

AMERICAN UNIVERSITY OF ARMENIA

**Appraisal as a Tool to Measure Teacher Performance
Effectiveness and Productivity**

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ABSTRACT

Education serves as the base and driving force for proper functioning society and professional development of each particular individual. It is every person's right to receive and government's responsibility to provide education. Qualified and skillful teacher has an immediate impact on education quality. Teacher performance appraisal represents a valuable mean to observe performance effectiveness and productivity. It provides an insight into the organization and administration of work process in educational spheres, as well as, studies teachers' aspirations and concerns, interaction with students and parents.

The current research looks at teacher performance appraisal system on policy level and organizational level. It used case study method to measure the impact of the change in appraisal system on teacher performance effectiveness and productivity. The changes adopted by the institution provided setting of natural experiment for this Master's Essay. Using explanatory sequential design, quantitative data were collected and analyzed, identifying particular results which needed further explanation. Next qualitative study was formulated to collect data and elaborate on the specific results identified through quantitative data analysis.

Combined interpretation of quantitative and qualitative analysis aimed to share light on whether the adoption of systematic change of appraisal system leads to increased teacher performance effectiveness and productivity or not. The findings revealed all six factors identified on policy level played crucial role on organizational level too. The change in the frequency of appraisal had positive impact on teacher performance effectiveness. The change in the pace of teacher trainings and workshops also resulted in increased teacher performance effectiveness. The change in teaching technology positively affected teacher performance productivity; resulting in students' higher achievements on progress recording tests. Yet the correlation between the change in appraisal system and teacher productivity was statistically insignificant. The change in feedback system had negative impact with decline in parental ranking of teacher performance effectiveness and productivity.

Based on the analysis of the findings it was possible for us to conclude that the adoption of systematic change led to increased teacher performance effectiveness, but not productivity. Hence, we were able to accept hypothesis 1 and reject hypothesis 2.

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Chapter I

Introduction

“Education is the most powerful weapon, which you can use to change the world.”¹

Nelson Mandela

Education is the driving force of societies healthy functioning and development. The right of education belongs to individuals and societies all over the world. Armenia recognizes the importance of quality education and provides policies, means and regulations of maintenance and improvement of education within the country. Teacher quality represents a key contribution to the education process. Educated and skillful teacher is considered to have an immediate impact on students’ achievements, value system, personal and social characteristics. However, it is hard to give a static definition of teacher’s effectiveness and productivity. Research on teacher performance appraisal is a valuable opportunity to study the implementation of appraisal regulation policies, get an insight of educational sphere, to study teachers’ aspirations and concerns, observe teacher-student interaction, staff relationships, and styles of management and organization of work process in educational sphere. Appraisal is a topic which is of general interest to policy makers, school heads, teachers, school governors, teacher trainers, advisers, inspectors, and politicians concerned with the spending and accountability of public funds, as well as to the research community (Wragg et al. 2002).

The aim of this capstone project is to study policy and organizational level of personnel appraisal as a tool for measuring teacher performance effectiveness and students’ productivity. It looks into such factors like what is teacher performance appraisal policy, criteria and the impact

¹ According to the Susan Ratcliffe (2011) *Oxford Treasury of Sayings and Quotations*. p. 137, Mandela mentioned this exact quote at a speech, Madison Park High School, Boston, 23 June 1990.

it has on teacher performance. The research studies questions such as what are the factors and conditions that affect teacher performance effectiveness and productivity. The paper also studies the interrelation between teacher effectiveness and students' achievements. It discusses the components that may contribute to the level of teachers' effectiveness: such as methodology, training, teacher development programs, teacher-student/parent interrelations, feedback possibility and teaching technology. The paper also looks at the period and frequency of conducting performance appraisals. It provides analysis on the organizational level of teacher performance appraisal policy.

This Master's Essay uses a case study of a private institution in Yerevan, Armenia. The institution is considered as one of leading educational institutions of Yerevan. It has over 400 students and 23 teachers. The scope of academic programs within the institution includes academic, professional and general English, as well as, exam test courses. It also provides consultancy to students who want to apply for the academic degree in international educational institutions.

The changes in the appraisal system of the institution make it a valuable sample of a natural experiment for the current study. This study observes whether the change in the structure and mode of the appraisal, in the efforts spend on appraisal, in the frequency of the appraisal impact teacher performance effectiveness or not. It also studies the impact of the change in the amount of teacher training and workshops, as well as, change in teacher development program and teaching technology on teacher performance effectiveness and productivity, or not.

The first chapter of this Master's Essay provides an introduction to government decision on Article 26, issue 5 of Law on "Public Education" in the Republic of Armenia (RA Government Decision, 2012). It discusses the role of teacher performance appraisal. The paper

presents the purpose of the study on teacher performance appraisal, its strengths and weaknesses, as well as, the importance of teacher performance appraisal.

The second chapter provides background on teacher performance appraisal policy in the Republic of Armenia and an overview of the studied literature review. It presents set of documents and guidelines of teacher performance appraisal regulation and process regulation in RA. The chapter discusses works done by different scholars, who have studied teacher performance appraisal and evaluation process in various countries and different schools. The literature review provides an insight into the main components of the appraisal process and discusses the correlation between each component and teacher effectiveness and productivity.

The third chapter is dedicated to the methodology and structure of this Master's Essay. It discusses the structure and data collection strategy appropriate for this capstone project.

The fourth chapter presents findings on the teacher performance effectiveness and productivity impacted by the adoption of new performance appraisal system in the institution.

The fifth chapter consists of the analysis of the findings discussed in the chapter IV. It draws the parallels between the policy level and organizational level of teacher performance appraisal. The chapter provides linkage between studied literature review and the results of findings visible from the case study. The analysis section serves as base for the next chapter six.

The sixth chapter presents conclusion drawn by the study. Based on all the above-mentioned chapters, the last chapter sums up analysis and provides the conclusion on the correlation between the teacher performance appraisal and teacher performance effectiveness and productivity.

Chapter II

Teacher Performance Appraisal Policy in the Republic of Armenia

Educational sphere in the Republic of Armenia is regulated by the following laws: “Education”, “General Education”, “Education for Individuals with Special Needs” “Primary and Secondary Education” “Higher and Post-Graduate Professional Education” and “Academic Proficiency”. (National Institute of Education, 2011). Government of the Republic of Armenia Decision, December 27, 2012, N1667, on approval of teacher performance serial appraisal procedure in educational institutions which provide basic programs of general education, represents the main regulatory of teacher performance serial appraisal procedure policy in the RA, according to Article 26.5 of the law on “General Education” (RA, Government Decision, 2011)

The establishment and implementation of English teacher performance serial appraisal procedure criteria and standards, and teacher development program guidelines are regulated according to the Republic of Armenia Ministry of Education and Science Minister Decree of 2011(RA, Minister Decree, 2011).

Literature Review

Teacher performance appraisal is important and very hard process. It is quite challenging to evaluate the job conducted by practitioners specialized in the field. The particular challenge is to evaluate teachers and their classroom activities. There is a difficulty in defining the concept of effective teaching, let alone the periodicity and other vital characteristics of performance appraisals. For example, since teacher appraisals cannot be dispensed in a short period, thus many educational organizations traditionally use long-cycle appraisal method.

Teacher performance serial appraisal procedure criteria and standards of serial teacher performance appraisal and English teachers' performance appraisal guideline on teacher development program approved by Minister Decree of the RA Ministry of Education and Science (2011) provide step-by-step description and guide on teacher performance appraisal. Teacher performance serial appraisal procedure criteria and standards (2011) provide four mandatory points teachers are required to complete within the mentioned timeframe: 1) policy on general education- 8 hours, 2) informational technologies and their use in teaching process 12-hours, 3) psychology and teaching methods – 24 hours, 4) Learning languages and teaching of English- 36 hours. English teachers' performance appraisal guideline provides instructions and assessment for lesson plan creation and usage. It highly emphasizes teacher knowledge on grading and evaluating students. The guideline provides different types of scoring and appropriate practice of grading. The study of above mentioned documents revealed six key factors contributing to teacher performance appraisal procedure:

- the structure and mode of the appraisal
- the role of teacher training and workshops
- teacher performance and development potential
- teaching technology
- student scoring and evaluation
- teacher-parent communication

Various scholars studied for this research emphasized both the importance and difficulty of teacher performance appraisal. Teacher effectiveness literature mainly focuses on six topics, which contribute to teacher performance appraisal. These six factors are studied and compared on the policy level and organizational level.

- the structure and mode of the appraisal
- the costs and efforts of the appraisal
- frequency of the appraisal
- the role of teacher training and workshops
- teacher performance and development potential
- teaching technology

The structure and mode of appraisal

Scholars such as Poster and Poster (2003), Kressler (2003), Scott and Einstein (2001) have studied the structure and mode of the appraisal. Poster and Poster (2003) propose the differentiation between types of appraisals: presenting their verification as performance review and staff development review. They define performance review as an appraisal focusing on the setting of achievable, relatively short term goals. The authors identify staff development review as a type of appraisal which focuses on improving the ability of employees to perform their present or perspective roles. This type of appraisal is conducted through the identification of personal developmental needs and the provision of subsequent training or self-development opportunities (Poster and Poster 2003).

Kressler (2003) also discusses Poster and Poster (2003) belief behind the importance of staff development review, but he stresses the structure of performance appraisal, pointing to the differences between motivation in performance level and development potential. He believes that reward expectation plays major role in the appraisal quality. The author states that it is not enough to say to an employee that he is doing well or badly. There should be a clear defined reward and discipline system in the organization (Kressler 2003).

Furthermore, Scott and Einstein (2001) also discuss the structure of appraisal. They state that during appraisal, membership configuration must be taken under consideration. They give huge importance to organizational units and level of interdependence in the organization. The authors observe individual focused performance appraisal characteristics and team focused performance appraisal characteristics. In order to draw conclusion on the results of studied structural differences, they take into consideration such factors as study outcome, behavioral or competency-based outcomes. The authors came to a conclusion that team based appraisal needs effective leadership and solid implementation procedure (Scott and Einstein 2001).

The study conducted by OECD in 2013 (OECD 2013) derived to two categories of teacher appraisal: internal and external. In the case of external appraisal the instruments and criteria of appraisal are of common knowledge. The appraisals are mainly external evaluators, who do not work at the exact school. In case of internal appraisals, the organization develops and implements appraisal instruments and criteria according to its needs. The evaluators are mainly the school leaders, or teachers who have gained sophisticated experience and expertise in the field. The external appraisals tend to be more accountable, as the internal appraisal is conducted in the familiar environment both for evaluator and for the teacher who is evaluated.

The study also differentiates three types of appraisal: the first is appraisal for professional development, the second is appraisal for performance management and the third is performance based appraisal. Appraisal for professional development stresses the importance of focusing on classroom instructions, behavior, and teacher skills. It consists of multilevel evaluations which include classroom observation by school leaders as well as by peers and students and parent surveys. It focuses on the development of individual teacher quality and the collective quality rise of the organization. The performance management appraisal takes place for promotional

objectives. It is used as a tool for career possibilities. This type of appraisal chases more individual approach and needs outside examiner/evaluator in order to ensure the fairness.

The performance based appraisal deals with teacher rewards and limitations. This type of appraisal also needs solid reference standards against which teachers are evaluated. Standards such as teachers' professional profiles, a set of general and professional duties and responsibilities and curriculum development plan. In the criteria of serial teacher performance appraisal and English teacher professional development standards and program (2011) we also see the importance of reference standards teachers are evaluated against. It stresses the role of change in appraisal system, discussing the role of diversity in efficiency of teaching. It provides discussion on the reviewing of educational materials, teaching methodology and scoring system. (National Institute of Education, 2011).

Thus, according to Poster and Poster (2003), the organization has higher chances to improve its performance if the appraisal is focused on staff development review. In addition Kressler (2003) suggest that in staff development review type appraisal, reward system is crucial. The employees who get rewards, or get penalized tend to perform better. Finally, Scott and Einstein (2001) suggest that the organization benefits from staff development review appraisal type, if the team is in high interdependence and there is a strong emphasized leadership role.

The costs and efforts of the appraisal

Other scholars such as Lord (1990), Reynolds and Farrell (1996), Middelwood and Cardno (2003), Jacob and Lefgren (2007), Stronge (2011) discuss the efforts and costs of appraisal as factors contributing to teacher performance quality. Stronge (2011) in the Handbook on the OSAC/AASSA (2011) discusses student surveys as one of the key efforts of appraisal process. He describes the process of conducting student surveys and the types of feedback. Jacob and

Lefgren state that surveys may serve as valuable tool to get feedback on teachers' performance (Jacob and Lefgren 2007). Despite the fact that student-parent surveys lack influence in official evaluation results, unofficially they provide valid contribution on the teacher performance management type appraisal.

Many schools in Canada and Poland used the parent council opinion polls for rewards/promotion type appraisals. Korea uses student/parent questionnaire feedback as important formative feedback for the teacher development appraisal. Additionally, Jacob and Lefgren (2007) state that parent survey feedback provide information not only on teachers' professional qualities, but also on teachers' humane qualities such as: the art of supporting students emotionally, humane attitude towards students and the creation and maintenance of healthy communication with students and parents (Jacob and Lefgren 2007).

On his turn Lord (1990) speaks about the importance of decoding appraisal actions of teachers. He suggests that teachers usually tend not to comment directly on students poor performance. Here comes the importance of teacher parent socialization. Parental feedback increases the chances of better teacher performance. It may also play a crucial role in appraisal results (Stronge, 2011).

Middelwood and Cardno (2003) agree that appraisal is a hard process both for teachers and appraisers. They state that all sides involved may benefit more if they use team appraisal instead of individual appraisal. The authors bring an example of research conducted by Reynolds and Farrell (1996) in 1996(Reynolds and Farrell 1996), where they came to a conclusion that collaborative working was a major contribution to educational achievements. The teachers had a chance of getting not only appraiser's feedback, but also their teammates and colleagues.

Middelwood and Cardno (2003) believe that team appraisal process may be implemented easier and may cost less and result in better feedback system (Middelwood and Cardno 2003).

Hence, Lord (1990) states that implementation of feedback system in organization leads to higher teacher efficiency. Middelwood and Cardno (2003) add that the organizations may shorten appraisal costs and raise teacher efficiency if they adopt team feedback system. Stronge (2011) provides requirements, criteria and forms of feedback system which impact increase of teacher efficiency and productivity.

Frequency of the appraisal

According to article 26 of the law on “General Education” and Article 27.15 on teacher performance appraisal procedure of the RA, teachers have a right and are obliged to participate in teacher performance appraisal every five year. On voluntarily bases teachers may participate in performance appraisal not earlier than two years after their last appraisal (National Institute of Education, 2011).

Scholars as Meyer (2007),Mintz (2007),Stewart (2007) and Chang (2009), Castetter (1996), Stronge and Helm (1991), Lustick and Sykes (2006) focus their attention on the frequency of the appraisal. Meyer (2007) states that due to the speed of the present day the world of employment requires more frequent appraisals nowadays. His debate is over the issue that long-cycle appraisals lead to the repetition of the same mistakes, as people tend to forget the skills they do not use on daily bases. He also discusses the difficulties which the organizations face within implementation of short-cycle appraisals. They transfer the structure of the whole organization. The reform of strategy means that the organization must let go all the techniques that do not work properly and adopt new techniques which will benefit the organization.(Meyer 2007).

However, Mintz (2007) discusses the phenomenon of teacher stress, and its impact on students' performance, as well as, their achievements. He studies the correlation between teacher appraisal and teacher stress. He states that during the establishment of the pace of appraisal, the consideration of psychodynamics of teacher stress is of high importance (Mintz 2007). Thus, elaborating further, he states that in cases of being in high stress level, teacher is more likely to be less effective.

Stewart (2007), in her turn, looks at the process of appraisal interviews. She discusses the reaction of teachers to appraisal and to its interviews. The author brings both advantages and disadvantages of conducting appraisal interviews. She looks at the phenomenon of teacher stress influenced by appraisal (Stewart 2007). Chang (2009) discusses the issue of teacher burnout. He suggests that emotional exhaustion has strong impact on teacher performance and development potential. He looks at the role of appraisal in teacher exhaustion. The author argues that long lasting unpleasant emotions from students' performance and behavior may lead to teacher exhaustion and disappointment. These are the emotions that tend to lead teachers to burnout. Chang looks at appraisal as a method of ceasing the chances of burnout. He states that appraisal provides teachers with possibility to understand the weak points of educational process and contributes to the development of teacher potential (Chang 2009).

Castetter (1996), however, believes that either positive or negative impact of appraisal depends on the relationship between the evaluator and the teacher. In cases then the appraisal is held in a development boosting manner, rather than checking or monitoring, it results in a beneficial consequences both for the evaluator, teacher and school. However, Stronge and Helm (1991) state that frequent appraisals may raise suspicions in teachers and create mistrust toward the evaluator. On the contrast, Lustick and Sykes (2006) suggest that the appraisals have definite

positive impact on teachers' quality. They state that the teachers who have participated in teacher performance appraisals tend to show more devotion to school and its program. Moreover, they tend to participate actively in curriculum preparation, project planning, new teacher preparation and school evaluation projects. They claim that the appraisal is a cost-effective instrument in contribution to teacher development.

Thus, Meyer (2007) sees the frequent repetition of appraisal as a key to success in increasing performance quality. However, Stewart (2007) suggest that appraisal interviews lead to an increase of stress level among teachers. Mintz (2007) also observes teacher stress resulted from appraisal. She states that teacher stress has negative influence on his/her performance and on students' achievements. Based on this she contradicts Meyer (2007) idea on benefits of frequent appraisals, stating that they may result in decrease of teacher efficiency and productivity. However, Chang (2009) and, Lustick and Sykes (2006) agree on the opposite. They state that frequent appraisals help teachers to see their weak points and work on their correction. The later leads to decrease of emotional burnout and increase of teacher efficiency.

The role of teacher training and workshops

The establishment and implementation of teacher performance serial appraisal procedure criteria and standards (2011) emphasize the importance of teacher trainings and workshops, discussing them as contributors to teacher professional development and skill enrichment. The other group of scholars as Huang and Lin (2014),Poster and Poster (2003), Jürges and Schneider (2007), Davis, Ellett, and Annunziata(2002), Stronge (2006) study the role of teacher training and workshops in teacher performance effectiveness. Poster and Poster (2003) discuss the role of teacher trainings in performance appraisal, suggesting that any training disregarding its quality has positive impact on teachers' latter performance.

Huang and Lin (2014) study the role of charisma in the teacher effectiveness. The key point of their study is teacher behavior in classroom. In their study Huang and Lin look at the characteristics which describe teaching charisma. They discuss charisma as a strong factor which can influence teacher evaluation. They state that in teacher ranking charisma does not serve less than the course methodology and teacher attitude. The scholars state that the research on charisma may help teachers to develop skills and qualities which are needed for effective teaching.

Jürges and Schneider (2007) studied teacher ranking. They look at the teacher ranking through their effectiveness and productivity. The authors measure these two factors within the level of students' achievements. They observed the skills demonstrated by teachers who provide the most sophisticated results.

Davis, Ellett, and Annunziata (2002) claim that the appraisal should not seek only benefits for school development, but it should also pursue the development for the individual teachers as well. The objectives of the appraisal should stress the desired goals rather than the improvement of the existing state of quality. They state that the appraisal should not be represented as a simple bureaucratic necessity, but rather should contribute to the development of each and every teacher as well as a school itself (Stronge, 2006).

Accordingly, Poster and Poster (2003) suggest that the practice of teacher trainings and workshops in educational institutions leads to an increase of teacher efficiency and productivity. Moreover, Huang and Lin (2014) look at the impact of charisma and teacher behavior in classroom on their evaluation results. They state that charismatic teachers tend to show better results during evaluation. Davis, Ellett, and Annunziata(2002) claim that the trainings and workshops work more efficient if they pursue not only the school's goals and objectives, but also

individual teacher's as well. In addition, Jürges and Schneider (2007) add that training and workshops may lead teachers to adopting the charismatic behavior and necessary skills for effective performance.

Teacher performance and development potential

The establishment and implementation of teacher performance serial appraisal procedure criteria and standards, and teacher development program guidelines also provide clear description of programs and activities devoted to an increase of teacher performance and development potential. Likewise, scholars as Wragg, Wikeley and Haynes(2002), Darling-Hammond, Newton, and Wei (2012), Evans (2012), Athanases (1994), Haynes (1995) studied teacher performance and development potential role in teacher efficiency and productivity. Wragg, Wikeley and Haynes (2002) discuss the study conducted by Wragg on teachers' performance and development potential. It uses information gathered from 109 authorities, 658 primary and secondary teachers and 479 appraisers. This study is considered the most extensive study of this area ever undertaken. The study focused on teacher's competence in classroom, which is the basic component of schools efficiency ant students' achievements. It provides an insight into the quality of practice and teacher appraisal at present. The authors discuss the way of using appraisal to benefit most, as they think that appraisal is hard task to accomplish. It is better to use all the benefits it provides (Wragg et al. 2002).

Darling-Hammond, Newton, and Wei (2012) study performance assessment as a tool to measure and improve teacher performance potential. They suggest that, in order to develop teacher efficiency, performance assessments should be associated to teachers' later productivity in the classroom. The performance assessment should support and ensure teachers' learning and adopting of new skills and experience. It should also provide teachers with valuable information

on how to prepare for the classes, how to behave in the classroom and how to conduct the lesson. Performance assessment should support and strengthen teacher practice.

Evans (2012) focuses her study on the student's outcome as a factor of teachers' development. She states that teachers' qualification is not enough without the ability of proper interaction with students. The author suggests that appraisal should be focused not on the improvement of teaching only, but it should also seek the improvement of students' outcomes. The study stresses the importance of teachers' developing skills which lead to students' engagement into lesson and proper provision of teacher feedback.

The development of teacher effectiveness plays as important role as its measurement process. Teacher performance assessments tend to assist and improve teacher development. Athanases (1994) notes that teacher who participated in National Board Certification recorded that later they have presented more devotion and commitment to their job. The teacher stated that appraisal process helped them to look at their own and their students' work through the prism of professional lenses. Later on, that experience helped them to develop their professional competency. Haynes and Bradly also agree on board-certified teacher David Hynes statement that during the participants in National Board Certification he has gained more experience out of the appraisal than out of any other type of professional development (Haynes 1995, 58).

Respectively, Wragg, Wikeley and Haynes(2002) suggest that appraisals lead to increase of teacher competency, and teacher competency is the main contributing factor to high quality education. Darling-Hammond, Newton, and Wei (2012) add that teacher competency can be developed and that performance assessment is a means to develop teacher efficiency and potential. However, Evans (2012) stresses not only teacher competency as itself, but also

students' outcome. She suggests that appraisal which pays attention to students' productivity leads to an increase of teacher efficiency and education quality.

Teaching technology

The crucial role of teaching technology is particularly stressed both in the establishment and implementation of English teacher performance serial appraisal procedure criteria and standards (2011), and teacher development program guideline for English teacher performance serial appraisal (2011). The later provides guidelines and criteria for formulation and implementation of teaching technology in educational institutions.

Finally, the works conducted by Ministry of Education and New Teacher Induction Program (2010), Ministry of Education of the USA (2010), OECD (2005), Stronge (2011) provide an insight into teaching technology necessary for effective teaching. Schools usually tend to create their individual education and appraisal system; however it is very important for school leaders to understand the concept of "high-quality teaching". Highly competent teachers have to be competitive internationally and the most vivid index of the competent teacher is the achievements of his/her students. Highly qualified teachers tend to possess skills and knowledge which effectively reflect both students' and school's objectives OECD (2005)

Ministry of Education and New Teacher Induction Program (2010) handbook looks at the importance of proper guidelines and supervision both for new and experienced teachers. They explore the challenges that teachers face and provide them with possible problems and drawbacks, as well as, appropriate solutions. Ministry of Education of the USA (2010), in its resource handbook for mentors, provides necessary resources and criteria which will help mentors to cooperate with teachers, in order to gain efficient results in teacher performance.

Stronge (2011) in the "Handbook on the OSAC/AASSA", provides an insight into instructional planning, instructional delivery, and assessment of/for learning.

Thus, Ministry of Education and New Teacher Induction Program (2010) in its handbook states that guidelines and supervision lead to increase of teacher efficiency. In the work conducted by the Ministry of Education of the USA (2010), the authors add to the previous point, stating that guidelines must be prepared not only for teachers, but for mentors as well. They suggest that well prepared mentor has an immediate impact on teacher efficiency. Stronge (2011) provides planning and assessment requirements, criteria and forms which lead to efficient teaching.

To sum up, a more detailed study of the above mentioned authors and sources will allow me to articulate more focused hypotheses and research questions and then observe whether change in appraisal leads to an increase of teacher effectiveness and productivity or not. I have divided my review of the literature into six groups based on the change of the appraisal process in the institution, which serves as a natural experiment for this research.

The study of the first group of authors looked at the structure and mode of the appraisal and came to the following conclusion. The development review type appraisal and practice of reward system lead to an increase of teacher efficiency, particularly in organizations with high level of employees' interdependence.

Another group of authors suggest that adoption of feedback system leads to better teacher performance and increases teacher productivity. In addition several other scholars discussed the impact of the frequency of the appraisal on teacher efficiency and productivity. In this group the authors presented contradicting views on the matter. Two of the authors state that frequent

appraisals lead to increase of teacher efficiency and two other authors contradict it, saying that frequent appraisals lead to the decrease of teacher efficiency and productivity.

In the next group authors discussed the role of teacher trainings and workshops. They state that trainings and workshops allow teachers to adopt and develop skills needed for effective teaching, which leads to definite increase of teacher productivity.

In like manner, the fifth group of authors observed the role of teacher performance and potential development in effective teaching. They came to a conclusion that teacher performance assessment is a valuable way of developing teacher competency. And the competent teacher shows better results in students' outcomes.

The last group of authors looked at the impact of proper teaching technology on teacher effectiveness and productivity. They came to a conclusion that well organized guidelines and supervision lead to an increase of teacher effectiveness and productivity.

Furthermore the research will look at the change in appraisal system in the institution and will draw parallels with the studied literature review. Based on the study of the works conducted by the scholars in the first group, I will make analyses and draw conclusions on the impact of the change in appraisal structure and mode in the Global Bridge Educational Center. In the center the appraisal structure changed from individual focused to team focused. It actively practices development review type appraisal rather than reward system appraisal.

Next, the study will compare the findings in the change of cost and efforts of appraisal system of institution with the ideas discussed by the scholars in the second group of the literature review. The studied institution started practicing wide implementation of feedback system both by student/parents and peer observation feedbacks.

Then, the research will draw parallels between the ideas studied in the works of the authors in the third group and the changes in appraisal frequency in institution's appraisal system. It will discuss the stress level of the teachers during the appraisal, teachers' attitude towards more frequent observations and feedbacks.

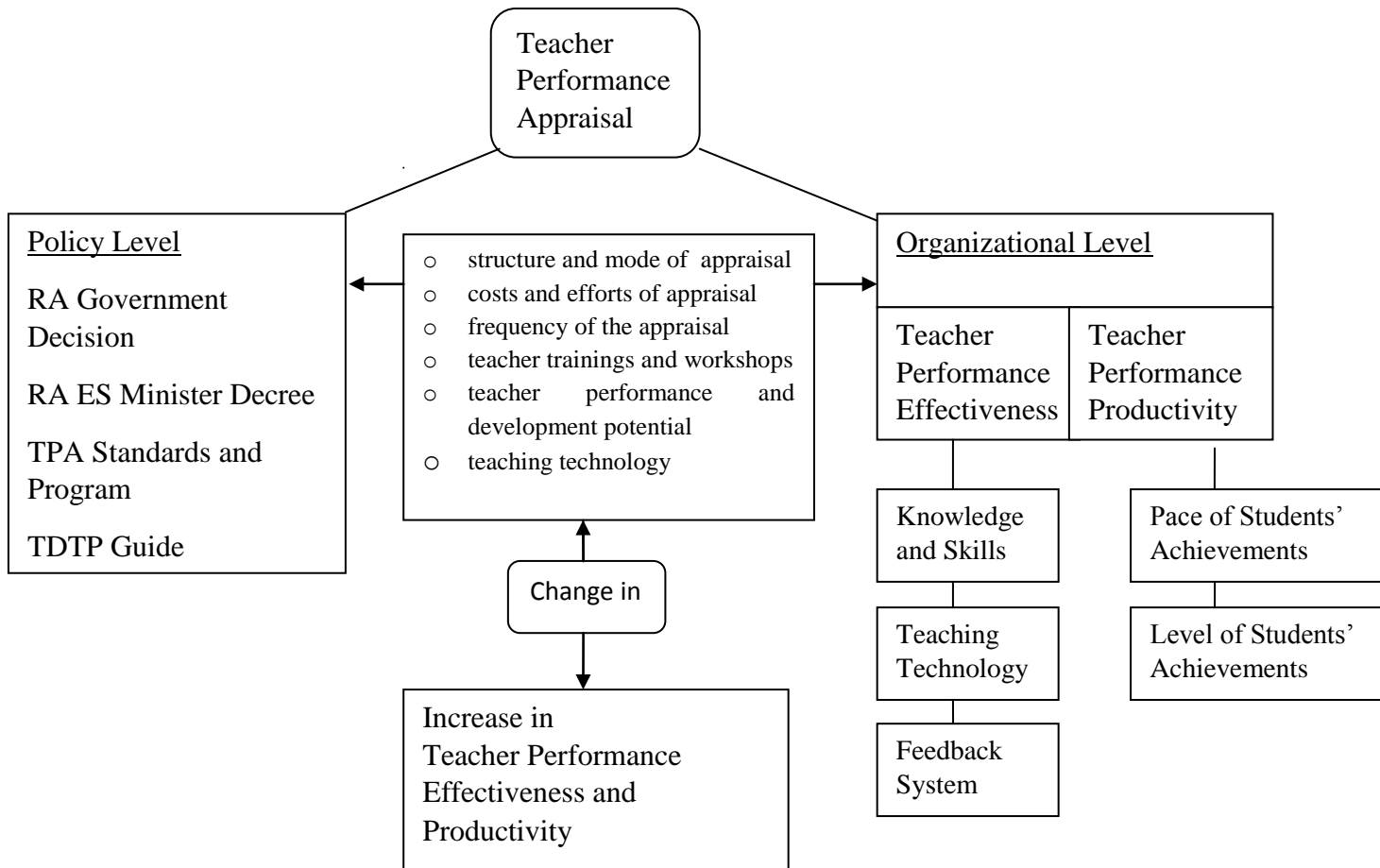
Further, the study will analyze the findings on the role and effectiveness of the workshops conducted in the institution. It will use the ideas studied in the works conducted by the authors of the fourth group as a base and measuring guide. The analysis will be based on the correlation between trainings and workshops and teachers further use of the techniques and tools in the classroom.

Moreover, the study will use the information studied within the scholars grouped in the fifth group to analyze and measure the changes in the teacher performance development potential in the institution. It will allow seeing the impact of the development projects on teachers' performance effectiveness and the change of teachers' classroom competence.

Finally, this capstone project will draw parallels between the impact of the change in the teaching technology in the institution and the ideas on the role of teaching technology discussed by the authors in the sixth group. It will measure the role and importance of appropriate teaching technology and its impact on teachers' performance effectiveness and productivity.

Chapter III -Methodology and Design

Research Structure



Methodology

Teacher performance appraisal represents a crucial share in the development process of educational institution. Evaluating teachers and their classroom activity is particularly difficult because of differences in appraisal approaches that best assess teacher effectiveness and quality based on student learning objectives and results achieved.

Teacher performance appraisal process in the Republic of Armenia is regulated by law on “General Education” and Government of the Republic of Armenia Decision, December 27, 2012, N1667, on approval of teacher performance serial appraisal procedure in educational institutions. The procedure of teacher performance serial appraisal is formed, implemented and supervised by the Ministry of Education and Science. Impact evaluation type study, which is the type of this research, requires a change in independent variable. For a single public school or group of public schools it is merely impossible to change the appraisal system, without the change in appraisal policy, which regulates the procedure. For that reason the research methodology chosen for this Master’s Essay is a case study of “Global Bridge Educational Centre” in Yerevan, Armenia. The recent changes in teacher performance appraisal system of the institution provided the setting of natural experiment for this study. It allows studying the impact of change in the identified six key factors of appraisal system, which contribute to the quality of teacher performance.

Case Selection

Since the beginning of 2014 academic year the institution has adopted several changes in its appraisal system. It changed the structure and mode of the appraisal, the frequency of appraisal was increased from every six months to every month. It also increased the amount of teacher trainings and workshops. Prior to changes the trainings were conducted once every month, which become twice every month after the change in appraisal system. The amount of workshops increased from twice a month to once in each week.

Hence, the research has studied the appraisal process of the organization for six months: from September 2014 to March 2015 comparing to the results of other six appraisals conducted twice in an academic year from 2011 to 2014. Analyzing the findings of mentioned six months

the research looked for an answer to whether the change in appraisal led to an increase of teacher effectiveness and productivity or not.

Hypothesis and Research Question

The current research aims to study whether changes in appraisal mechanisms/tools lead to increase in teacher performance effectiveness and student learning outcomes or not. The literature review has helped to identify six main factors related to teacher performance appraisal. These factors are as following:

- (1) structure and mode of appraisal
- (2) efforts and costs of the appraisal
- (3) frequency of appraisal
- (4) role of teacher trainings and workshops
- (5) teacher performance and development potential
- (6) teaching technology

The following hypotheses and research questions have derived from the objectives of this research.

H₁: Adopting a systematic performance appraisal system leads to increased teacher effectiveness.

H₂: Adopting a systematic performance appraisal system leads to increase of teacher productivity.

RQ.1 How does the change in appraisal structure affect teacher performance effectiveness and productivity?

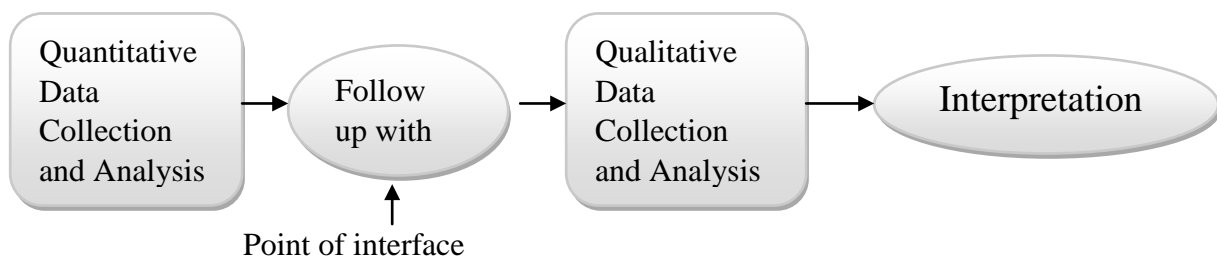
R.Q.2 How does the change in teacher training and workshop pace affect teacher performance effectiveness and productivity?

R.Q.3 What is the impact of the change in teaching technology on teacher performance effectiveness and productivity?

R.Q.4 What impact does the change in feedback system have on teacher performance effectiveness and productivity?

Research Design and Data Collection Strategy

This research has an explanatory sequential design. It allows using both qualitative and quantitative methods sequentially, where the collection and analyze of quantitative data is followed by the identification of several results, which need further elaboration. The elaboration of those results is provided through collection and analyses of qualitative data. The final step in explanatory sequential design is the interpretation of combined quantitative and qualitative results.



The type of analysis performed on the institution cannot be done on public scale, since there are no data on teacher performance and feedback by students/parents. For that reason, only secondary data-based documentary analysis will be performed.

Research Instruments

This Master's Essay studies the correlation between the change in appraisal system and its impact on teacher performance effectiveness and productivity. In order to measure the impact of the change in appraisal system on teacher performance effectiveness and productivity, both quantitative and qualitative research data collection tools were used.

The quantitative phase uses data of the analysis of teacher appraisal forms (both employer appraisal and self-appraisal forms), students' achievement tests (each level lasts three months, at the end of the third month students have progress recording test) and student/parent feedback questionnaire (questionnaires consist of both open and close-ended questions, and are given to students or parents to fill in every month).

Employer appraisal form consists of nine points where supervisor marks and scores teacher performance. It introduces the necessary and appropriate amount of training and workshop for each particular teacher. At the end the supervisor provides the scores of teacher performance against each objective discussed in the form. The scores are marked as following: 0= ineffective, 1=emerging, 2=effective, 4=highly effective. Totally, ten teachers' were chosen, who have undergone equal amounts of appraisal processes before and after the change in appraisal system.

Student achievement tests consist of 60 questions: multiple choice and open ended questions. Each 10 questions represent each level of six level courses consequently. Each level lasts three months, thus, students have a progress test, with score 10 as the highest mark, at the end of each three months.

Student/parent feedback questionnaires represent two types of questionnaires which are filled in either by students themselves or by their parents: depending on the age of the student

(from six to 18). The first type of questionnaire aims to measure students/parents satisfaction with the institution, teacher and classes. The second type of questionnaire is distributed among the parents every month and aims to measure student/parents satisfaction rate with teacher performance (both personal qualities and professional skills), and students' progress during the respective month.

Prior to the changes in appraisal system the former questionnaire type mentioned above was distributed to parents every fourth month at the end of academic semester. After the change in appraisal system the questionnaire was distributed every third month at the end of each level of the course. The later type of questionnaire was introduced due to the change in appraisal system.

The qualitative phase uses data of analysis of supervisory and peer observations, teacher training observations, interviews with supervisor and teachers and focus groups among teachers and parents. Based on the specific results identified through analysis of quantitative data, specific questions were formulated for the interviews with supervisor and teachers to elaborate which factors contribute most and which conditions mattered more than the others. The set of questions were formulated for focus groups with teachers (who were not interviewed) and parents who filled in feedback questionnaires.

Measurements

The aim of this research was to study, whether the change in appraisal system increased teacher performance effectiveness and productivity or not. The simple difference of means test was used for the analysis of quantitative data. In order to compare the impact on teacher performance effectiveness, the current research compared the average score of supervisory satisfaction rate, with ten teachers who have worked in the institution before and after the change

in appraisal system. The results were coded in the following order: 0=ineffective, 1=emerging, 2=effective, 3=highly effective.

We have also compared the average for peer reviews before and after the change, however, it is hard to indicate, because peer observations were introduced as a result of change in appraisal system. After the change in appraisal system peer observation was conducted with the following indicators: -1= not sufficient, 0=needs more practice, 1=emerging satisfactorily, 2=area of strength. The test also compared averages for teachers' self-appraisal forms indicators, in order to compare the changes in teachers' self-esteem. The coding was organized as the following: 0=poor, 1=satisfactory, 2=good.

Furthermore, the test compared the averages for students' achievement tests, in order to measure the impact of change in appraisal system on teacher productivity. Results of quantitative data collection were inputted as the following: 0=the worst result, 10=the best result.

Parental feedback also was compared to see whether the change in appraisal system affected teachers ranking by the parents or not. The measurement indicators were chosen as following: -2=strongly dislike, -1=dislike, 0=neutral, 1=like, 2=highly like. The idea behind comparing the change in the frequency of appraisal and change in workshop and training pace was to measure the impact the lasts had on teacher performance effectiveness and productivity.

Chapter IV -Findings

Quantitative Data Analysis

The data used for quantitative analysis were appraisal forms (supervisory appraisals and self-appraisals), students' achievement tests and feedback questionnaires. The current research looked at the teachers ranking in the supervisory appraisal forms in order to measure the change in the supervisor satisfaction rate with teachers' performance effectiveness. It compared the

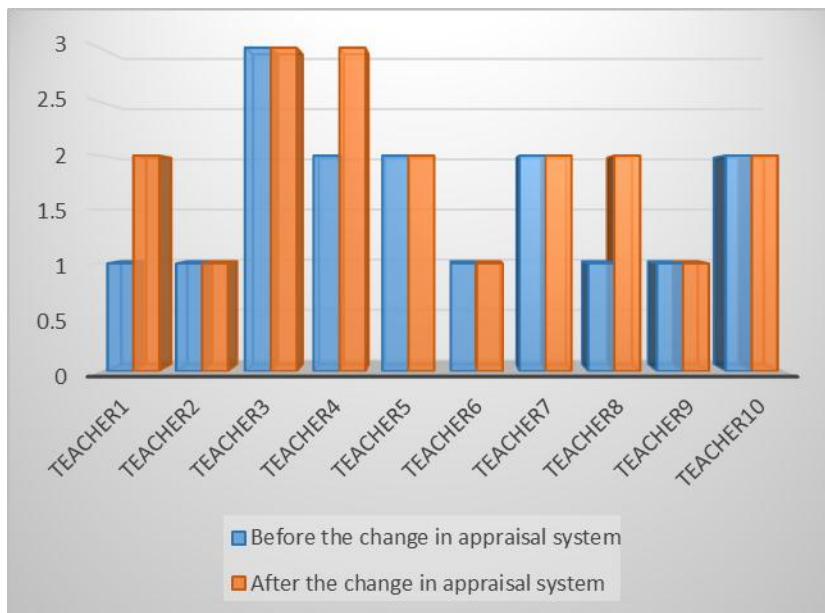


Figure 1: Supervisory Satisfaction Rate

scores teachers gain on the appraisal forms before and after the change in appraisal form. The range of teachers' rankings varied as follows: 0=ineffective, 1=emerging, 2=effective, 3=highly effective. The results can be seen in the graph presented in the left. In the graph we can see that there was a slight increase in supervisory satisfaction rate with teachers' performance effectiveness. The change particularly affected, positively, teacher1, whose ranking went up from 1 to 2 where 1=emerging and 2=effective, teacher 4, whose ranking went up from 2 to 3, where 2=effective, and 3=highly effective and teacher 8, whose ranking went up from 1 to 2, where 1=emerging and 2=effective.

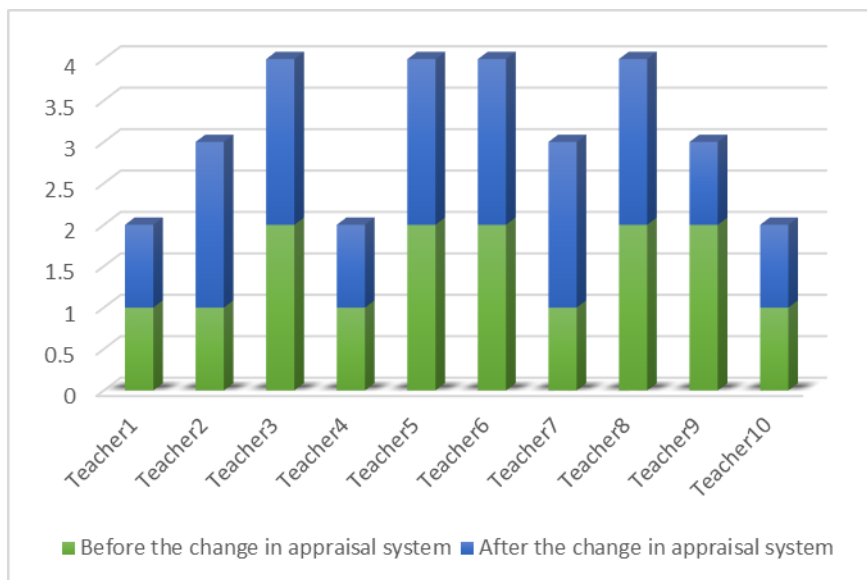
Through the simple difference of means test it became possible for us to say that the increase in teacher performance effectiveness was slight: it varied from 1.6 to 1.9, thus, recording only 0.3 rate increase. The correlation represented with Pearson

	Variable 1	Variable 2
Mean	1.6	1.9
Variance	0.488888889	0.544444444
Observations	10	10
Pearson Correlation	0.775314886	
Hypothesized Mean Difference	0	
Df	9	
t Stat	1.963961012	
P(T<=t) one-tail	0.040563094	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.081126189	
t Critical two-tail	2.262157163	

Figure 2: t-Test: Paired Two Sample for Means

Correlation (r) was 0.7753 which showed that the correlation between the change in appraisal system and supervisory satisfaction rate is strong. One-tail P-value of 0.04 showed statistical significance for the correlation.

The research also compared the results received through analysis of teachers' self-appraisal forms, in order to measure teachers' self-perception on their competency development. The range for teachers' evaluation of their performance was as following: 0=poor,



1=satisfactorily, and 2=good.

From the graph presented on the left we can see that teachers' satisfaction ranking with their performance has increased.

Figure 3: Teacher Self-Satisfaction Rate

For instance, for Teacher 2 the scores differed in a range from 1 to 2, with 1=satisfactorily and 2=good. After the change in appraisal system Teacher 7 also was scored in variation from 1 before the change in appraisal system to 2 after the change in appraisal system with 1=satisfactorily and 2=good. Meanwhile, Teacher 9 recorded decrease in self-satisfaction rate from 2 to 1, with 2=good and 1=satisfactorily.

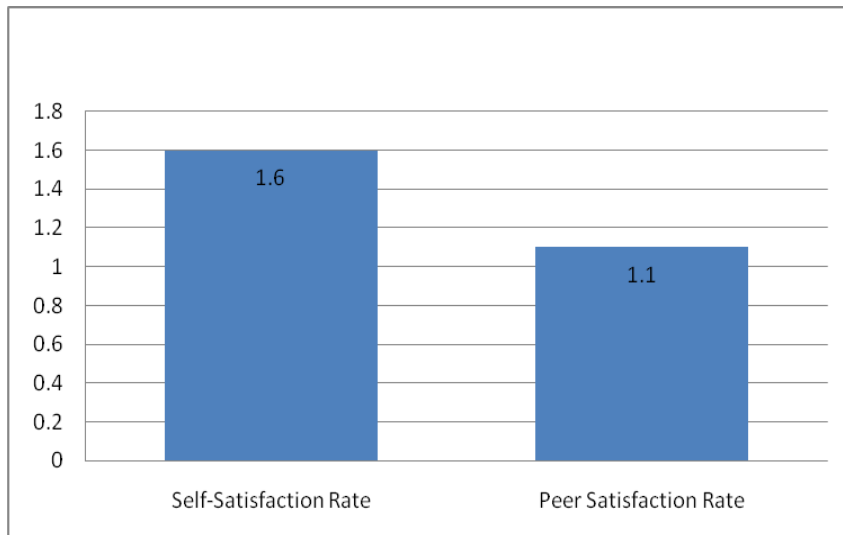
The simple difference of means test was conducted to compare the change in teachers' self-satisfaction rate, which is presented on the table on the right. From the table, we can see that prior to the change in appraisal system the average

	Variable 1	Variable 2
Mean	1.6	1.9
Variance	0.488888889	0.544444444
Observations	10	10
Pearson Correlation	0.775314886	
Hypothesized Mean Difference	0	
Df	9	
t Stat	1.963961012	
P(T<=t) one-tail	0.040563094	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.081126189	
t Critical two-tail	2.262157163	

Figure 4: t-Test: Paired Two Sample for Means

ranking that teachers were marking themselves was 1.6.

After the change in appraisal system the average of self-ranking increased to 1.9, thus, recording 0.3 points increase. According to the results of Pearson Correlation (r) 0.7753 the correlation between the change in appraisal system and teacher self-satisfaction rate is strong. The results of



one-tail P- value of 0.04 showed statistical significance of the correlation.

We have also compared the averages of

teachers' rating of their performance and their peers' performance. The comparison showed that teachers have ranked their performance higher than the performance of their colleagues. From the graph on the left we can see that the average rate of teachers' satisfaction with their own performance is 1.6, while the average of their satisfaction rate with the performance of their colleague is 1.1. Hence, teachers have ranked their improvement higher than the progress of their peers.

This study also compared the results of students' achievement tests in order to measure

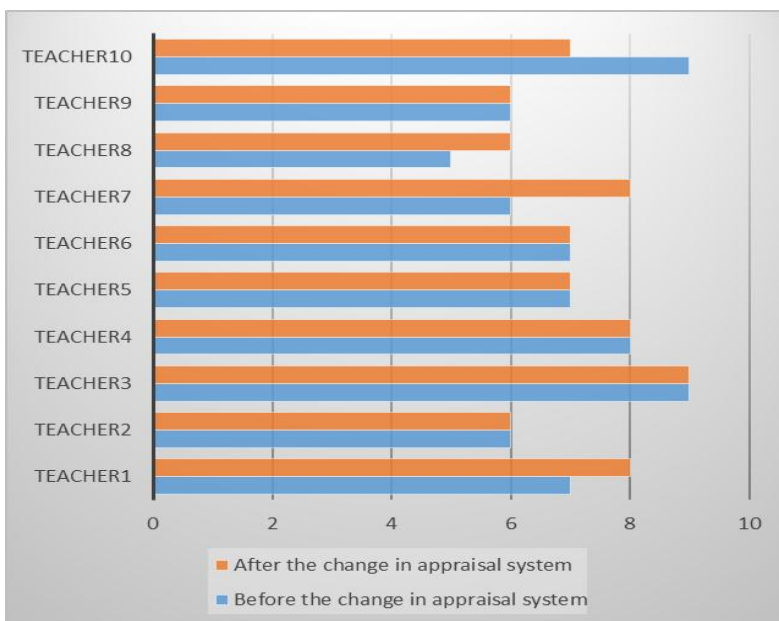


Figure 5: Students' Achievement Test Rates

the impact that the change in appraisal system had on teacher productivity. Students complete progress test at the end of every level which lasts three months. In the graph on the left we can see the variations of students' achievement test scores before and after the change

in appraisal system was adopted. It is visible from the graph, that teacher1 recorded change in student achievement test result, increasing the score from 7/10 to 8/10. Teacher 7 has also recorded an increase in the score of tests recording the improvement from 6/10 to 8/10. Teacher 8 recorded improvement as well, increasing the test scores rate from 5/10 to 6/10. Meanwhile, Teacher 10 recorded decrease in the student achievement test scores. Before the change in the

appraisal system the average scores of student progress test were 9/10 which decreased to 7/10.

The rest of the teachers recorded no variation impacted by the change in appraisal system.

The simple difference of means test was done to compare the change in student achievement test scores which is presented on the table on the right. On the table we can see that the difference in student achievement test scores varies

	Variable 1	Variable 2
Mean	7	7.2
Variance	1.777777778	1.066666667
Observations	10	10
Pearson Correlation	0.645497224	
Hypothesized Mean Difference	0	
Df	9	
t Stat	-0.612372436	
P(T<=t) one-tail	0.277722721	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.555445442	
t Critical two-tail	2.262157163	

Figure 6: t-Test: Paired Two Sample for Means

from 7.0 to 7.2 in average, which means that there was only 0.2 increase recorded in teacher productivity. According to Pearson Correlation(r) 0.6454 presented through the test it is visible that the correlation between the change in appraisal system and increase in the scores of students achievement tests is strong. Meanwhile, the results of one-tail P-value of 0.2 showed that the statistical significance of the correlation is weak, thus, the correlation is statistically insignificant.

We also studied the results gathered from the study of student/parent feedback questionnaires, as student/parental ranking of teachers were included into teachers' appraisal system by the institution. The feedback represented the ranking of teachers (based both on their personal characteristics and professional skills) in the following range: -2=strongly dislike, -1=dislike, 0=neutral, 1=like, 2=highly like. The graph, on the left, presents the comparison of the student/parent satisfaction rate with teacher performance before and after the change in appraisal system was adopted by the institution. Looking on the graph above it is visible that the

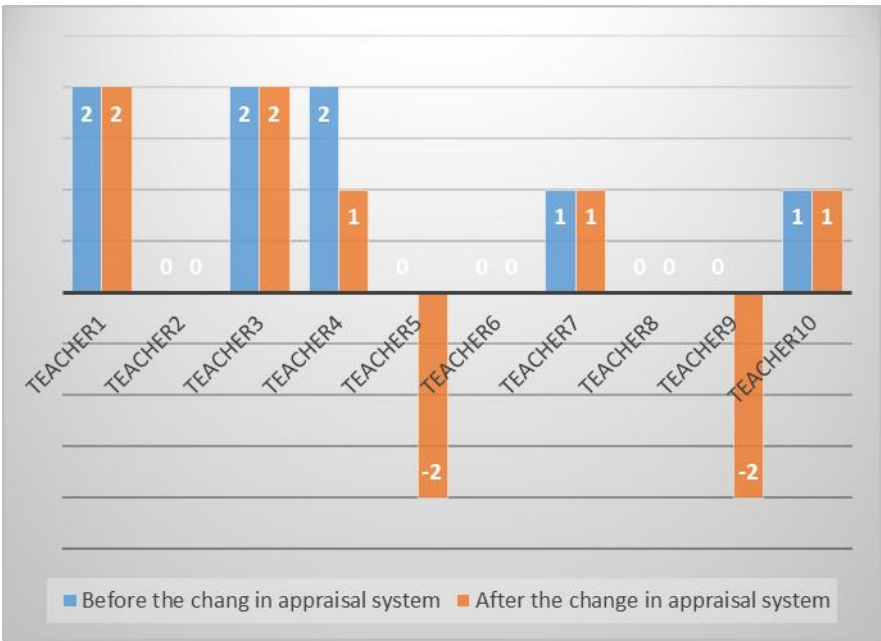


Figure 7: Parental Satisfaction Rate

change in appraisal system negatively affected parental satisfaction rate with teachers' performance. We can see that Teacher 4 ranking dropped down from 2 to 1, with 2=highly like to 1=like, the ranking of Teacher 5

decreased with dropping down from 0 to -2, with 0=neutral, -2=strongly dislike. Also, Teacher 9 recorded decline in the ranking of student/parent satisfaction rate with ranking dropping down from 0 to -2, where 0=neutral and -2=strongly dislike. For the rest of teachers the change in appraisal system had no impact on parents' satisfaction rate with their performance.

Simple difference of means test was done to measure the correlation between two variables and to understand the statistical significance of correlation between parents' satisfaction rate with teacher performance and change in the appraisal system adopted by the institution.

Through the simple difference of means test results presented on the table on the right, we can see that there was a negative decline in parents' satisfaction rate from 0.8 to 0.3 in average. The results of Pearson correlation (r) 0.8444 show strong correlation between the changes in appraisal system and decline in parental

	Variable 1	Variable 2
Mean	0.8	0.3
Variance	0.8444444444	2.0111111111
Observations	10	10
Pearson Correlation	0.818512186	
Hypothesized Mean Difference	0	
Df	9	
t Stat	1.860521019	
P(T<=t) one-tail	0.047866955	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.095733909	
t Critical two-tail	2.262157163	

Figure 8: *t-Test: Paired Two Sample for Means*

satisfaction rate. Additionally, one-tail P-value of 0.04 shows statistical significance for the correlation.

Quantitative data analysis has showed that the change in appraisal system by the institution had although slight, but positive impact on teachers performance effectiveness rated by the supervisor in appraisal forms, where the ranking increased from 1.6 to 1.9 in average. It also positively affected teachers' ranking of themselves in self-appraisal forms raising their self-sufficiency from 1.5 to 1.6 in average. There was also slight improvement in students' achievement test rates which serve as the indicators of teacher productivity. The test scores increased from 7.0/10 to 7.2/10 in average. However, despite the increase in both teacher performance effectiveness and productivity, student/parent satisfaction rate, which is a part of teacher performance appraisal system, decreased from 0.8 to 0.3 in average. The contrast in above mentioned data analysis served as a base for constructing qualitative study in order to explain the identified results of quantitative data analysis.

Qualitative Data Analysis

The qualitative study was constructed for this research to further elaborate results identified through the quantitative data analysis and to find which conditions and factors contributed to the change discussed in the quantitative data analysis. The design of qualitative study was constructed with a purpose of explaining quantitative data results and further contributing to answering research questions through combined interpretation of both quantitative and qualitative data analysis.

The simple difference of means test used for quantitative data analysis revealed that there was a slight improvement in supervisory satisfaction rate, teachers' self-sufficiency rate and student achievement test scores, due to the changes in appraisal system of the institution. However, there was a decrease in student/parent satisfaction rate, despite of recorded increase in both teacher performance effectiveness and productivity.

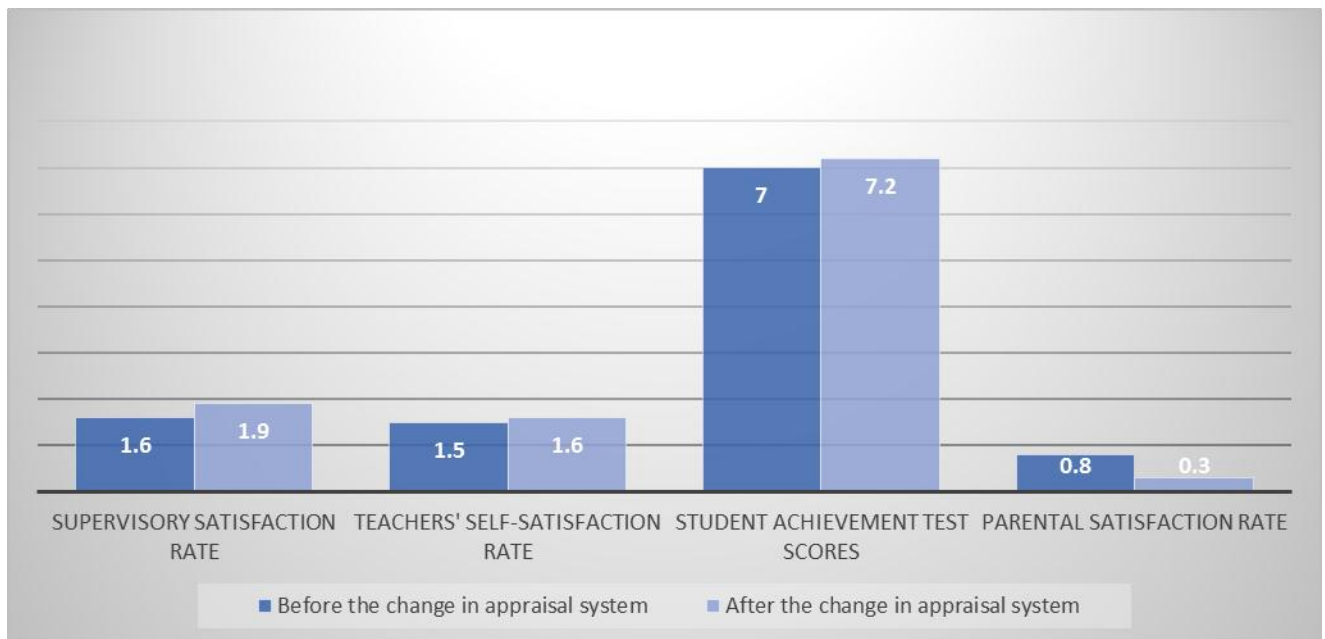


Figure 9: Change in Appraisal System

The tools used for qualitative data collection were analysis of supervisory and peer observations, teacher training and workshop observations, interviews conducted with supervisor and teachers and focus groups among teachers who were not interviewed and focus groups among parents.

The major factors contributing to the results identified through quantitative data analysis were:

- teacher aspirations
- teacher emotional stress level
- teaching technologies
- teacher/parent interaction

The purpose behind supervisory and teacher performance was to study the characteristics, ways and means of ranking teachers and to observe teachers classroom behavior under observation by different people such as supervisor and peers. The idea behind the observations of teacher trainings and workshops was to observe the correlation between the skills teachers get introduced to during the trainings and workshops and their later performance in classrooms.

The aim of interviews with supervisor and teachers was to share light on the factors that impacted the increase in supervisor satisfaction rate and teacher satisfaction rate, as well as, the increase in students' achievement test scores. The purpose of focus groups among teachers and among parents was to study the phenomenon behind the increased rate of both supervisor satisfaction rate and teachers' self-satisfaction rate and decrease in parental satisfaction rate.

The observations lasted from one hour to two hours depending on the length of the class observed. The timeframe for interviews varied from 45 minutes to 1 hour, covering questions formulated based on quantitative data analysis and to find the factors that contributed to an increase in supervisory satisfaction rate with teacher performance effectiveness and teachers'

self-satisfaction rate with their professional development. The questions were designed with the aim of answering to research questions. Focus groups lasted one hour each and aimed to answer the questions, which were covering the linkage between increase in supervisory satisfaction rate and teachers' self-satisfaction rate and decrease in parental satisfaction rate.

During both interviews and a focus group with teachers, they were asked to rank the level of their alertness and preparedness before and after the change in appraisal frequency and mode which was paralleled with more frequent observations either by the supervisor or by their peers. The range for ranking was estimated from 0 to 5, where the indicators for alertness were presented as following: 0=totally relaxed, 5=highly alert, and for preparedness 0= not prepared at all, 5=fully prepared

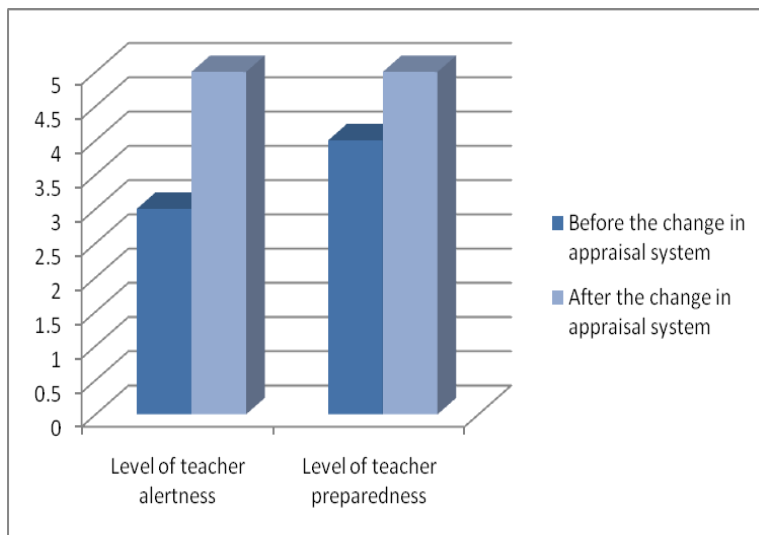


Figure 10: The Impact of Observations

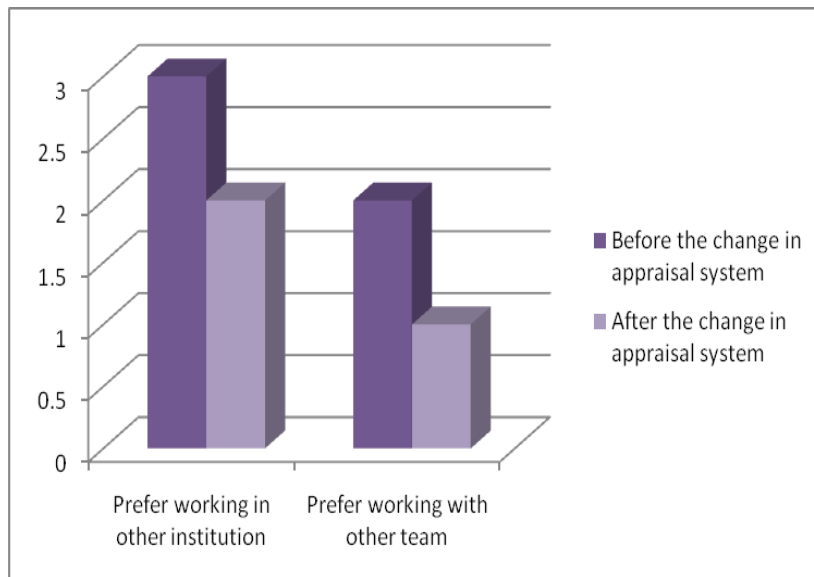
Due to the fact that each month teachers were observed both by the supervisor and by their fellow colleagues simultaneously, each teacher was observed every single lesson. From the graph on the left we can see that the level for both alertness and preparedness has increased since the change in

appraisal system. Prior to the change in the frequency of appraisal the level of alertness was recorded as 3 in average, while after the change in appraisal frequency more frequent observations resulted in the level of alertness of 5=highly alert. However, we can see that the

level of preparedness has also recorded an increase. If prior to the change in appraisal frequency it was ranked 4 in average after the adoption of change in the appraisal system it grew up to 5=fully prepared.

Another major factor contributing to an increase in supervisory satisfaction rate and teachers' self-satisfaction rate was increase in the amount of teacher trainings and workshops. The analysis of the results of teacher trainings and workshops observations allowed saying that teachers were actively practicing skills learned during the trainings and workshops in the classroom. It provided them with necessary resources to enrich lesson process and to adopt a synchronized teaching method within the institution.

The interviews with supervisor and teachers also revealed the importance of the change in teacher trainings and workshops as key factor to increased rate of supervisory satisfaction rate and teachers' self-satisfaction rate. The focus group with teachers revealed that due to the increased number of trainings which went from once every month to once every week and workshops, which amount changed from once every two months to weekly workshops, teachers started feeling more competent. The change in teacher trainings and workshops also affected teachers' perception of the institution, their team and their importance. The teachers confessed to feel more important and more cherished, as more resources and time were spent on their



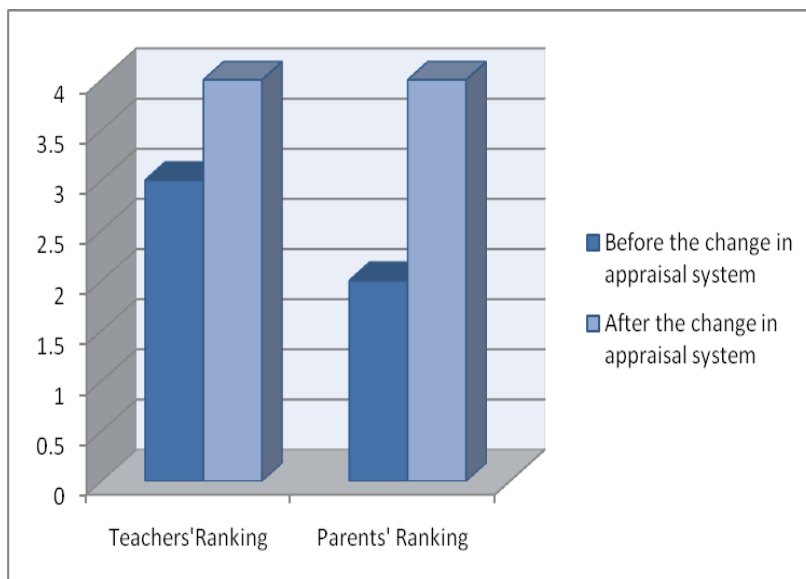
development, which in parallel increased their devotion and loyalty to the institution and team. During interviews and a focus group teachers were asked to rank the extent of their

Figure 11: Teachers Devotion to Institution and Team

preference to work in the current institution and with current team before and after the change in appraisal system adopted by the institution. The range of answers varied from 0 to 5 with 0=not prefer at all, and 5= highly prefer. As we can see from the graph on the left, before the change in appraisal process, teachers' preparedness to work in other institution was 3, which decreased to 2 after the change in the pace of teacher trainings and workshops. Teachers preference to work with other team has also decreased from 2 to 1 after the change in appraisal system. Thus, we can see that the change in the pace of teacher trainings and workshops lead to increase of teacher loyalty and attachment to both institution and team.

Furthermore, the interviews and a focus group revealed that the change in teaching technology served as a major factor contributing to students' progress on achievement tests. The material resource support such as the provision of computers and laptops in every classroom, as well as, higher emphasize on informational technologies contributed to better organization of the lesson process and more students' involvement. As an example teachers stressed the gamification of the lesson, which added more creativity and interest among students. Moreover, the resource support such as free available copies of materials used (books, handouts, printings) led to more involvement of students and increased participation rate among students.

On the other hand the analysis of results of focus groups with teachers and parents, which



aimed to contribute to explanation of raise in both supervisory satisfaction rate and teachers self-satisfaction rate revealed that the increase of the frequency of supervisory

and peer observation also affected the level of teacher emotional stress. Both teachers and parents were asked to rank teachers' sensitivity, before and after the change in appraisal system, from 0 to 5 with 0=totally relaxed and 5=highly stressed. From the graph on the left it is visible that both teachers and parents see the change in teachers' emotional level. Before the change in appraisal system teachers ranked the level of their emotional stress 3 in average. After the change the number increased to 4. We can also see that parents see the difference in teachers' sensitivity, as they ranked the stress level of the teachers 2 in average before the change in appraisal system and 4 after the change in appraisal system. Teachers stated that being under constant observation makes them feel more nervous, and the necessity of creation of a lesson plan and strict follow up with the agenda set on the lesson plane made their lesson process feel more robotic, while in teaching a room should be left for creativity.

During the focus group, parents emphasized change in feedback system, as one of the main factors contributing to decrease in parental satisfaction rate after the adoption of changes in appraisal system. Prior to the change in feedback system they were communicating with teachers verbally. Parents were discussing the issues bothering them in person, while after the change they had to fill in the feedback questionnaire once a month and get the feedback on their children electronically or in a written form, which parents claimed to be inconvenient and not satisfactorily.

To sum up, the main factor contributing to increase in supervisory satisfaction rate tended to be the change in appraisal frequency, which in parallel brought the change in observation frequency. According to observation and interviews results, more frequent observations lead to higher level of teacher preparedness and more competent classroom performance. The other condition contributing to an increase of teachers' self-satisfaction rate

was the change in workshop and training pace, which allowed teachers feeling more important to the institution. It raised their devotion to the institution and empowered their classroom performance skills.

One of the major contributors to increase in students' achievement tests was the change in teaching technology. New material support and lesson plan procedure resulted in slight increase in students' performance during progress tests. However, the changes also brought negative impacts on the student/parents satisfaction rate. The increased amount of observations, trainings and workshops contributed to an increase of teachers emotional stress level, resulting in parents' dissatisfaction with teachers' performance.

The change in feedback system also led to negative consequences. The change of feedback system from verbal to written, shortened the interaction between teachers and students/parents and led to decrease in parents satisfaction rate.

Chapter V – Analysis

Combined Interpretation of Quantitative and Qualitative Data Results

Teacher performance appraisal is an important mean for observing and evaluating teacher performance effectiveness and productivity. It provides an opportunity to study the factors and conditions which have their impact on teacher competency and students achievements. This study looked at the changes in appraisal system in order to measure whether the adoption of new appraisal system has its impact on teachers' performance effectiveness and productivity or not. Through explanatory sequential design of research both quantitative and qualitative data collection was conducted to observe the impact brought by the change in appraisal system. The

combined interpretation of quantitative and qualitative data results provided answers to the following research questions:

R.Q.1 How does the change in appraisal frequency affect teacher performance efficiency and productivity?

R.Q.2 How does the change in teacher training and workshop pace affect teacher performance effectiveness and productivity?

R.Q.3 What is the impact of the change in teaching technology on teacher performance effectiveness and productivity?

R.Q.4 What impact does the change in feedback system have on teacher performance effectiveness and productivity?

The combined interpretation of the results aims to build ground for accepting or rejecting the hypotheses:

H₁: Adopting a systematic performance appraisal system leads to increased teacher effectiveness.

H₂: Adopting a systematic performance appraisal system leads to increase of teacher productivity.

Since there was a wholesale radical change in teaching technology, methods, material support and training methods it was hard to say which particular condition brought the change. However, the analysis of both quantitative and qualitative data allowed us noting which indicators were affected most by this new scope of measure.

The quantitative data analysis showed that there was a slight change in supervisor ratings of teachers. It serves as an indicator of the fact that teachers presented formally more organized and competent classroom behavior during the appraisal after adopting the change in appraisal frequency. The key contributing factor to this change was suggested to be the change in both the frequency of teacher observations, and pace of workshops and trainings. The change in appraisal

frequency resulted in teachers being always prepared to be observed and alert, which in its turn had its impact on their classroom behavior and effectiveness ranking by the supervisor.

Quantitative analysis, i.e. simple difference of means test, showed that there was a slight increase recorded in supervisory satisfaction rate with teachers' performance effectiveness. The correlation was also measured to be statistically significant. This finding is linked to the statement of Meyer (2007), studied in the literature review, who stated that the hectic pace of the current world requires high pace of appraisals. More frequent appraisals allow institutions avoiding the repetition of the same mistakes, as teachers are provided with opportunities to constantly use the skills gained (Meyer 2007). The data collection results of this study confirmed that the increase in the frequency of appraisal led teachers to use the skills gained on daily bases, which increased their performance effectiveness.

The change in the pace of workshops and trainings also contributed to teachers more competent behavior in the classroom. Teachers were inspired to practice skills and knowledge gained during the workshops and trainings, which had positive impact on supervisory satisfaction rate and also raised teachers' self-satisfaction rate. The increased amount of trainings and workshops contributed to teachers' professional development and empowered more skillful behavior in classroom. These results perfectly match the ideas discussed in the literature review by scholars such as Huang and Lin (2014), Poster and Poster (2003), Jürges and Schneider (2007), Davis, Ellett, and Annunziata(2002), Stronge (2006) who stated that independent of the quality of workshops and trainings, their impact is always positive on teachers latter performance.

The qualitative data results analysis showed that teachers recorded high level of aspiration, they felt more important and worthy to the organization. The results showed

coherence with the ideas discussed by Davis, Ellett, and Annunziata(2002) and (Stronge, 2006) who suggest that appraisal should contribute to not only to improvement of the quality of institution as a whole but also to development of each teacher individually (Davis, Ellett, Annunziata, 2002 and Stronge, 2006).

Moreover, the change in the pace of teacher trainings and workshops resulted in not only the increase of teacher competency and contributed to their development, but also raised teachers' devotion to the institution and the team they were working in. The finding exactly links to Lustick and Sykes (2006) claim that appraisal which is devoted to teachers' development results in increase of teachers' loyalty and devotion to institution they work for (Lustick and Sykes 2006).

Although there was a slight improvement in students' achievement tests scores, the simple difference of means test showed that the correlation between the change in appraisal system and teacher productivity was statistically insignificant. The slight increase in the scores of students' progress recording tests came mainly as a result of change in teaching technology such as the adoption of new mandatory lesson plan organization for teachers. The finding complies with the literature review studied for this research. It mainly coheres with Stronge (2011) who states that investment in teaching technology is a necessity for effective teaching. He emphasizes the importance of instructional planning, instructional delivery, and assessment of/for learning in a positive impact of raise in teacher performance effectiveness and productivity (Stronge ,2011). In spite the fact that the scholars such as Middelwood and Cardno (2003) and Lord (1990) looked mainly on the implementation of feedback system as main costs of appraisal, this study showed that not less important was the change in material support. The change particularly included cost of new computers and laptops, emphasizing teaching technology,

which coheres with the establishment and implementation of English teacher performance serial appraisal procedure criteria and standards (2011), copies for each and every student, as well as, the provision of books to each teachers, printing handouts, and etc. Prior to the change in appraisal system these costs were beard by teachers, while due to the change in teaching technology the institution took the responsibility for all the material costs.

Meanwhile, there was a contradiction witnessed in quantitative data analysis. In contrast with increase in both supervisory and teachers' satisfaction rate with latter's performance effectiveness and productivity there was recorded a decrease in parental satisfaction rate. Although the institution did not use parent council opinion polls as a means of reward/punishment appraisal system as in schools of Canada and Poland discussed in literature review by Stronge 2011, teacher- parent communication is a mandatory point in serial appraisal of teacher performance in education institutions of the RA (National Institute of Education, 2011). The institution considered parental feedback as one of the indicators of teacher performance effectiveness and included it in its teacher performance appraisal procedure.

The contradiction presented in data results was discussed to derive from the change in appraisal system, particularly in feedback system. Prior to the change in feedback system, teachers were giving and receiving their feedback verbally. After the change in appraisal system they started providing and receiving feedback in written form. Thus, the findings of this research on the change in feedback system disagree with Lord (1990) suggestion that implementation of written feedback system in organization leads to higher teacher effectiveness. Our study showed that the change in feedback system led to decrease in teacher parent communication leading to decrease of parental involvement in students learning process, and increasing the leverage of the teacher over students. It resulted in the decline of parental satisfaction rate with teacher

performance. According to the results of difference of means test the correlation between the change in feedback system and parental satisfaction rating was statistically significant.

Another factor contributing to the decrease of parental satisfaction rate was mentioned to be the increase in teachers' emotional stress level, which came as a side effect of being constantly observed. This factor parallels with Mintz (2007) and Chang (2009) idea discussed in literature review. They emphasized the phenomenon of teacher stress. The authors claimed that there was a strong correlation between the appraisal process and teacher stress which negatively affects teacher performance effectiveness and productivity (Mintz ,2007 and Chang 2009). Although data analysis of this Master's essay did not support Mintz (2007) and Chang (2009) claim on negative impact of teachers stress level on teacher performance effectiveness and productivity, it supports Huang and Lin (2014) study on the importance of teacher charisma. Consequently, data analysis of this study show that "Dr. Fox effect"² represents more than illusion: parents were inclined to rank teachers based on their charisma rather than on performance effectiveness and students' achievements. Prior to the change in feedback system teachers tended to communicate to parents more and were likely to be more relaxed and positive. Hence, parents ranked them higher.

To sum up, the combined interpretation of quantitative and qualitative data results analysis allowed us stating that the change in appraisal frequency had positive impact on teacher performance; increasing teacher performance effectiveness; however it did not show any significant impact on teacher performance productivity. The frequent observations resulting from the change in appraisal pace provided teachers with opportunity to use their newly gained skills on daily bases, as well as to develop their expertise. Nevertheless, the change in the pace of

² The Dr. Fox effect is a correlation observed between teacher expressiveness, content coverage, student evaluation and student achievement

appraisal also recorded the change in teachers' emotional psychodynamics increasing the teacher stress level and leading to teacher burnout.

Purely positive impact was recorded by the change in teacher training and workshop pace. More frequent workshops and trainings resulted in more competent, aspired and devoted teachers. The change in the pace of workshops and teacher trainings led to increase of not only individual teacher's performance effectiveness and productivity, but also improved the institution's quality as whole.

The change in teaching technology also positively affected teacher performance effectiveness and productivity: particularly, it impacted the level of students' achievements. Students not only showed higher level of participation, but also recorded higher scores on their progress recording tests.

However, the change in feedback system had rather negative impact on institution's effectiveness. The change of feedback system from verbal to written led to significant decrease of teacher-parent communication: thus, resulting in decrease of parental satisfaction rate with teachers. In institutions, where parental opinion polls play contributing part to teachers' performance appraisal process, the point of teacher-parent interaction needs to be carefully designed. The appraisal design should be built in a way that will contribute to teachers' development without increasing the chance of teacher burnout, the level of emotional stress and without decreasing teacher-parent communication.

Conclusion

High quality education serves as a base for proper organization and management of not only professional sphere, but also society as itself. The major contributors to educational process are teachers. Qualified and skillful teachers impact educational process and students' achievements. Study on teacher performance appraisal serves as a valuable mean for observing teacher performance effectiveness and productivity. It allows studying the factors and conditions that affect teacher performance and result in increase of teacher productivity. The study on teacher performance appraisal also provides an insight into educational sphere, through studying the organization work process and various management styles applied in the institutions. It emphasizes teacher aspirations and concerns, as well as, spreads light on teacher-student/parent interaction. The studies on performance appraisal are of high interest to school heads, teachers, school governors, teacher trainers, policy makers and advisors.

This capstone project aimed to study the procedure of appraisal process on policy level and organizational level. It studied the key factors of appraisal system and measured their impact on teacher performance effectiveness and productivity. The study looked at the government decision, minister decree, standards and criteria of appraisal process and teacher development program guideline of the Republic of Armenia. Standards and criteria of English teachers' performance serial appraisal process emphasized the role of teaching technology and teacher development program in appraisal system. It provided clear definition of what teachers should know, be capable of and practice in the field. In the serial appraisal procedure on English teachers' development program, teacher training programs were of utmost importance; however they lack the formulation of workshops procedure in the program agenda. The guideline introduces means and methods of self-development, yet ignores the effect of exchange- in-

practice on teacher development. The studied literature review looked at issues such as the idea behind teacher performance appraisal, the dimensions of teacher performance effectiveness and productivity. It discussed and analyzed the major contributors to teacher performance effectiveness. The main factors were identified as the impact of teacher performance observations, teacher trainings and workshops, teaching technology and teacher-student/parent communication.

This master's essay used a case study method to study the organizational level of teacher performance appraisal policy. The adoption of new appraisal system in the institution provided a setting of natural experiment for the current research. The institution adopted changes in the structure and mode of appraisal, in the pace of teacher trainings and workshops, teaching technology and feedback system, key factors identified through the document analysis of policy on teacher performance serial appraisal procedure. The only factor that was widely discussed on the organizational level, but not mentioned in policy level was the cost of appraisal system.

The research looked into the impact of the change emphasizing particular factors, which mattered most. It aimed to answer to research questions on whether the change in above mentioned spheres has an impact on teacher performance effectiveness or not. Consequently, this research pursued the purpose of accepting or rejecting the raised hypotheses that the adoption of systematic change in teacher performance appraisal system led to an increase of teacher performance effectiveness and productivity.

This study used explanatory sequential design, which allowed usage of both quantitative and qualitative data collection instruments. First quantitative data were collected and analyzed, which allowed identification of special results that needed further elaboration. Next, the

qualitative study was formulated to answer to the questions raised through the analysis of quantitative data findings.

The quantitative data analysis, through simple difference of means test, presented slight, however, statistically significant increase in supervisor ranking of teacher performance effectiveness. It also showed improvement in teachers' self-satisfaction rate with their performance quality. Furthermore, the analysis identified slight, yet statistically insignificant increase in students' achievement tests scores, which represent teacher performance productivity. The quantitative data analysis also identified decline in parental satisfaction rate with teacher performance effectiveness and productivity.

Further analysis of qualitative data results showed that the major factors and conditions which played important role were the change in appraisal frequency, the amount of teacher trainings and workshops, change in teaching technology and decline of teacher-parent communication. The change in appraisal frequency (from once every four months to once every month) and mode (not only supervisor review but also peer review) resulted in teachers constantly being observed.

According to the policy on teacher performance serial appraisal in RA the required frequency of appraisal is every five year, while the maximum frequency is established not less than in two years. The current study recorded statistically significant correlation between the frequency of appraisal and increase in teacher performance effectiveness. This finding serves as a base for us to infer that while on the policy level the frequency of five years interval between two appraisal process is enough, on the organizational level teachers recorded progress in their performance effectiveness, due to an increase of frequency of appraisal.

The policy level also lacks the stress on teacher performance observation by not only supervisors but colleagues as well. The findings of the current paper showed that the increase in the pace of observations resulted in improvement of teacher performance effectiveness. Yet, despite of the positive consequences in form of increased teacher preparedness, more frequent appraisals also negatively impacted teachers' emotional stress level. Teachers showed more stressful behavior and recorded signs of teacher burnout. Standards and criteria of English teachers' performance serial appraisal process provides the description and definition on the role of psychology and methodic of teaching, however, all eight points described in the document are student centered and do not provide information on teacher emotional state of being, or the risk of teacher burnout. As teacher is a key contributor to the quality of education, teacher psychodynamics should not be ignored, hence, the issue of teacher burn-out is necessary point to be discussed at the policy level as well.

Change in the pace of teacher trainings and workshops recorded positive impact on teachers' performance. It increased teachers' formal organization and competency in classroom. Teachers confessed to feel more worthy, aspired and skillful. The change in teaching technology, particularly in material support, led to increase in students' participation and further recording of higher scores on progress recording tests at the end of a course. The role of teaching technology was particularly discussed on policy level. Teacher development program intensively stressed the requirement in the policy on the teacher performance serial appraisal procedure. Teacher development program guideline provided step by step explanation and guiding for the organization and implementation of teacher development program. So far, the findings of the current research showed that on organizational level teacher development program benefits from

frequent training and workshops, while on policy level teacher development program guideline lacks information on workshop and exchange-in-practice among teachers.

Furthermore, the change in feedback system (from verbal to written), contributed to decline in teacher-parent communication, resulting in decrease of parental satisfaction ranking of teacher performance effectiveness and productivity. According to standards and criteria on teacher performance serial appraisal procedure part 3.2.4 teacher-parent communication is a mandatory component of appraisal process. The results of analyzes emphasized the vital point of teacher-parent communication not only on policy level, but also on organizational level. The findings showed that after the change in appraisal system in the institution parents ranked their satisfaction with teachers' performance lower than they tended to do before the change in appraisal system. Meanwhile, neither teachers' performance effectiveness nor students' achievements rates recorded decline, allowing inference that parents rated subjectively. They rated seemingly to "Dr. Fox Effect", which stresses the importance of teacher charisma, a factor actively discussed in the literature review. The analysis allows us inferring that parental survey poll results may provide subjective evaluation. Based on it we see that parent-teacher communication serves as a valid point both on policy and organizational level. Yet, the findings of this research showed that while the communication results in positive outcome, parents' evaluation of teachers tend to be subjective and not valid to appraisal system quality.

The results of both quantitative and qualitative data analysis allow us concluding that the adoption of systematic change in appraisal system led to increased teacher performance effectiveness, thus *Hypothesis 1 : Adopting a systematic performance appraisal system leads to increased teacher effectiveness* is accepted. The adoption of systematic change in appraisal system did not lead to significant increase in teacher performance productivity; which serves as a

ground for us to state that *Hypothesis₂: Adopting a systematic performance appraisal system leads to increase of teacher productivity is rejected.*

Limitations and Recommendations

The main limitation for this study was the shortage of time. The institution has adopted systematic change in its appraisal system since September of 2014 academic year. It provided the research the opportunity to study the impact of change in appraisal system on teacher performance effectiveness and productivity for six months (each course lasts three months, thus, studying two complete courses). Further and more specific analysis will be a valuable benefit.

The major recommendation concerns appraisal design. The policies formulated on teacher performance appraisal should take into consideration the design of appraisal. Teacher performance appraisal should be formed the way that emphasizes the issues of teacher emotional consciousness: i.e. the phenomenon of teacher stress and teacher emotional burnout. The appraisal design should also stress the crucial role of teacher-parent interaction, providing them with more time to communicate. More concrete analysis on how to improve each student outcome will be a precious asset.

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