (Bloom, Krathwohl & Masia, 1984). It means that knowing facts cannot be a measure of the highest thinking abilities and still thousands of students all over the world are supposed to be low achievers because they do not have this kind of knowledge. They cannot perform well for various reasons, they are not motivated to learn, they have other priorities, they cannot communicate teachers etc.

Children with low achievement are often considered as ones with lower cognitive capacity or some learning disability. However, distinguishing between learning disabilities and low achievement is necessary. Child with a learning disability can be a low-achiever because of lack of treatment. In the countries where special education is not developed, children with learning disabilities are left without special teaching techniques and adapted educational environment. But low-achiever is not always one with learning disability.

This is the description of learning disabilities in Diagnostic and Statistical Manual of Mental Disorders (DSM V).

> Specific learning disorder is diagnosed through a clinical review of the individual’s developmental, medical, educational, and family history, reports of test scores and teacher observations, and response to academic interventions. The diagnosis requires persistent difficulties in reading, writing, arithmetic, or mathematical reasoning skills during formal years of schooling. Symptoms may include inaccurate or slow and effortful reading, poor written expression that lacks clarity, difficulties remembering number facts, or inaccurate
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*m mathematical reasoning* (American Psychiatric Association, 2013, Specific learning disorder section, p.1).

But learning difficulty also exists in other cases, when there is no permanent medical syndrome or any disorder. Reasons can be different, from cultural specifics to subjective emotional conditions.

The statistics also shows the difference between the children with learning disorders and learning difficulty. IQ score of children with Mathematical Learning Disability is on the low border of average, while the scores of children with low achievement show no difference from the children with typical achievement. Besides, children with learning difficulty have higher scores in mathematics tests than children with learning disability (Geary, 2011).

Educational scientists suggest that reasons of low achievement are sometimes internal but mainly external or semi-external. For example, According to Al-Zoubi & Younes (2015) there are six reasons of academic failure:

1. Lack of clear plan – when a student does not have organized idea how to study, what to study, how to prepare for lessons, what is a teacher’s demands and how to follow. This reason may be caused by family background or school culture.

2. Medical and psychological reasons – when a student skips lessons because of physical health and then fail to follow up the curriculum, to concentrate on health issues and find no time for preparing lessons, to avoid lessons because of psychological issues and stress. Home-schooling is considered to be used in this situation but not every parent use this service.

3. Personal reasons (low self-confidence etc.) – when a student accepts the fact that he or she cannot achieve more, that he is not so clever as his classmates are. These beliefs are strengthened by parents or teachers.

4. Parental and educational reasons – when a student is a victim of family violence, parents are not motivated him or her to get succeed, there is a cultural demand to stop studying, relationship between him and teachers is not motivating etc. These problems are on the leading positions in the countries where social working system does not function properly.
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5. Exam anxiety – when a student studies well but he or she cannot perform knowledge because of exam anxiety. In this case teachers have possibilities to work on anxiety problems but the students are accepted as low achievers.

6. Lack of motivation for success – when a student thinks that academic success will not bring wealth, he or she does not have an idea about their future profession, there is no desire to communicate with teachers or classmates etc.

In the case of medical and psychological reasons sometimes academic achievement is postponed as a priority by parents, they think that during treatment additional stress by lessons is not acceptable for their child. But after a few months or years following up to the curriculum is more stressful and seems impossible for the child. Having clear plan, personal traits, exam anxiety and lack of motivation for success are internalized symptoms which were developed by wrong demands and behavior toward the student. When teachers teach the subject it is important for students to have a clear idea why they need to make effort, what is the usage of the topic in practice. If the teacher provide practical examples from life experience, students’ plan can get clearer, motivation can get higher and anxiety can be replaced by interest.

In another case of low achievement, children with various behavioral problems may feel a lack of attention and encouragement in the learning process. Even in this case situation varies widely. Sometimes because of low social-economic condition parents have to work overloaded to finance important needs and cannot supervise their children’s educational needs because of lack of time and other priorities. Sometimes they have time but cannot imagine that their children can get qualified education to have a better life so they prefer to follow the way which is more familiar to them and do not care about it at all. Situation is getting worse when they have psychological, behavioral or private problems, government is not so strong to take after such kind of families, and social workers do not exist for such children so they continue to struggle themselves. Then they make friends with the same interests, expectations from teachers becomes lower and lower but curriculum- harder and harder from year to year. Motivation to try harder is nowhere, it does not come from inside because they were not trained from a very childhood to search interesting topics and widen their erudition and it does not come from outside because no one expects from them to be
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successful at something. There is a typical story but the phenomenon of low-achievement is more complicated.

Main environmental causes of low achievement are socio-economic status, family background and expectations from other people, for example teachers (Ejakait, Mutisya, Ezeh, Oketch, & Ngware, 2011). In the families with lower socio-economic status students are not motivated to study, instead maybe they are demanded to work from early ages to help the family financially. They know how to live with low budget and they start to get used to their economic condition. Family background also matters. When the relationship between parents and student is challenging and they cannot control his achievements. There are a several assumptions: When parents violate on their children, when they ignore his achievements and when they overreact on their mistakes. Personal characteristics can be gender in certain situations and emotional stability. On the other hand, gender is a social construct which contains attitudes and prejudices toward someone connected to the gender and these prejudices form student’s self-concept.

Thus, personal characteristic can be formed by external variables. For example, in some cultures, women are not supposed to have high education. Instead they are expected to get married and take care of their families. Majority of them follow the expectations. Besides, there is a wider range of reasons which turned out to be interesting in this context.

Regarding socio-economic status, according to Garner and Raudenbush (1991) and Cassen and Kingdon (2007), the neighborhood has an influence on children’s achievement as well as socio-economic status of their family. In particular, children from poorer districts had more difficulties in learning than children from wealthy environment in spite of their own conditions. It can be explained by Bronfenbrenner’s (1979) Ecological System Theory that in a child's development there are different micro-systems involved, one of them can be neighborhood, their lifestyle and values, the things that child sees every day and have an influence on his or her behavior or attitudes. Child's first friends often become ones from neighborhood. Their behavior and peer-pressure makes influence on his motivation about studying. Even more there are subcultures of the children in the districts where low achievement is encouraged as a protest toward schools, families and society.
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While discussing the importance of children’s social involvement at schools, Woolfolk (2008) collects the research data about the relation between friends and achievement: 11-12 year-old children with at least one friend have a better academic achievement than children without friends. Maybe this means that the students need external motivation to perform better. They need someone important to see their success. Like the number of friends the quality of friendship was also correlated with the level of achievement and stress. The closest friends children have the higher their achievement was, especially in the difficult time of their family life.

Fuchs and Wößmann (2007) analyzed different student achievement data bases and turned out that in private schools there were less low-achievers than in public schools. The clients of private schools are parents of high socio-economic status and we already know that there is correlation between SES and achievement. Families with lower income concentrate more on first aid needs. Sometimes they cannot see the importance of high quality education for their children or sometimes they care but they do not have enough family budget to pay for private schools. As a result their children have the same capacity and intellect as children from private schools but their social and physical environment is different and there is a higher risk of low achievement. On the other hand class size is also a discussable topic in some researches. According to several authors class size does not make difference in students’ achievement (Hoxby, 2010) but others claim that class size matters for high achievement of the students at math class while does not matter in humanitarian classes (De Paola, Ponzo, & Scopa, 2013). In addition administration of private schools is stronger, the teachers have more intensive supervision as private schools are business and head of the school cares about parents’ demands. If these three variables: High socio-economic status, smaller class size and supervision of teachers are considered, maybe it will be more obvious why private schools are more successful in struggling children’s achievement.

The role of the culture and gender in low achievement is discussed with Kingdon and Cassen (2010) where they suggest that gender differences have an influence on achievement in certain ethnic groups in English schools but Socio-economic condition correlates with achievement no matter ethnicity. Gender role is determined by cultural views. In some countries especially in the Muslim cultures women have limited rights to get higher
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Education or the field of their education is determined beforehand from the society (Moustafa, 2013). While the western cultures have radically different stereotypes about women education. Gender stereotypes make influence on girls’ self-concept and academic achievement in European societies (Igbo, Onu, & Obiyo, 2015). Stereotypes that girls cannot perform as boys in science make them stop learning well and make them concentrate on other things maybe they are not interested in. The challenge of the policy-makers is to involve more girls into STEM (Science, Technology, Engineering and Mathematics) subjects against the prejudices that these fields are only for men (How to get more girls into technology. 2018) which resulted in lower achievement of girls in these subjects that in humanitarian subjects.

All the risk factors analyzed above are mentioned in the graph 3.1.1.

Graph. 3.1.1 Risk factors of low achievement

Relations among schoolmates matter when the social environment is hostile for them. Some researchers suggest that victims of bullying tend to be low achievers more than bystanders (Glew, Fan, Katon, Rivara, & Kernic, 2005). There are three types of bullying: verbal, physical and non-verbal. Verbal bulling contains threatening, teasing etc. physical bulling is
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about beating, kicking, destroying things while non-verbal bullying is about using gestures and humiliating expressions (Yerger, & Gehret, 2011).

Bullying is a phenomenon which has multiple sources. A child can be bullied because of being different on any level, sometimes when it is unimaginable for others. This nature makes bullying as one of the harmful aspects associated to low achievement. Sometimes a victim of the bullying starts to absence lessons and it causes low achievement. But in other cases he or she denies to express the desire to avoid the bullers and attend classes. However continuous stress affects the victim’s psycho-emotional condition and risk of low achievement still exists (Dake, Price, & Telljohann, 2003). Children from families with low socio-economic status and rural origin are more vulnerable to become the victims of bullying but nobody is ensured from it (Woods, & Wolke, 2014). 77 percent of students are bullied at least one time. 50 percent of all cases left unreported by the children (Yerger & Gehret, 2011).

Erik Erikson (1994) developed psycho-social development theory which includes 8 stages from the birth to the death:

Trust VS Mistrust (birth to 12-18 month) – psychological wellness in this period is depended on child’s communication with his or her caregiver. The relationship should be predictable and careful for a child. This provides trustful feelings in a child and prevents him or her mistrust of the environment later.

Autonomy VS Shame (18 month-3 years) – child of this age starts independent activities. Psychological wellness is depended on how much he is encouraged to act autonomous by the caregiver. If the child is over controlled he will feel the shame instead of curiosity toward new things in later life.

Initiative VS Guilt (3 to 6 years) – social environment starts to be a central part of psychological development. Child starts to play with other children. He or she should be encouraged to initiate playing, communication and relationships among peers to prevent him feeling guilty for later initiatives.
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Industry VS Inferiority (6 to 12 years) – it is a period of learning new skills. Children’s self-esteem is depended on their feeling how well they can achieve. Their achievement in this age is associated with school success. Wrong communication and humiliating feedback from teachers can cause feeling of inferiority.

Ego Identity VS Role confusion (adolescence) – on this stage of an early adulthood children become to identify their roles in society, who they are, which ideas they follow, what are their values. If a teenager of 12-18 year-old cannot feel the belonging to any group, role confusion will be inevitable.

Intimacy VS Isolation (young adulthood) – on this stage people try to form intimate, loving relationships, form private space and healthy borders between them and others. This provides psychological wellness. In case of failing in relationships and communication they tend to isolate themselves.

Generativity VS Stagnation (middle adulthood) – it is a period when people try to feel their own importance; to make a change for a large development; to feel functional. Otherwise feeling of stagnation breaks psychological wellness.

Ego Integrity VS Despair (late adulthood) – psychological wellness on the last stage is provided by the feeling that one’s life was complete and satisfied, feeling of being wise and internal peace is gained. If there is a feeling of wasted life, the person feels regret and despair (Wolfolk, p.86, 2008).

From these stages the most interesting one for this thesis and in general for school educators and educational scientists is 4th - Industry VS Inferiority not only because it describes a period of 6 to 12 year-old (school age) children but also for its content. For example, as Cherry (2015) describes this stage, the children of this age are motivated by the question “How can I be good?” and their self-confidence is connected to the tasks they overcome successfully. The main job they evaluate themselves is school tasks. If they overcome difficulty their beliefs in themselves are grown up. Teachers play the greatest role on this stage. They can make students feel competent and they can make students feel inferior. Wellbeing or anxiety formed in this age may long life-time.
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As it appears according to Erikson (1994), Self-confidence and self-esteem is highly attached to achievement level at school. If the self-concept of the children is that they cannot achieve success, they start to find something different they feel competent at. These people have no feeling that they can struggle with problems in an adequate way as other people do and choose negative coping strategies. They try to cover their failing with bad behavior which sometimes leads them to mild or really heavy crime. As they do not consider themselves as successful learners, they try to be good at bad behavior, so there is a correlation between their own perception of their difficult behavior and low self-esteem (Theia, 2007) and high anxiety (Feldhusen, Klausmeier, 1962). Delinquency is negatively correlated with self-esteem in one more study (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005). The study draws a picture about an interrelationship among low self-esteem, supportive parenting, achievement and delinquency. As it suggests, supportive parenting is connected with child’s self-esteem while low self-esteem is correlated with low achievement and delinquency.

Here must be mentioned that low achievement in some subject cannot lead to low self-esteem definitely because one more crucial aspect is the importance of the subject for a child. If he is a good footballer or dancer, maybe grades in math do not matter for him at all and do not make influence on his self-confidence, but if low achievement is not balanced in other fields, it is higher chance to make effect on child’s thoughts and behavior. Behavioral problems can be related with criminal acting in adulthood but there is no direct causal relation between them. If behavioral problems exist at the same time with low level of anxiety then there is more chance of delinquency (Defoe, 2012).

Thus, sometimes bad or strange behavior is not conscious choice of a child, but it is associated with high anxiety which is caused by low achievement and low self-esteem. Anxiety in this context does not mean being adequately worry about failing and thinking about solutions but symptoms which prevent from normal life and as it is described in DSM 5 “The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning” (American Psychiatric Association, 2013, Generalized Anxiety Disorder, p.2). Low achievement correlates with high level of anxiety both in girls and boys in three kinds of skills- reading, arithmetic and language. The correlation is not important only in the case when IQ is above
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120 (Feldhusen, Klausmeier, 1962). This source confirms the case mentioned before, that when child is obviously successful in some way, he or she does not care about gaps in other fields. The results are somehow the same in modern research too. Anxiety prevents students from success in Math (Gala, Wood, 2011). In other research there is no important correlation between generalized anxiety and low-achievement in math but math-anxiety still exists (Wu, Willcutt, Escovar & Menon, 2014). Sometimes identification of anxiety is more difficult by both parents and teachers and they have different reasons for this. As for parents they cannot see their children’s changed behavior as it does not happen in a comfortable environment. They play, laugh, talk much in a family environment but as soon as they change place shyness and silence comes first. For teachers this reaction is taken as a characteristic feature while it is caused by the scare new environment gives a child. In certain cases student even stops any kind of communication with teachers. Changing behavior and stop communication in a strange environment is called a selective mutism and is considered as a kind of anxiety disorders (Bressert, 2016).

Low self-esteem is a direct predictor of children depression or depression-alike symptoms (Steiger, Allemand, Robins & Fend, 2014). It means that the child is vulnerable to have lack of energy, sleeping problems, feeling of worthlessness or guilt, increased sensitivity to rejection, irritability or anger and so on (Brennan, D. 2014). It can cause a vicious circle described in the graph 3.1.2, depressed student will not have a power, eager and motivation to study well which will cause low achievement and being a low achiever will cause to decrease self-esteem even more.
If the problem of low self-esteem in childhood is ignored, as adults they face more serious problems, for example alcohol drinking. In the research hold in China in 2015 lower self-esteem was related to drinking problems without gender differences (Zhai et al., 2015). In this case the country is also important to be considered, as China is a developing society where healthcare system is not capable to deal with drinking problems, so results must be more natural in contrast to the developed countries, where public services are well-developed and reachable for everyone with soft drinking-problems. In the end, in developed countries people have more chances to work on their life-skills and school achievement may affect less harmful than in the countries, where governmental services is not effective to take care people of adult age. For example, in Georgia there is a state program of treatment for the patients with drug addiction (Social Service Agency, 2018) but does not exist any program for the people with alcohol addictions. Gambling addicted people are also left without treatment.

Besides, in earlier studies there was evidence that low achievement is in relation with suicide attempting (Lewis, Johnson, Cohen, Garcia & Velez, 1988). In modern researches this hypothesis is confirmed partially as it turned out that low achiever boys at school have more
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tendency to commit suicide as adults than girls (Anderson, 2008). Somehow this is logical as boys and girls have different coping strategy with anxiety and low self-esteem, besides society’s demand toward them is different. Boys are expected to be successful in many ways, otherwise they are losers while girls have more excuses not to be academically successful, they are demanded to be good-looking or good at some arts and craft and it will be an excuse for them. Even more in some cultures the main goal for girls is to get married in early age instead of studying. In Georgia from 2014 to 2017 there were 1612 facts of suicide. 81 percent of them were men (Institute for Development of Freedom of Information, 2017). The data about correlation of low achievement with suicide in Georgia does not exist.

Harmful results associated with low achievement at school are described in graph. 3.1.3.

Graph. 3.1.3 Associations with low achievement

As one can see, low achievement is associated with harmful results of psycho-social development while its reasons are mainly external and more or less controllable by different levels of government and society. The educators cannot control wider economic and social aspects but they intensively look for variables which will be associated with successful teacher. As the success of the teacher finally is measured by the teacher’s influence on student’s achievement. “Teachers’ interpretations of children’s successes and failures in
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ways that reflect favorably or unfavorably on their ability also affect children's judgments of their intellectual efficacy” (Bandura, 1994, p.12).

3.2. Teacher’s Self-efficacy

In the 21st century, age of free information, good teaching does not mean anymore to make children memorize unimportant materials and evaluate them according to quality of their memory. Therefore, there is an ongoing debate about what constitutes a good teacher. This issue has been discussed widely during last few decades; however, the scientific circles have not yet achieved any consensus. The discussion is so fragmented and dismantled, that while some researchers try to find out what exact competencies are essential for teacher, others take away the focus from competencies and highlight other personal and cognitive characteristics. Moore (2004) summarized the existing scientific data about the nature of a good teacher and outlined that three main discourses have been constructed around this topic:

The first is the discourse of “competent teacher”, which implies that if teachers acquire certain arsenal of competencies, such as lesson planning, behavior management, assessment, reporting, they could be regarded as “good teachers”. This discourse has been largely adopted in the state education policies because of many reasons. One of the possible causes of “Competence” discourse popularity is that the competencies are easily translated into standards and this factor enables governments to control, check and train teachers, measure their progress against the predetermined standards. The same is true for Georgian government as well. As Chankseliani (2018) argues, Post 2003 revolution period in Georgian education system was characterized with the politics of standardization – state introduced different elements of heavily centralized school governance system through competitive assessment system, surveillance tools (CCTV cameras, school resource officers). Consequently, it is safe to state that this “competencies” discourse dominated Georgian education system.

The second discourse „charismatic teacher” is rather less popular is state policies and teachers’ professional development schemes compared to “competent teacher”. However, its dominance is fueled with stories, movies and general social mythology. Even though it is a
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rough extrapolation, “competent” teacher could be related to mind, whereas the “charismatic” teacher is more driven with heart. The reasons for the popularity of such teachers is very obvious. If average person is asked which teachers s/he remembers from the school, it is a high chance, he or she will name the one with the odds of “charismatic” surge since they manage to penetrate deeply into the heart of their students. Such teachers are memorable, some of them are even attributed as live changers and consequently and not surprisingly their images are easily translated into stereotypes about what “good teachers” are like. At the same time, the popularity of this particular discourse is not based solely on the sweet memories of emotional bonding of children with teachers. There is considerable scientific evidence that emotions can play significant role in building trusty relationships in the classroom, which on it hand sets up the foundation for fruitful and beneficial learning outcomes. If the ability helps teacher to understand students’ feelings and reasons of their behavior, helps to express the empathy toward students, consistently their relationship will be based on respect and motivation to learn the subject. As for the scientific evidence itself, while some researchers emphasize the importance of passion, reflection and love of children (Devine, Fahie & McGillicuddy, 2013), others focus on emotional intelligence (Corcoran & Tormey, 2012). There is a widely discussed topic which personal characteristics predict more effectiveness of a teacher. Love of children is difficult to measure in pre-service teachers. Emotional intelligence is an ability to understand and differ emotions and feelings of self and other people (Salovey & Sluyter, 1997).

Noticeably, as Moore (ibid.) clearly underlines, the qualities of charismatic teachers are usually regarded as inherent, gifted. This notion of inherence adds another dimension to the “mind or heart” debate – particularly, while “competence” discourse both implicitly and explicitly points out the possibility of “making” good teachers by enhancing their competencies, the second “charismatic” discourse does not leave space for professional development by highlighting the preference of inner, “born with” characteristics. If we dive deeper into this discussion, the differentiation of “competence” and “charisma” eventually opens up the avenue for the emergence of teacher / pedagogue dichotomy. The similarities and differences of these two terms have been analyzed vastly from different standpoints but the bottom line is that while a teacher is more oriented on teaching process and transferring
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the knowledge, a real pedagogy embraces new responsibilities and roles of a career and savior.

However, the both discourses entail specific difficulties. As an example, the story of charismatic teacher distracts attention from the social, political, cultural and economic background of the learning process and puts all the responsibility on a teacher, considering them as magicians, who are capable of transforming children’s’ lives despite the intertwining of classroom environment with the existing inequalities and other nuances of the specific context which has been proven to affect the inside school processes, including discipline, relationships and most importantly for us, achievement. Consequently, the professionals who are embedded in charismatic discourse often tend to set high expectations for themselves and such demanding attitude undermines teaching process and puts teachers under stress.

Secondly, the “charismatic” discourse represents teaching as a mystic profession which is beyond of normal, average human capability to acquire and master, thus devaluing such important personal and professional characteristics, such as motivation, aspiration, knowledge, experience on the one hand and underestimating the role of strategies, planning and learning materials of the other hand.

The difficulties of the competence discourse are slightly different though. Conceptualizing the ingredients of a good teacher and reducing the concept on the arsenal of certain “items” generates the idea that everyone, regardless the personal traits can acquire skills and knowledge necessary for being effective in teaching. Therefore, in contrast with “born with” thoughts and ideas, “teachers can be made” line of thought is established. Theoretically, nothing is wrong with the standpoint that if appropriately trained, anyone with relevant background can become teachers, nevertheless, in practice a large number of teachers struggle with substantial difficulties they can’t usually deal with, whereas the charismatic teacher can effortlessly deal with the classroom without neither any prior knowledge, training nor experience.

Georgia, not surprisingly, like many other countries, has chosen the route of competencies in regard with schoolteachers. With the aim to strategize, plan, and execute teachers’ management and development, the National Center for Teacher Professional Development
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(2019) was established in 2008 with explicit vision that is based on three strategic directions, the first of which is the elaboration and implementation of high performance professional standards. Further, TPDC aims at developing the systematic framework for the professional development system for teachers, and the third direction is the implementation of projects based on the TPDC strategy and the national goals of general education. Since the establishment, the TPDC has totally chosen the competencies line, not leaving any space neither for charismatic discourse not for the third discourse outlined by Moore, “Reflective Teaching”.

The concept of reflection in educational settings was first introduced by Dewey, in his book How to think (1910). Shortly, it refers to the practice of reflection on what you know and what you do, therefore setting up the basis for continuous development process. Smyth (1993) analyzed the emerging notion of reflective teaching which already in 90s started to emerge and enrich and in some cases substitute the standardized forms of teaching. He summarized the then existing experience and draw some advantages of this approach:

- If learning process is managed and executed through reflective lenses, it becomes more comprehensive since the knowledge of teachers about what they know and what they do is increased.
- It enables teachers to refocus when needed, thus becoming more flexible.
- The reflective approach catalyzed the surge of self-esteem among teachers.
- The planning process is becoming more feasible by basing the assumptions and principles on real, sensible reflections.
- The reflective practice shifts the focus away from “knowledge as commodity” thinking to the process of acquiring knowledge by which teachers are given the opportunity to keep themselves updated.

Since 1993 many studies has been dedicated to the examination of reflective practices in educational environments, including schools as well as the universities (Fakazli, 2017). Mathew (2017) finds that reflective practice plays the pivotal role in teachers’ professional improvement and examines how exactly teachers education can be targeted at the development of reflective practices among the practitioners.
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Even though there are some similarities and overlapping between competent and reflective discourses, Moore (2004) draws a clear line in between them and points out certain characteristics that make the reflective practice the entirely new discourse rather that the addition or one of the skills of “competent” teacher. Particularly, the emphasis on the “whole picture”, evaluating the individual lessons as well as the series of lessons, analyzing the effectiveness of the process, turns the reflective practice into a separate, considerable discourse.

As it was already mentioned above, Georgian education system has been oriented on transferring knowledge to the teachers and developing narrow, practical skills for them and as a result, reflective practice has been ignored. So far, significant challenged has been faced by TPDC in terms of effectiveness of its approaches, but no light has been shed on reflective practices. This has created the gap between the incentives in teachers’ education and learning outcomes. By researching the self-efficacy and its correlation to the students’ achievements, I want to bridge this gap. Since the self-efficacy plays the fundamental role in reflection practices, I want to open this new way of thinking and provide the evidence based suggestions and recommendations for practitioners as well as policy makers. By finding the correlation between self-efficacy and achievement on the one hand, and by incorporating the practice of self-reflection among Georgian teachers, I hope to deliver the knowledge, heavily needed for Georgian education system.

On the other hand teachers have to follow new economic demands and need more free time at the lesson to work on higher thinking abilities. As Henry et al. (2013) suggest one more frame that should be considered in the evaluation of effective teaching is teaching according to demands of the labor market. Modernization of the business working creates new professions. Knowledge of facts are no more relevant according to this aspect. Higher thinking abilities and adaptation skills will be more helpful. Thus if knowledge is not useful or enough for the students to get success in a future life, there is no sense to evaluate teachers only according to their knowledge in the subject and mechanical transmission of this knowledge.

According to Bloom et al. (1984) knowledge is the lowest level of thinking abilities. There are 5 more abilities which create taxonomy:
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1. comprehension - interpretation, understanding meaning;
2. Application - use learned material in a matched situation;
3. Analysis - ability of partition material into pieces to discuss each detail;
4. Synthesis - ability of organizing detailed parts in a new whole;
5. Evaluation - ability of criticizing, comparing learned material.

In short, a teacher should see her/his responsibility in student’s development as an independent thinker. If teachers have belief that their effectiveness and performance at the lesson is important for students, they will try more to affect the students’ achievement. Teacher’s self-efficacy is one of the several factors correlating with students’ achievement.

Self-efficacy is tendency of belief that one has ability of performing some kind of behavior. The concept was first used by Albert Bandura in his Social-Cognitive theory. “Perceived self-efficacy is defined as people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives” (Bandura, 1994). He explains human psycho-social behavior as a reciprocal determinism of three factors: person (psychological and cognitive traits), environment where he acts and behavior which he performs. Controlling one of the factors can change others as he suggests (Bandura, 1986). In this triangle self-efficacy is supposed as personal trait which can affect his own behavior or environment. According to him there are four sources which affect a level of self-efficacy: mastery experiences, similar experiences hold by social models, social persuasion, and reducing stress reactions (Bandura, 1994). However self-efficacy is quite a firm pattern based on own experience, so the more experience teacher has, the more challenging it is to change self-efficacy level (Bandura, 1996). Self-efficacy is not the same as self-esteem. In case of high self-efficacy person believes that his behavior has an influence on the environment or other people. On the other hand high self-esteem means that a person believes he is good no matter whether his behavior affects others. So what about teacher’s self-efficacy it is “teacher’s belief in her or his ability to organize and execute the courses of action required to successfully accomplish a specific teaching task in a particular context” (Tschannen-Moran, Woolfolk Hoy, and Hoy, 1998). Or as it was developed later more laconic: “Teachers’ confidence in their ability to promote students’ learning” (Hoy, 2000 p.2) (Protheroe, 2008).
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Teacher’s self-efficacy correlates with teacher’s positive relationship with parents of students (Skaalvik & Skaalvik, 2009). The author interprets this correlation as if parents’ critical attitudes and difficult cooperation reduces teacher’s beliefs and confidence but it can be on the contrary. If teacher’s low self-efficacy correlates with their performance in the classroom, their positive influence and teaching results then it is logical that parents are more unsatisfied by teachers with low self-efficacy and vice versa. Parents like teachers who affect their children’s performance positively and accordingly have higher self-efficacy. Low teacher self-efficacy causes problems not only in academic achievement among students but also in dealing their behavior management. Besides, the largest teaching and learning international survey TALIS suggests that self-efficacy is also related to job satisfaction which itself leads to better relationships among colleagues as well as students (Schleicher, 2015). Self-efficacy is a descriptor, which more or less correlates with job satisfaction in other research too. As the research suggests, cultural background and socio-economic condition does not change the correlation between self-efficacy and job satisfaction significantly (Luthans, Zhu & Avolio, 2006).

Skaalvik & Skaalvik (2009) and other researchers (Zee & Koomen, 2016) talk about negative correlation between emotional exhaustion and self-efficacy. Emotional exhaustion is discussed as one of the determinants of burnout. This means that after some period of working as a teacher or after experiencing failure in job people have tendency to become desensitized toward teaching process. Ignoring gaps in teaching process will lead to missing children’s problems out of sight or ignoring their needs. Thus, teachers with lower self-efficacy has higher tendency of doing this.

Self-efficacy is an advantage not only in a relation with students but for teacher’s well-being itself. Teachers with higher self-efficacy tend to get less stress from job and accordingly to be more satisfied with their jobs (Zee & Koomen, 2016). Stress associates with health problems and issues with musculoskeletal, respiratory, cardiovascular, endocrine, gastrointestinal, nervous and reproductive systems (American Psychological Association, 2017). Thus, teachers with less stress during teaching process must tend to be healthier.

More unambiguously teacher self-efficacy turned out to be one of the most obvious variables of student’s achievement (Lee Bridget, et. Al. 2013) (Schleicher, 2015). Logically, if teachers have
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belief that they can affect other’s behavior, they take responsibility for children's success and failure. As a result instead of giving up students and leave them under stigma of low achievers, they try to find different ways to increase students’ performance and probability of reaching the goal rises. In addition, teachers with high self-efficacy succeed because they believe that they can affect students' perception and gain more respect from them (Miller, Ramirez & Murdock, 2017). Respectful relationships and both-side responsibilities associated with high self-efficacy must raise students’ achievement. Teachers with higher self-efficacy provide more interesting and entertaining classroom environment and their students have higher achievement in literacy (Guo, Connor, Yang, Roehrig & Morrison, 2012).

Despite cultural differences teacher self-efficacy associates with students’ motivation and achievement in Iranian context too (Mojavezi & Tamiz, 2012). This means that it’s a high chance self-efficacy scale will work correctly in Georgian context too.

3.3. Georgian context

Republic of Georgia situates in far-eastern Europe. The population of the country is 3 720 000. GDP per capita is 4344 US Dollars (World Bank National Accounts Data, 2018). Comparing to other countries, the average data of European Union countries is 36.546$ per capita, lowest data of Europe is in Bulgaria 9272$ per capita, highest is in Luxembourg – 114.340$ per capita. In 2018 GPD growth was 4.7% in Georgia.
Georgia was occupied by the Soviet Union from 1921. After Independence declaration from 70-year-occupation in 1991 (Legislative herald of Georgia, 2017) there were civil war in the country which was ended by the military coup and the death of the first President – Zviad Gamsakhurdia (On the 22nd of December in 1991 the war was started, 2017). In 1992-93 the war between Georgians and separatist Abkhazians was ended by occupation of Abkhazeti by Russia. At the same time after 5-day fights Russia occupied second region of Georgia – Samachablo (Sammut, Cvetkovsky, 1996). The wars were followed by the corruptive and stagnated governance of the second president – Eduard Shevardnadze which was ended by the Rose Revolution in 2003 (How the Rose Revolution happened, 2005). Mikheil Saakashvili became the third President of Georgia. The country started developing as a state. Governmental structures started working and reforming policies in different fields. The Ministry of Education and Science was among them.

There were a few dramatic and effective changes in educational system. In 2005 the corruptive system of high education was changed with the unified entry examinations. As a result about 30.000 school students per year have a chance to pass exams and continue studying at universities (The Institute for Development of Freedom of Information, 2014). In 3.3.1 graph one can mention that there was a lowest numbers of the students at the exams in 2008. The
reason was one more war between Georgia and Russia which was ended by the occupation of the Gori region by Russia (Harris, 2018), (2008 Georgia-Russia conflict fast facts, 2016).

But as it appeared the policy of the Government of Georgia toward education was not consistent. During the governance of two political parties the National Movement from 2004 to 2013 and the Georgian Dream since 2013 until today (2019) 11 Ministries were changed in 15 years (The Ministry of Education, Science, Culture and Sports of Georgia, 2019, section: Ministries). They change general view about educational development 11 times. Their political taste was different and reforms were canceled and replaces by another ones after new Ministry had come. For example, the project of promotion eating healthy food at schools was initiated by the Ministry Alexandre Jejelava. After a few months, new Ministry – Mikheil Chkhenkeli stopped it immediately (Jejelava: apples will not be distributed any more, 2017).

With this modern history and social-economic condition Georgia faces many difficulties. Educational system with low-achieved children is among them. The program of international Students assessment (PISA) by the Organization for Economic Cooperation and Development, defines 15 year-old generation of Georgia as much lower than average in mathematics, reading and science (Pisa results, 2015).
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Definition of low achievement varies from one to another cultural context. In Georgian schools evaluation system starts in 5th grade and contains 10 point scale, where 6 is in the middle (National Curriculum, 2014) but in fact, 4 is already fail where student must re-pass the subject. Re-passing exams associate with bureaucratic processes, tensed personal relationship between the teachers and the students, dissatisfaction of the parents. Thus, Teachers use 5 and 6 grades to evaluate students whose performance is not content however manage to pass from class to class to avoid additional problems. In practice, grade 7 and 8 are used as an average evaluating grade. Since the students have no valid exams for ten years, they are evaluated only by their teachers. In the 11th grade they have graduation exams for some subjects and in the 12th grade-in remaining ones (The National Assessment and Evaluation Center, 2018). It means that their teachers’ attitudes toward them define their achievement score and their image in the classroom. As discussed above, in this reality, teachers’ attitudes toward students and her capacity is even more important as far as she affects their cognitive and emotional development. Besides, there is more chance for grades to be used as a weapon to punish children for their confronting behavior. In 2010 Georgian Ministry of Education formed exams for teachers in their subjects and professional skills and a certificate of the exam is supposed as a variable of teacher’s success (National center for teacher professional development, 2014). The research ordered by the Ministry of Education and science shows that there is a correlation between teachers’ certificated status and students’ achievement. According to the same research teacher’s satisfaction is correlated with students’ achievement (Teachers’ satisfaction, 2017).

There are debates about the importance of certificate-based policy among the teachers and the principles. The argument of the principles is that the system should see the difference between teachers’ qualification and the standardized exam is a most objective tool. The teachers’ contra-argument is that their length of experience is a proof of their qualification. So the question is what features determine teachers as a motivation and facilitation source of the students with low achievement. It is a theoretical knowledge in the subject and pedagogy confirmed by the certificate, length of experience – decades of teaching experience in the Soviet and post-Soviet society or it is their personal features such as teacher self-efficacy as discussed above.

Self-efficacy is supposed as the universal construct regardless cultural background or economic condition of society (affluence of country) (Vieluf, 2013). The culture can be individualistic or
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collectivistic. In individualistic cultures a person is a central figure and his or her priorities over community rules and demands. In collectivistic cultures as the name suggests, community is a central figure and people are part of the bigger group. The interest of the groups are priority over a person. Close relationships and following traditional rules are encouraged in collectivistic cultures (Guess, 2004).

In Georgian urban schools maximum permissible number of students per class is 30. Since 2014-2015 academic year the number reduces to 25 for 1st grades (Georgian law “About Normative Acts”, 2014). Exceptions can be allowed by the approval letter of the Ministry of Education, Science, Culture and Sport of Georgia. For example, in the data of this thesis there are classes with more than 30 students. If class size matters in Georgian context then a teacher's personal traits such as his beliefs and attitudes lose importance in larger classes. Or maybe it is vice versa, if teacher’s competence in classroom management and instructional strategies is not high, then class size becomes important variable.

Second, the teacher's average salary in Georgia is about GEL 547 – (approximately $185) (order of Minister N126n, 2015). While average salary in Georgia is GEL 1069 – (approximately $360) (Agenda, 2017). It means that on the one hand teachers’ motivation to improve their skills is very low and on the other hand many highly-qualified and motivated people refuse to work at schools. Thus, teaching is not prestigious profession. Lack of money causes one more problem. The system cannot change post-Soviet experience effectively. There are a lot of awareness-raising trainings in children’s rights and behavior management by the Center for teachers’ professional development and non-governmental organizations but they have experienced authoritarian teaching style as efficient for decades and their attitudes are too strong to change in a few years. This issue is also mentioned as an important barrier in Turkey- Georgia’s one of the biggest neighbors (Boz & Uzuntiryaki, 2006).

As it seems conservative societies with low SES (no matter the culture is Christian as in Georgia or Islamic as in Turkey) often have challenges with modern approaches. So the first and most important question is whether the Teacher self-efficacy test will be relevant for Georgian context. If it is relevant and correlates with achievement of the students, can it become a predictor of good teaching? Can it differ the teachers with modern approaches from the teachers
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with conservative attitudes? Can it predict teachers’ influence on students better than subject-qualification exams and their results or should it be used in addition?

Data for this research was collected in Tbilisi- capital of Georgia. The city is the biggest and most developed economically and culturally in Georgia. Population of Tbilisi is about 1.2 million (national statistics office of Georgia, 2014). Thus, according to official sources one-third of Georgian whole population lives in Tbilisi but in practice there are much more people who are written as citizens of other cities or villages, but come to Tbilisi for working or studying.
4. Research Method

4.1. Design, population, sampling

I am interested in tendencies which potentially gives hints to discuss about the educational policy in Georgia. For the discussion I needed some results which could be generalized in a wider population. For example, mean number of low achievers in the classrooms from selected schools would indicate the average number of low achievers in Georgian schools. In such cases the most appropriate was quantitative research method and survey design. The survey includes two kinds of designs: causal-comparative and correlational (Cresswell, 2013).

For the main hypothesis “There will be a negative correlation between teacher’ self-efficacy and the number of low achiever students” (1) and additional hypotheses: “There is a negative correlation between length of experience and self-efficacy” (5) “There is no correlation between the total number of children in the classroom and per cent of low-achieved students there” (6) correlational design was used. It means that I searched for relation between two or more variables without finding out which of them is a cause of the other. For the following hypothesis: “In Tbilisi central schools there are lower per cent of students with low achievement than in suburbs” (2); “At private schools of Tbilisi there are lower per cent of students with low achievement than at public schools” (3); “Holding certificates has no impact on teacher self-efficacy” (4) causal-comparative design was the most appropriate, as there were two groups (central school students and suburban school students; private schools and public schools; certificates and no certificates.) and I compared the means of the groups according to number of students with low achievement among them with T-test (Kim, 2015).

The sample of the research is chosen from Tbilisi schools. Population are teachers working in Tbilisi schools. According to statistics, there are 67,000 teachers from private and public schools in Georgia (National statistics office of Georgia, 2019). The number of teachers in Tbilisi is not counted so I had to calculate roughly according to the following logic: As one-third of Georgian population lives in Tbilisi, According to proportions one-third of Georgian teachers work here. It is about 22,000 of them. Until 5th class students are not evaluated by grades. Thus, the low-
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Achievers in this cluster could not be calculated and there was no sense to collect data about their teachers. It is about half of the whole number - 11,000. In the 5th class they finish to study with beginners’ teachers and have new ones for each subject. From 6th class students start various subjects including natural sciences until 12th class. But in 11th and 12th they hire additional private teachers to get help to pass university exams (there is no formal data about this fact, because private teachers do not pay taxes and cannot be counted by the government). The teachers from 6-th to 12 class are the same. So I needed interviews with teachers of the students from 6th to 10th class.

Thus, the research population was roughly 11,000 teachers from Tbilisi schools, teaching Georgian language and literature, Mathematics, Natural sciences (physics, chemistry, biology, geography), and humanitarian studies (foreign languages, history) to the students from 6-10 classes.

The sample of the research was about 10 per cent of the population as Cresswell (2013) suggests. Sampling procedure was planned on several levels. First step was selecting clusters. Before selecting schools I selected districts where the schools were situated. The selected districts should be representative of the distribution of the whole city. In each district public schools were selected randomly by lottery Principe. In addition some special oriented and private schools were added by availability. Thus, the sample of the research is 110 teachers teaching Georgian language and literature, Mathematics, Natural sciences and humanitarian studies to the students from 6-10 classes from different districts of Tbilisi.

4.2. Instruments

Tschannen-Moran, Woolfolk-Hoy and Hoy (1998) analyze main efficacy tools including early studies by the organization RAND which turned out later as weakly correlated instrument to predict teachers’ behavior. Bandura’s (1997) 30-item self-efficacy scale key with 7 subscales has not published for reusing. What about Gibson and Dembo’s (1984) 30-item 2 factored scale, by later studies the questionnaire was reduced into 16-item and even later into 10-item scale. As my instrument should have been translated into Georgian language and because of time constraints for complete process of pilots and adaptation, to keep reasonable inter-rater reliability, I decided
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I chose the Teacher’s Sense of Efficacy Scale because of its reasonable size and being up to date.


The Teacher’s Sense of Efficacy Scale (TSES) was used to find out correlation with student’s performance or achievement in several cultures and they got succeed (Lee Bridget, Cawthon Stephanie, Dawson Kathryn, 2013). The test exists in two forms, 24-item long form and 12-item short form with 9 point Likert-type scale from 1 (nothing) to 9 (great deal) (Fives, H., & Buehl, M. M. 2009). I chose the 24-item long form to get more accurate results and translated in Georgian (Appendix A).

Second instrument was a self-made demography questionnaire (Appendix B). The questionnaire includes teacher’s age, gender, status (certificate holder), length of experience and the district where the school is situated (In most public schools students are from the same district where school exists). Also a total number of students in the class and the number of students with grade 6 and below in last semester. It helped me to calculate:

1. The number of low achievers (the number of students who got a grade 5 or 6 from 10 in a previous semester by their teachers) for testing the first, second, third, fifth and sixth hypotheses (There will be a negative correlation between teacher self-efficacy and the number of low achiever students in the classroom; 1); In Tbilisi central schools there are lower per cent of students with low achievement than in suburbs (2); At private schools there are lower per cent of students with low achievement than at public schools” (3); There is a negative correlation between length of experience and self-efficacy (5); There is no correlation between the total number of children in the classroom and per cent of low-achieved students there (6));

2. The number of teachers with certificates to test the fourth hypothesis (Holding certificates has no impact on teacher self-efficacy (4));

3. The length of teachers’ experience to test fourth hypothesis (5);

4. The class sizes to test the fifth hypothesis (6);
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5. To mention suburban and central schools to test the second hypothesis (2).

The issue about measurement of low achievement is that the only existing data measuring students’ achievement is grades written by teachers. So below I will discuss how this data contains different features of students’ low achievement as well as teachers’ attitudes and dependents toward their students.

4.3. Ethical Considerations

The first instrument of teachers’ self-efficacy scale is officially public available for research purposes. Additional permission is not needed by the author (Tschannen-Moran & Woolfolk-Hoy, 2001). The second instrument is a self-made questionnaire which helps to collect demographic data. Answers are anonymous. Demographic answers such as school, subject etc. are confidential. The respondents know information about the research purposes and they agree on participating in the research.

The interviews were taken at schools. The permission to enter the school buildings for meeting with teachers was taken from the heads of schools. No additional permission was needed.
5. Analyses

Due to limited time the adaptation of the scale of teachers’ self-efficacy in Georgian language and cultural context was not possible. Therefore, the first thing before data analysis was a principal component analysis, in order to confirm the key of an original instrument that there are 3 factors to measure by 24 questions. The Kaiser-Meyer-Olkin value varies from 0 to 1, the higher it is, the more adequate the sampling is for factor analyze. In case of my sampling it was 0.78, Bartlett’s test of sphericity showed statistical significance. It means that the data is suitable for factor analyze (Pallant, 2011).

In the original scale (Tscahn nen-Moran, Woolfolk-Hoy, 2001) key factors are divided as follows:

Efficacy in student engagement: items: 1, 2, 4, 6, 9, 12, 14, 22

Efficacy in Instructional Strategies: items: 7, 10, 11, 17, 18, 20, 23, 24

Efficacy in classroom management: items: 3, 5, 8, 13, 15, 16, 19, 21

There was a recommendation that factors slightly differ from each other, thus the questionnaire is not for pre-service teachers. Maybe the reason is that hypothetical answers which are not supported by practice can change the statistical picture. In the analysis of Georgian version, components are ordered as follows:

1st component (supposed as efficacy in student engagement): items: 2, 4, 5, 6, 7, 8, 9, 10;

2nd component (supposed as efficacy in instructional strategies): items: 11, 12, 14, 17, 18, 20, 22, 23, 24;

3rd component (supposed as efficacy in classroom management): items: 1, 3, 13, 15, 16, 19, 21.

Next operations were held in both ways, calculating according to original factors and calculating according to new factors in order to see if there is any difference.
THE ROLE OF TEACHER SELF-EFFICACY IN STUDENT’S ACHIEVEMENT

Second step was to analyze the reliability of the questionnaire. In this case Cronbach’s Alpha (Santos, 1999) is 0.872 which means that the reliability of Georgian version of the teachers’ self-efficacy scale is high.

Descriptive Statistics about TSES instrument comparing to original results look like this:

Timetable 5.1. Georgian results VS Original results of the TSES

<table>
<thead>
<tr>
<th></th>
<th>Mean in this data</th>
<th>Mean in original test</th>
<th>std. Deviation in this data</th>
<th>std. Deviation in original test</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-efficacy</td>
<td>7.31</td>
<td>7.1</td>
<td>0.64</td>
<td>0.94</td>
</tr>
<tr>
<td>Engagement</td>
<td>7.0</td>
<td>7.3</td>
<td>0.77</td>
<td>1.1</td>
</tr>
<tr>
<td>Instruction</td>
<td>7.52</td>
<td>7.3</td>
<td>0.69</td>
<td>1.1</td>
</tr>
<tr>
<td>Class management</td>
<td>7.40</td>
<td>6.7</td>
<td>0.79</td>
<td>1.1</td>
</tr>
</tbody>
</table>

*Graph 5.2 Teacher self-efficacy results on normal distribution graph*
Self-efficacy means between Math and humanitarian or Math and Georgian language subject teachers was tested by T-test and was not significantly different.

Next, the main hypothesis was tested: “there is a negative correlation between teacher self-efficacy and number of students with low achievement in the classroom.” As it appeared, correlation between teacher’s general self-efficacy and percentage number of students with low achievement in the classroom is negative (Pearson’s R= -0.174), but is not statistically significant (p=0.68). It means that the first hypothesis has been rejected. Mean percentage of low achievers in the classroom is 25.6%, with standard deviation - 14.16. The correlation between teacher self-efficacy in student engagement and percentage number of students with low achievement in the classroom is negative (Pearson’s R= -0.233) on a significant level (p=0.014). The correlation between two other factors of teacher self-efficacy and percentage number of students with low achievement in the classroom are slightly negative in both cases but are not statistically significant (p1=0.206, p2=0.362). Correlation is not significant between these variables even when self-efficacy factors are calculated according to the items from principal component analyses above.
THE ROLE OF TEACHER SELF-EFFICACY IN STUDENT’S ACHIEVEMENT

Timetable 5.3. Statistical significance of the correlations with the number of low achiever students with the teacher self-efficacy factors

<table>
<thead>
<tr>
<th>Teacher self-efficacy</th>
<th>$p = 0.68$</th>
<th>Not significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher self-efficacy in student engagement</td>
<td>$p = 0.014$</td>
<td>Significant</td>
</tr>
<tr>
<td>Teacher self-efficacy in classroom management</td>
<td>$p = 0.206$</td>
<td>Not significant</td>
</tr>
<tr>
<td>Teacher self-efficacy in instructional strategies</td>
<td>$p = 0.362$</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

In order to test the hypothesis “In central schools there are lower per cent of students with low achievement than in suburbs”, T-test was used (Kim, 2015). It means to measure means of percent of low achievers in two group - central and suburban schools and compare results. Levene’s test showed that equal variances assumed but the mean difference between these two groups (1.5) was not statistically significant ($p=0.605$).

On the other hand, Levene's test shows that equal variances assumed ($p=0.52$) and the mean difference (13.5) of the students’ achievement between public and private schools was statistically significant ($p=0.0$). The mean of the percentage of low achievers in the classroom was 27.5% at public schools and 14% at private schools. Standard deviation in first case was 12.7 and in second case it was 16.9.

Testing hypothesis Holding certificates has no impact on teacher self-efficacy by T test showed that Mean difference (1.73) is not significant ($p=0.58$). Comparing groups by different factors of self-efficacy does not show statistical difference either. Per cent of the teachers holding certificate was about 66% while 33% of them did not have it.

There was no difference either in the number of low achiever students in the classroom between teachers with the certificate and without them. Mean of the part of low achievers in the classroom was 24.5% in the case of certified teachers and 27.7% in the case of uncertified teachers.
To test the hypothesis “There is a negative correlation between length of experience and self-efficacy” we need Spearman’s correlation coefficient (Myers, 2004) as data about experience is on nominal scale. The correlation is slightly positive (Spearman’s rho=0.166) but is not significant (P=0.082). Distribution of the teachers by their age are: 1.8% of them are between 22-30-year, 13.5% of them are between 31-40, 33.3% are between 41-50, 32.4% are between 51.60 and 18.9% are above 60-year-old. To compare the data with the European data, the highest number of the teachers above 50 are in Italy – 57.2%. The lowest number is in Malta – 13% (Eurostat, 2019).

Correlation between the total number of children in the classroom and percent of low-achieved students is slightly positive (Pearson’s R=0.139) but non-significant (p= 0.146).

The Data analyze showed that 95% of the Georgian teachers are women. The Data analyze showed that 95% of the Georgian teachers are women. According to official statistics, their number comparing to men teachers is more than 86% (Etaloni, 2019). To compare with European Data, in Latvia there are the highest percent of women teachers after Georgia – about 85%. The lowest percent is in Luxemburg – about 45 % (Eurostat, 2019).
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Graph. 5.5. Gender Distribution – Maximum and Minimum Data in Europe
6. Discussion

My master thesis is about the role of teacher’s self-efficacy in students’ achievement in the developing post-soviet context. My goal was to predict several hypotheses according to the experience of various researchers and countries and discuss similarities and differences. I had one main hypothesis: “There will be a negative correlation between teacher’s self-efficacy and number of low achiever students in the classroom” (1) and additional hypotheses to discuss more about teacher’s self-efficacy and nature of low achievement in Georgia:

2. In Tbilisi central schools there are lower per cent of students with low achievement than in suburbs – part of the students with low achievement comparing to the whole class number from the schools from central districts – Vake-Saburtalo and Mtatsminda-Krtsanisi with the schools from suburban districts – Nadzaladevi, Isani-Samgori and Gldani-Temka was compared and the hypothesis has been rejected.

3. In Tbilisi private schools there are lower per cent of students with low achievement than in suburbs - part of the students with low achievement comparing to the whole class number from the public schools comparing to the private schools was compared and the hypotheses has not been rejected.

4. Holding certificates has no impact on teacher self-efficacy – the mean of teacher self-efficacy of the group who have certificates was compares to the mean of the group without certificates and the hypothesis has been rejected.

5. There is a negative correlation between the length of experience and teacher self-efficacy – correlation between the length of experience and teacher self-efficacy was calculated and the hypothesis has been rejected.

6. There is no correlation between the total number of children in the classroom and per cent of low-achiever students there – the correlation between the total number of children and part of the students with low achievement in the classroom was calculated and the hypothesis has not been rejected.
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The correlations of the three factors of the Teacher Self-Efficacy Scale – efficacy in student engagement, efficacy in classroom management and efficacy in instructional strategies has been calculated with the number of the students with low achievement and only one factor of self-efficacy - student engagement was correlated slightly negatively with number of low achievers in the classroom.

As a beginning, most of the items turned out in the same factor as they were supposed to be but there are items (1,7,8,10,12,14,22) which were contained by wrong factors according to the original key. The reason can be both, as the questionnaire was translated without pilot and second, Georgian teachers’ professional knowledge and reflection about teaching strategies does not match the idea of all questions in the Teachers Self-Efficacy Scale:

Question n.1: “How much can you do to get through to the most difficult students?” this question is contained by the third factor – efficacy in classroom management instead of the first factor as in original key – efficacy in student engagement. It means that for the respondents difficult student means a student with difficult behavior who tries to disrupt the lesson. Getting through the difficult student means to manage class in the way that students with difficult behavior cannot disrupt the lesson. But it does not mean that the difficult student is involved in classroom activities. If the student does not try to obstruct the lesson, the teacher does not percept him or her as a difficult student to get through.

Question n.7: “How much can you do to calm a student who is disruptive and noisy?” This question should be contained in the second factor – efficacy in instructional strategies, instead it is contained in the first factor – efficacy in student engagement. It means that teachers don’t think about instructional strategies when it comes to disruptive and noisy students. In developed countries maybe it automatically means that teachers’ instructions match to modern recommendations of psychologists and educators (Canter, 2010) but these recommendations are not obvious for an average Georgian teacher. As they do not have structured knowledge about behavior management, their answers are based on their own experience, which may mean that they use engagement of the disruptive student in the classroom activities as a punishment instead of encouraging instructions.
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Question n.8: “How well can you establish routines to keep activities run smoothly?” in original factor analyze this question was in the third factor – efficacy in classroom management. In the current data analyze it happened to be in the first factor – efficacy in student engagement. In the original item this question contains knowledge about time management, switching skills from the activity to another, organizing group working etc. As the answers in Georgian context was connected to the student engagement it is a high risk, that teachers see establishing routine as a timetable which is known by the student before the lesson and they know what to do to get an evaluation. On the one hand the method is easy to manage the lesson but on the other hand it is boring for the students when they can predict all the time what activity is upcoming and how it will be ended.

Question n. 10: “How much can you gauge student comprehension of what you have taught?” Instead of putting this item in the second factor – efficacy in instructional strategies, it was put in the first factor – efficacy in student engagement. Maybe the reason is that students are engaged at the lesson when their knowledge need to be evaluated. For the teachers to gauge student comprehension is associated with student engagement and expressions. Their instructions are on the second plan.

Question n. 12: “How well do you implement alternative strategies in the classroom?” In the original questionnaire this item is under the first factor – efficacy in student engagement. While in the Georgian version the item is put under the second factor – efficacy in instructional strategies. It means that the main part of the strategies the teachers use in the classroom is instructional. The first goal is to make the students understand what they are demanded. It is a chance that their interests and the strategies of their involvement in the class activities are neglected. On the other hand the reality is that there is a lack of infrastructure, technology and material resources at schools. Thus, teacher’s answer about implementation of alternative strategies may not reflect her self-efficacy.

Question n.14: “How much can you do to improve understanding of a student who is failing?” The question should have been under the first factor – efficacy in student engagement. Instead it was put under the second factor – efficacy in instructional strategies. On the one hand the teachers may assume that alternatives and variety of their instructions can improve understanding
of a student. That is why their self-efficacy in instructional strategies is associated with improving understanding of a student. On the other hand, this approach excludes the assumption that the student’s failing is caused by the lack of engagement and motivation. Sometimes they can understand the instruction, but they have no eager to involve in the process which leads to the low achievement and fail.

Question n.22: “How much can you assist families in helping their children do well in school?”

This item is under the first factor – efficacy in student engagement in the original test, but in the data analyze of the thesis it appeared under the second factor – efficacy in instructional strategies. This may indicates to the several points. First, the teachers’ idea about assisting families with their children performance is giving additional instructions to the students. They think that parents cannot provide instructions in different subject and the role of the teacher is to fill this gap. Second, the teachers may think that giving clear instructions is the only reason of students’ high achievement at school. Personal relationships, motivation and out of class activities are neglected.

To discuss more about the efficacy in student engagement, instructional strategies and classroom management in Georgian context, Georgian average lessons should be analyzed more in depth by the observation method.

The rejection of the main hypothesis that “There is a negative correlation between teacher’s self-efficacy and number of students with low achievement in the classroom” (1) can show us peculiarity of Georgian educational structure.

As it was mentioned above, the main part (about 80% of the teachers are above 40) of the total number of Georgian teachers (above 67,000) have soviet knowledge of teaching lessons. Ideas of modern education is student oriented with a constructivist understanding that student is an active figure in the classroom where teacher builds a climate for learning and a student learns (Wilen, 2000). Where a student is an independent learner who needs a teacher a supportive figure in learning process. The teacher needs to evaluate his or her students’ advantages and disadvantages to motivate them by emphasizing their strong sides and to teach them to work on their weaknesses.
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The lessons in Soviet schools were based on an authoritarian understanding (Bassett, 2013). Teacher is an actor, who decides how to explain topic, what questions to ask, what answers to get, who to speak. Students are in silence unless they are asked to talk and initiatives are punished. As the first years of being in profession determines the level of self-efficacy (Bandura, 1997) their self-efficacy was formed in the context of soviet mentality. Every answer they give to the questions from the Teacher Self-efficacy scale indicates their idea about successful teaching. There is a chance that their idea about successful teaching-learning process does not contain working according to each student’s needs.

On the other hand students in Georgia do not follow the development process of the teachers’ education and mentality. The Globalization process, spreading of the Internet and developing English language knowledge in a new generation provided a big gap between children and their teachers. The skills of teachers in Georgia are very low in informational technology. They do not have skills of management of digital processes. Consistently they do not use internet as a source of learning or entertainment. As a result their and their students’ common interests are being reduced. It is not the problem only in developing countries but Spain for example, face the same challenges (Cruz, & Díaz, 2016). The study suggests that lack of technology in the teaching-learning process changes the relationship between teacher-student as well as affects the quality of the lesson. On the one hand shoffner (2009) emphasizes that the reason why teachers do not use technology is not only their abilities in ICT. Educators talk about the attitudes of teachers which should be changed first. The attitudes contain the negative ideas about using technology with students with studying purposes. Crus and Diaz (2016) reminds that according UNESCO (2018) there is a classification of the three level of competencies in informational and computer technology:

1. Integrating ICT competencies in curricula;
2. Solving practical problems by using the technology and
3. Creating new knowledge about or using by the technology (Cruz, & Diaz, 2016).

In Georgian schools ICT competencies are not integrated in different subject curricula. Thus, teachers’ cannot satisfy even the first level of the classification. Their competence is significantly lower in the fields of their students’ interest. Even more it can be assumed that like their
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Colleagues the same happens on the level of their attitudes. They believe that technology is a disruptive material at the lesson. As a result they lose the role of a competent person who can motivate and make students involve in the teaching process.

Nowadays University programs and Ministry policies try to change picture and provide teachers who will match modern education demands (Educational program for preparing teachers, 2016) but individual cases cannot change the whole picture. According to this data (graph. 6.1) 80% of the teachers who participated in the research was above 40 year-old, 51% was above 50 year-old. According to National statistics, 75% of Georgian teachers are above 40 year-old and 48% of them are above 50 year-old (Shortage of young teachers in Georgian schools, 2016). I assume that the different theoretical and political backgrounds of the soviet teachers compared to their colleagues from Ohio (where teachers self-efficacy test was made) provides different understanding of self-efficacy in student engagement, instructional strategies and classroom management. As Bandura (1998) claims self-efficacy results does not change according to cultural background. This opinion was confirmed by the calculation that means and standard deviation of the original results and results in Georgia does not differ from each other significantly. However the correlation between self-efficacy and low achievement can be different across the culture and political reality.

Graph. 6.1 Age of teachers in Georgian schools
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The number of the students with low achievement has not been correlated with teacher self-efficacy in instructional strategies and classroom management. It may indicates that the teachers do not use instructional strategies and classroom activities in order to assess their students. Student’s engagement has been more tendency to be used as an assessment tool. Even more the assessment tool is not used to evaluate students’ abilities during ongoing teaching-learning process. The main goal to assess students is to give them grades (Chapman, King, & King, 2005). During the students’ activity at the lesson they express their knowledge and it becomes easier for the teacher to evaluate them positively. Thus, student engagement is one aspect of their evaluation by the teacher. Where students’ engagement is high, they are evaluated more positively and teacher’s self-efficacy in this aspect is higher. On the contrary, classroom management and giving clear instructions help the students to get more information from the teacher but do not help them to express knowledge in order to get an evaluation.

On the other hand the teacher self-efficacy scale does not measure teachers’ attitudes about their assessment skills, thus it is acceptable that their ideas about their teaching methods is not connected with the grades they give students. It should be assumed that low achievement of the students is caused by other. If teacher self-efficacy is relevant to their teaching methods but students’ achievement is still low, it is logical that correlation between teacher self-efficacy and low achievement does not exist.

“In central schools there are lower per cent of students with low achievement than in suburbs” (2) the hypothesis has been rejected. On the one hand the reason can be distribution of the people in Tbilisi districts. It was assumed that People of higher socio-economic status lived in central and more prestigious districts. The assumption comes from the fact that central districts are more developed economically and culturally than suburban districts. Public transport does not work properly. Thus, if people have a budget they prefer to live in the district which is developed in a way that there are parks, old city views, sightseeing, cultural institutions such as theatres, cinemas, shops and infrastructure. It is a new tendency of Tbilisi urban politics. But there are an important number of people who live in a certain place for decades and the living place does not indicate to their socio-economic status. This is the reason why there is no significant difference between the students achievement from central and suburban districts.
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On the other hand it must be reminded that low achievement in this thesis is measured by the teachers’ biased evaluations. During the interview process some teachers were proud they had many low achievers and were known as strict teachers who do not give high grades easily. They think that giving high grades make students lose motivation to work harder. On the contrary some of them thought they could not give a bad grades because all of their students were lovely and sweet. They emphasize that low grades may destroy students’ psychological wellness and they try to avoid negative evaluations. It means that because of their opinions about low grades, neither of the two groups assess students based on their knowledge. If students of these two kinds of teachers were evaluated under the one standardized tool, the results would show the difference more obviously.

There are two more groups of teachers with opposite behavior toward the evaluation of their students. In some schools organizational culture is higher teaching-learning standard. The teachers are encouraged to maintain their standard and evaluate students with tests and exams. It reduces the chance of biased written grades. In another group there are schools where the management does not waste time on evaluation aspect and teachers are encouraged to write high grades more easily. It cannot be said whether the students from one group achieve the same level as students from another group of schools. It can be assumed that expectations from their teachers are lower and they are assessed in a biased way.

Thus, with second assumption, these two kind of differences, teacher’s personal dependence toward the high grades and organization culture of the schools annul the significant difference between central and suburban schools in Tbilisi.

Despite the rejection of the second hypothesis, the role of socio-economic status in students’ achievement is still relevant. The third hypothesis “In Tbilisi private schools there are lower per cent of students with low achievement than in public schools” (3) has not been rejected. Data analyze showed that difference between them was significant. The per cent of low achiever students is higher in public schools. Comparing to free service of public schools, private schools have quite high payment and children from families with higher socio-economic status attend there. Private schools in Georgia are divided into three categories: the first category contains most expensive schools, with exchange programs and a perspective for their students to get higher education in European or American universities. Annual payment for that schools is
THE ROLE OF TEACHER SELF-EFFICACY IN STUDENT’S ACHIEVEMENT

$5,000-20,000. In the second category there are schools which cannot provide exchange programs but still have luxury buildings, high quality infrastructure, non-formal activities dinner for students and qualified teachers. What is more important for parents, in private schools students are involved in non-formal activities until working hours will finish in Georgia. It relieves parents’ day schedule. School time is ended by 2-3 PM in public schools. During busy work day it is impossible for parents to take their children home by afternoon. Or students of lower ages are forced to go and stay home alone which cause additional problems. Thus, if income of a family can satisfy the minimum demands of school payment, they have to agree to apply private schools instead of public schools. Annual payment is $1,500-2,500. In the third category schools do not have outstanding infrastructure and non-formal activities but they claim that they have more qualified teachers than public schools. Annual payment per school is GEL1000-2000 (about $300-700) (“The price of private schools – the most expensive schools of Tbilisi”, 2016). Average annual salary in Georgia is about $4300 (Average monthly salary in Georgia: Men earn more than women, 2017). According to this data it can be concluded that only the family with high socio-economic status can access the first and second category private schools. The third category can be reached by middle class families.

Despite the difference between socio-economic statuses, private schools claim that teachers there are more qualified, motived and creative than in public schools. The reason of teachers’ motivation can be higher salary, more flexible environment free from governmental bureaucracy and lower number of students per class) (“The price of private schools…,” 2016). It should be mentioned that after announcing upcoming reforms in public schools teachers’ salaries is getting almost twice as higher by 2022 than it is now and it will become about $500 averagely by currency (Teachers’ salaries by 2022 will reach GEL 1500 averagely – Ministry of Education, 2018). This announcement motivated teachers from the third category private schools to move and work for public schools.

One more hypothesis has not been rejected as it was predicted: Holding certificates has no impact on teacher’s self-efficacy (4). The average scores in self-efficacy test did not differ from each other whether the teacher was certified or not. Holding certificate means that the teachers passed exam and confirmed knowledge of the subject on a minimum level since 2015 when the national exams for teachers have been started (The National Assessment and Evaluation Center,
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But they started teaching decades earlier and their self-concept was developed with their experience. Getting certificate did not change their perception of their own efficacy in teaching other students.

Considering self-efficacy level with possessing certificate could be more effective predictor of good teaching. Measuring self-efficacy and knowledge in the subject and pedagogic abilities are from the same group of mechanisms for teacher’s evaluation. They are included by the “beyond the class activity” studies (Kyriakides, Campbell, & Christofidou, 2002).

It would be more interesting to find any statistical significant difference between the numbers of low achiever students who are taught by certified or uncertified teachers. The mean number of low achiever students with certified teachers was compared to the mean number of low achievers with uncertified teachers. Testing the hypothesis “Certified teachers have less low achievers in the classroom” has been rejected. In this thesis there is no opportunity because of the instrument to suggest whether certified teachers have different number of low achiever students in the classroom or not. As achievement of the students are measured by the grades, instead there is a discussion whether certified teachers assess their students differently or not. As the result showed, there is no clue that certified teachers have a fewer number of low achievers.

There is a negative correlation between length of experience and self-efficacy (5) hypothesis has been rejected. The logic is the same as it was developed in the case of teacher self-efficacy and certified teachers. As it was predicted according to Bandura (1997), self-efficacy is a stable pattern. It was formed during the first years of their experience, when their teaching methods were acceptable in the society. After decades neither length of experience nor changing demands toward teachers (and certificates in the same context) could not affect their beliefs about their abilities. Average age of the teachers is 46.4 (Education Management Information System, 2017). The same data in the USA is 42.4 (schools and stuffing survey, 2012). If the length of experience correlated with teacher self-efficacy, Georgia would have the highest data in self-efficacy.

The hypothesis “there is a no correlation between class size and number of low achievers in the classroom” (6) has not been rejected. The data analyses cannot confirm any significant connection between the number of students in the classroom and number of low achievers there.
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As it appeared for children teachers’ personal competences matter more than the number of their classmates. Or to say from the other side, teachers’ evaluation is not stricter when there are more students in the classroom. Despite the results, during the interview teachers were complaining that a big class size is a disruptive factor for a high quality teaching process. This assumption needs deeper research. However the class size does not change their strategies of students’ assessment.

6.1. Limitations

First of all, as the principal component analysis showed that it would be better if the translation of the questionnaire was piloted. A few items turned out in different factors than it was considered. As it was discussed teachers’ professional knowledge and perception about student engagement, instructional strategies and classroom management needs to be developed theoretically. According to the theoretical background their reflection about their self-efficacy in these three factors will be clearer. Cutting the misplaced items from the data to test their role in the factors did not change the whole calculation significantly. Thus all the data are calculated by the original factor combinations.

Another issue was the reliability of the answers. The teachers’ attitudes toward the educational research articles are challenging. General idea about Georgian teachers is negative. Society, Different research results, articles, journalistic reviews, politicians criticize educational system in Georgia (Vakhtangashvili, 2014). Economic situation of Georgia makes teachers scared about losing their jobs. Thus they get any public critics painfully. There is an ongoing process of reforms which make them feel unstable. They have a feeling that “incorrect” answers can make them appear as low qualified. Thus, their answers can be more what they need to show us rather than what they actually think. I did not have a right to access students’ grades, thus the information about low achiever students is taken from teachers. In the thesis I assume that they tell the truth about the number of low achievers as well as other information about their self-efficacy and certificates.
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For a deeper theoretical background and discussion of the topic scientific data and researches about Georgian Educational system was missed. Lack of scientific knowledge and resources is a one more indication of Georgian Educational system which affected the quality of this thesis.

Last part of the thesis limitations is the concept of the number of low achiever students. The instrument to measure low achievement is not standardized and I calculated the number of low achiever students by teachers biased grades. There is a chance that number of low achiever students in each class is caused by their representation skills of their abilities as well as by teacher’s tendency to give a low or high evaluation to the students. On each level of the thesis the fact is considered that number of low achievement is a result of the biased dependence of the teachers.

6.2. Implications

While writing this thesis The Ministry of Education, Science, Culture and sport of Georgia announced changes in Education system. The changes will provide more accurate data for deeper researchers in this field:

1. From 2020 students in 6th and 10th grades will be evaluated with standardized tests in different subjects (Exams on the 6th and 10th grades, 2019) and results will measure students’ standardized achievement and its connection with class size, teacher’s age, teacher’s certification, teaching style, school’s management, socio-economic condition in the district where the student lives.

2. From 2020 uncertified teachers above 60 will be retired, the vacancies of uncertified teachers below 60 will be open and they will work before theirs school finds new certified teachers (Virsaladze T. 2019). At the same time young people are motivated to go as teachers as rising salaries and different preparing programs are announced (Program of profession-seekers has started at schools, 2019). This picture would show us a clearer difference between personal characteristics, type of professional knowledge and self-efficacy of young and long-experienced teachers.
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3. During 2-year-period new teachers will be prepared according to modern educational theories. They will have structured knowledge about student engagement, classroom management and instructional strategies which will give the researchers a clearer picture about their self-efficacy.

Thus, by 2022 the researchers will have a possibility to access higher quality Data and provide deeper researches in Georgian Educational system.
7. Conclusion

The thesis was about the role of teacher’s self-efficacy in student’s achievement in the developing Post-Soviet context. The distribution of teacher self-efficacy in Georgian culture has not been different from the results of other countries and cultures. Several items from the self-efficacy factors were misplaced in the data analyze. Discussing the misplaced items indicated the problems and peculiarities of the Georgian teachers and education system in general. Some activities in a teaching process are associated with a different factor than it happens to the respondents of an original scale.

The number of the students with low achievement turned out slightly negatively correlated with teacher’s self-efficacy in student engagement. General self-efficacy or self-efficacy in classroom management and instructional strategies was not correlated with the number of low achiever students in the classroom. The results was explained by the historical background of the teachers in Georgia. Their understanding of self-efficacy concept is different because they received professional education about teaching methods in the Soviet environment. They were succeed by the traditional strict approaches toward students. Now their self-efficacy is high in the methods which are totally unacceptable for a new generation. Their interests and knowledge is determined by the Internet and Media influences. Thus their achievement cannot be affected by the teacher self-efficacy. Regarding to student engagement, it is a most effective way to evaluate students’ knowledge and give a grade. If student is involved in the process it’s easier for a teacher to give an evaluation and at the same time his or her self-efficacy will increase.

The Government of Georgia started reforms in the Educational system in 2019. To motivate the teachers to get updated knowledge about teaching methods the Government provides certificating exams for them. If they pass the exam they will get the certificate. It helps the teachers to get higher salary and keep their job but according to the results of this thesis, holding certificate does not make difference between the numbers of the students with low achievement of each teacher. With more specification certified teachers do not give different grades to their students than uncertified teachers. Evaluation methods and attitudes is a personal character and rising knowledge in the subject cannot change these attitudes.
THE ROLE OF TEACHER SELF-EFFICACY IN STUDENT’S ACHIEVEMENT

Even more, the teachers with certificates do not have higher self-efficacy than the teachers without certificates. It was explained by the theory that self-efficacy is formed in a first few years of the working experience. Teacher’s self-efficacy was not changed by the modern demands of the education system. It does not matter whether the teachers follow the demands successfully or not. This theory was confirmed with one more calculation - According to the results teacher’s self-efficacy was not either correlated with their experience. Teachers’ average age is one of the highest in Europe. The highest is the part of the women teachers in the teachers’ total distribution.

Low achievement of the students can be caused by different aspects – socio-economic status, social environment, health, motivation, family background and learning disabilities were discussed in the thesis. It was predicted that there are more low achievers in the suburbs than in the city-center but has been rejected. The teachers from Suburban schools do not give lower evaluations, than the teachers from the city central schools. Also connection of low self-esteem and child depression was discussed as a harmful correlations with low achievement. Bullying was last but not least important reason.

At a glance, it seems that reducing the number of children in the classroom must affect teacher-student relationship, face-to-face interaction and level of attention which should increase achievement but still, as it appears, there is no correlation between the number of low achiever students and the whole number of the students in the classroom. Teachers’ tendency to give low grades is the same no matter to the class size. Maybe quality of the teaching process is higher in smaller classes however it does not affect the students’ evaluation.

More accurate studies about low achievement in Georgia will be possible after The Government of Georgia starts providing more obvious data about Georgian students’ achievement. From 2022 it will be possible to use data of the unified examinations at schools to calculate different variables in the correlation of low achievement. As well as new comer teachers will have been ended their theoretical study in pedagogy and their structured knowledge will help the researchers to get more accurate data about teacher self-efficacy.
THE ROLE OF TEACHER SELF-EFFICACY IN STUDENT’S ACHIEVEMENT

In the thesis there was emphasized a few aspects of the challenges in Georgian educational system. I hope it will give insights to the researchers to investigate Post Soviet developing societies deeper.
The Role of Teacher Self-Efficacy in Student’s Achievement

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THE ROLE OF TEACHER SELF-EFFICACY IN STUDENT’S ACHIEVEMENT


# Appendices

## Appendix A

**Teacher Sense of Efficacy Scale Georgian Version**

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Note: The Georgia version of the Teacher Sense of Efficacy Scale is designed to help teachers feel more confident in their ability to guide their students' learning. It is important to note that the responses are confidential and will only be used for research purposes.
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THE ROLE OF TEACHER SELF-EFFICACY IN STUDENT’S ACHIEVEMENT

- How much can you improve the student's achievement for each student?
- How much can you improve the student's achievement through collaborative work?
- How much can you improve the student's achievement through group organization for each group?
- How much can you prioritize each student's needs?
- How much can you use assessment strategies?
- How much can you effectively solve some problems for each child?
- How much can you provide students with different explanations or examples when they are involved?
- How much can you respond to students' complaints effectively?
- How much do you involve your family in their child's achievements at school?
### Appendix B

#### Demography questionnaire in Georgian

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<td>(length of experience as a teacher)</td>
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<td>4. 20-30 წელი</td>
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<td>(Number of students in the classroom)</td>
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