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RESEARCH ARTICLE

COLLABORATIVE INQUIRY AS A TOOL TO CHANGE THE REALITY OF TEACHER'S PROFESSIONAL DEVELOPMENT IN SAUDI ARABIA

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ABSTRACT

The study aimed at exploring teachers' opinions of the concept of collaborative inquiry as a tool for teacher professional development, and knowing the possibility of its implementation in the kingdom. It included a group of the kingdom teachers of primary school teachers in one of the schools of the north of the Kingdom. The participants are 16 distributed as the following, 13 teachers, 2 administrators, and a headmistress. 8 of the participants are Saudis and 5 are not Saudis. The study used the descriptive survey approach. It applied the questionnaire, and personal interview, and the results showed that the professional development of teachers in its current form does not the professional practices. The teachers pointed out the effect of the obstacles that may prevent its implementation such as many teachers' lack of knowledge of this concept, individualism domination over practices in the school environment, and lack of time required for the implementation of collaborative inquiries inside the school. The results of the personal interviews showed that teachers are aware of the importance of the need for the implementation of collaborative inquiry, and willingness to implementing it for the sake of studying and understanding the problems they face in school. On the other hand, there were different opinions of futility of the current professional development efforts. Therefore, the study recommended to study the concept of collaborative inquiry deeply, and within more time in order to discover its implementation benefits, support cooperation between sectors of higher and public education to provide teachers with inquiry skills, exchange experiences between schools, and improving inquiry skill for teachers through implementing induction programs and development workshops inside the school.

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INTRODUCTION

The teacher's role is one of immense importance in any educational system. The teacher is the main director of most of the learning and teaching processes that has an impact on the achievement of educational goals. Those who are concerned in the field of education are aware of the importance of preparing and improving teacher's skills to construct a good education since there is no good education without high preparation of teachers and faculty members. Caring of professional development of the teacher is a concern, not only in schools, but also in universities. Investigating the reality of professional development contemplative practices is an important thing for development. (see Al-A'anzi 2015, Al-Maso'odi 2010, Shaheen 2012). The reality of teacher's professional development seems to be unable to make an effective change in the field of education. This may be because development process comes from the top of the educational hierarchy till it reaches the

teacher separated from school environment. There are many efforts aiming at development, but its effect on the educational practices is not noticed. The teacher sometimes face difficulties along with the continuous challenges and constant updates. He may also face adaption obstacles along with education updating in light of education development in the Kingdom, and improving teacher's level. Without improving him professionally, projects of education development will not be beneficial. Collaborative inquiry tends to disappear in the kingdom, and this is because many teachers don't know about this concept, and lack skills required for its implementation. Many of them lack experience in scientific research, that are important to implement collaborative research to improve teacher's behavior professionally. It is usually noticeable that efforts of education development focus mainly on development of curriculum not the teacher. There is no doubt that this is a main requirement, but it is not enough. It requires putting the teacher in the center. The failure of development efforts may be due to not giving the teacher the biggest part of development. The inquiries talking about teacher's practices inside the school, in general, and in the class, in particular, are

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so important and active because they highlight the reality of education. Thus, there is a clearer and more accurate image since the teacher became the researcher himself. He also looks for deficiencies in educational practices, and suggests solutions using tools of collaborative inquiry. Collaborative inquiry is considered an international tool for teacher's professional development during his work, since it deals with education, and starts with school. It also constructs a culture of development and exploring, and contributes to more comprehensive development of education.

This study assumes that skills of research and investigation must be mastered by the teacher, and must be within programs of teacher's professional development. Helping in change is a part of this change until he becomes a specialist in addition to what he participates in of workshops and training courses. Collaborative inquiry is important to decrease the gap between the courses that the teachers join to improve themselves, and professional practices that are looked upon negatively because they are useless. The teacher also needs continuous professional development in order to get the benefit of acquiring an international skill as his colleagues in the developed countries in contradiction with development courses that are held one time a year. Implementation of collaborative inquiry in a school is considered to be similar to workshops. Through it, the teacher, with his colleagues, decide the difficulties and aspects that need discussion and development in light of steps of scientific research helping them to find solutions that can be implemented as they rely on school reality. Continuity is one of its advantages that often lead to improving the educational process since teachers need teaching and growth to make changes in the educational system. It leads to professional development stemming from the teacher and his daily practices. It also transfers him from an information carrier into a researcher looking for any default to amend it with his colleague, and for any difficulties to simplify them for his and the students' interest since he is more aware of what happens in the educational environment. He is also closer to putting solutions than those who put them outside the educational process. This results in increasing his quality, and professional research quality in addition to improving the educational environment and psychological satisfaction within the school. Collaborative inquiry requires the efforts of teachers and administrators. A teacher with wide experience and knowledge, and a new teacher. This is very important as they help each other, but they have to take into consideration professional differences due to its benefit for the educational hierarchy. Collaborative inquiry leads the teacher to be responsible and creates a sense of cooperation within a group. It also decreases dangers and removes competition that may have personal aims not related to the goals of educational process. This undermines the basic assumptions of collaborative inquiry, planning, and agreement by experience and practice of the goals of professional development. In an attempt to raise the concept of collaborative inquiry, and recognize its importance for simplifying finding problems and solutions or alternatives for these problems, this study tries to direct attention to the process of development that starts by the teacher and his daily practices, and that tries to make the required change through collaborative inquiry.

Framework and Previous Studies

In many countries, collaborative inquiry is an important tool of teacher's professional development. The concept of learning

based on searching and investigation started to be used at 60s in the period of learning by exploring, that was an interaction against traditional teaching methods. This method is based on constructivist learning theories created by Piaget, Dewy and Vygotsky. This concept started recently to be used collaboratively for the sake of teachers' professional development. Many studied (like Carpenter, Fennema, & Franke 1996) pointed out that continuous real development and change must start by teacher's participation in the process of changing collaboratively taking into consideration the real situation of the school, searching and critically checking educational practices. Saying educational practices, we mean all what a teacher does inside the school whether in or out the classroom through his interaction with his colleagues. The researchers Uline et al, 2004 analyzed 408 of mediation sentences for 86 trainees. They found that their professional practices and be summarized in 5 items. 1- Class Management 2- Teacher's Flexibility 3- Time Management and Preparation 4- Considering individual differences. 5- Issues related to papers and writing. What we mean by professional practices includes all what the researchers mentioned in addition to learning aspects, experience and skills acquired by the teacher. It is worth to say that the added value of collaborative inquiry is supposed to bring in teacher's development professionally is that there is a continuous effort caring of development process whether horizontally regarding time, or vertically regarding coverage such as the whole school community when it is considered as a culture inside the school. Collaborative inquiry requires time, in which the teacher looks at the issues related to his educational practices trying to understand its details and all what is related to it. What happens inside the school leaves a deep impact on the teacher, and this is rare to be done within workshops. (CochranSmith & Lytle, 2004; Hobson, 2001; Horn & Little, 2010; Witterholt, Goedhart, Suhre, & van Streun, 2012) They pointed out that modals of professional development that change teaching from being a traditional process aiming at conveying meaning, into investigation process allowing for decision- making based on the reality of the educational practices that the teacher and student go through daily, and that creates an environment continuously responding to learner's needs. Darling-Hammond and McLaughlin, (1999) suggest that helping the teacher to reconsider his practices requires making professional development for him in the level of teaching and learning. This creates a new vision of what, when and how the teacher must learn. This development method leads the teacher to think of what he is doing, and then the required professional change will exist. This contemplative practice is an important element of teacher's professional development since it connects theory and implementation (Al-A'abd Al-Kareem et al., 2004, Haidar, 2004)

Some studies show the importance of acquiring skills of collaborative inquiry to meet requirements of new curricula. For example, one of the modern studies (Mansour et al., 2013) says, "teachers may be forced to use curricula requiring practices based on research (questioning- investigation), and finding a research culture in the classroom, but the teachers lack the professional development to meet their needs." Al-Mazrou'ei and Al-A'arini (2012) also suggest that most of the efforts of professional development given for science teachers in the Kingdom of Saudi Arabia don't suit requirements of the new curricula. It is also worth to say that collaborative inquiry is distinguished by establishing for culture of collective research and development of the school. This is shown in one

of the studies (Mansour et al., 2007) that suggests " some researchers in teaching science see that teacher's professional development is culture construction rather than skills mastering) A study by Holmes, Group, 1992 pointed out that efforts education rehabilitation in the United States doesn't focus only on teacher's development, but also on transforming his traditional role into the role of the discoverer research. By research, discussion and collaborative mediation, there will be more opportunities of learning and practice development available for teachers since knowledge constructs collaborative community that is called for by Social Constructivism Theory. The target change here requires a new role for the teacher, knowledge and skills the teacher must master in order to be able to perform his new role. Thus, teacher change from the expert role having the knowledge into the researcher, learner, and the partner of his colleagues in the journey of change and development requires teacher's acceptance of this role in addition to the tools that help him to succeed in this role. This change has more effective impact than efforts of traditional development of teachers implied by workshops. Traditional training haven't proved its ability to make a real change in the level of the teacher and his daily practices inside classroom. Conway & Clark, 2003) see that contemplative practice by the teacher must be a basis for new teachers' preparation programs. In addition, (Oja and Smulyan, 1989) see that collaborative inquiry and common experience have 4 advantages which are," 1- its collaborative nature 2- focusing on practical problems 3-emphasis on professional development 4- its need for organizational structur similar to the project to manage time and required support."

through cooperation and experiences exchange. Many educational researches emphasized the effectiveness of interaction and collaborative investigation among teachers (Yang, 2016; Moran, 2007). For example, in Yang's study, the concept of (Community of Inquiry) was applied on a group of teacher communicating online to evaluate and improve their educational practices collaboratively. The results showed the effective role of community of inquiry in improving teachers' level in giving feedback through interaction with their colleagues. (Butler & Schnellert, 2012) tried to describe how collaborative investigation exists among teachers, the form of collaborative investigation among teachers, and the effects of collaborative investigation on teachers' practices and learning process.

Since technology dominates us these days, and strongly affects our practices, it is used in many inquiries to support and enhance cooperation between teachers for professional development. In (Krutka et al., 2014), a close educational platform was used for social communication between trainees. The researchers motivated 77 teachers to communicate and check their educational practices to improve them. The results showed positive interaction between teachers and the effective role of cooperation on their abilities. Some previous studies showed some obstacles facing teacher's practicing of research. (Cochran-Smith and Lytle, 1992) pointed out that teacher's culture hinders his work as a researcher due to the dominant beliefs about teaching and learning. The known role of the teacher is to teach in the school, not a researcher understanding the nature of his work to develop it and solve problems from a

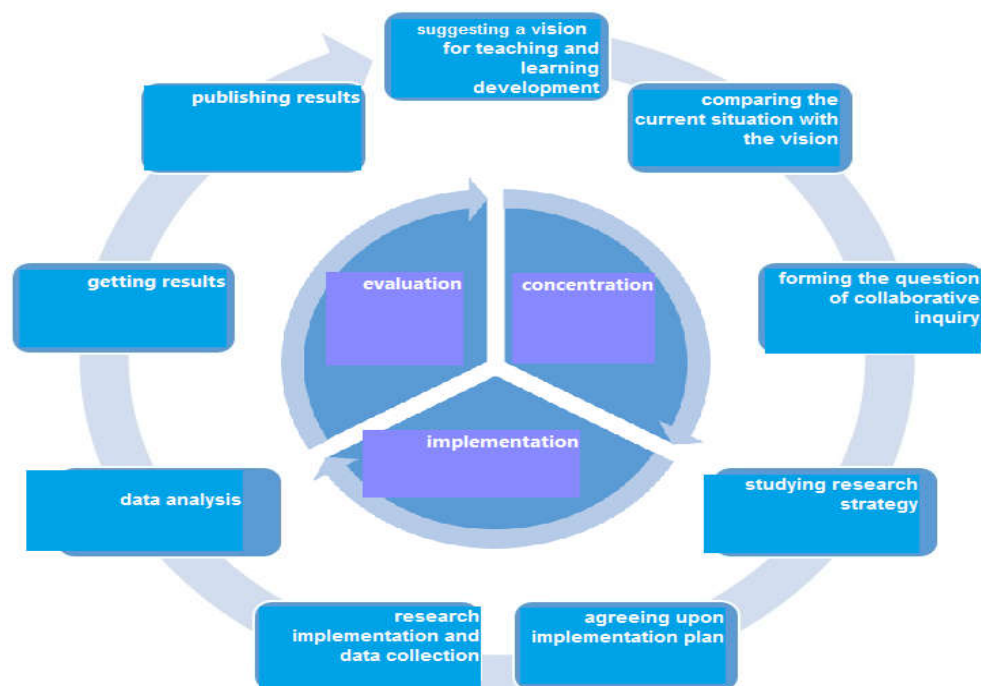


Figure 1. Explains how collaborative inquiry works

Real development exists when the teacher accepts and believes in the importance of developing his practices in order to achieve education goals. This doesn't happen unless the teacher checks his practices, teaching methods, looking for teaching methods and developing his skills inside the school. This is completed when the developmental efforts become in the level of the school. By this, the culture of the practicing community is formed and all of the participants interact and develop

scientific perspective. This view reflects the missed part between school community and researchers in higher education since there is no connection between what's performed in the school and research sections in universities. This connection may help in increasing professional practices inside the school, develop skills, and solve problems and difficulties facing teachers.

Problem of the study

The study talks about the concept of collaborative inquiry as a model to achieve teacher's professional change. It starts from teacher's reality, and touches daily problems that may not be apparent for development efforts delivered from the top of the hierarchy. It does not often give the teacher a place to make this change. This development system is supposed to be the solution suiting all teachers. This is opposite to the reality as each teacher faces different and sometimes similar challenges and difficulties. Because these activities are done by a group of teachers facing educational problems in the same school, changing becomes based on partnership and continuous research within the same school as it controls it and keeps its continuity by noticing practices success and problem solving. Observing the reality of professional development in the present, one can notice that it is not focusing on the teacher within school environment, and doesn't start from needs and priorities suggested by the teacher a practitioner of educational process inside the school. Thus, suggesting collaborative inquiry to diagnose and understand challenges, and then suggest solutions for them by the collaborating teachers in regular meetings in the school adds continuity and permanence to change and development efforts due to its positive effect. Depending on the above, we can formulate the following main question of the research, "What are attitudes of National Education school teachers towards collaborative inquiry as a tool of professional development?"

In addition to the following sub- questions:

- 1- What is the level of teachers' knowledge of the concept of collaborative inquiry?
- 2- What are obstacles that may face implementation of collaborative inquiry?
- 3- What is the relevance of the educational environment to collaborative inquiry in order to increase effectiveness of educational process?
- 4- May this concept be implemented in the environment as a tool to increase teacher's effectiveness?

Study Objectives

The study aims at exploring the attitudes of elementary school teachers about the concept of collaborative inquiry. The researcher also tries to achieve this aim by investigating the following sub-objectives:

- 1- Exploring whether the implementation of the concept is possible in the current teaching environment as a tool to improve teacher's performance.
- 2- Exploring the suitability of the educational environment for the collaborative inquiry to increase the effectiveness of educational process.
- 3- Exploring obstacles that prevent implementing collaborative inquiry.
- 4- Concluding results that may support improving educational environment and increasing teacher's efficiency in kingdom's schools.
- 5- Exploring level of primary school teachers' knowledge of the concept of collaborative inquiry.

Importance of the Study: The study is important for the following:

- 1- It talks about professional development that is an important topic in light of current educational updates.

Teacher's role may be the most important for developing his work. The topic of the study suggest an opposite meaning for professional development focusing on the teacher and considering him a development maker.

- 2- The importance of the study is delivered from the importance of teacher's role in education since collaborative inquiry helps in teacher's professional development through his educational practices.
- 3- Rarity of Arabic studies talking about collaborative inquiry as a tool for changing reality of teacher's professional development.
- 4- This study will provide prior knowledge about suitability of collaborative inquiry and possibility of its implementation since many studies shows effectiveness of this method for professional development as it discusses educational problems and issues related to teacher or to the whole school.
- 5- The study results may be beneficial for improving teacher preparation programs or updating effective programs serving him, and suitability of this concept for the current educational situation in the Kingdom.

Study Terminology

- Collaborative Teacher Inquiry: what a teacher does in collaboration with his colleagues as data collection and analysis, showing results, planning for work to improve teacher's professional practices (Livine, 2010).
- The researcher also defines collaborative inquiry as an integrated collaborative process between school teachers aiming at improving teaching by finding solutions for any problem in classroom practices or educational environment inside and outside school. Thus, it is put in a scientific research with exploration of its causes, results, importance and objectives in addition to discussing results using research tool, and suggesting solutions.
- Teacher's Professional Development during Service: professional growth a teacher achieves as a result of increasing experience and knowledge, exploring and understanding his professional practices.
- Kenny (1994) describes teacher's professional development as a process in which a teacher explores his professional practices to form his own theory towards his work.
- The researcher that collaborative inquiry in professional development holds regular meetings to improve professional practices through researching about points of strength and weakness to solve them. It also deals with education practices and their methods. The curriculum also including searching effects of educational practices on students, and agreeing upon methods of improving education to change the school into a source of inspiration based on teachers' qualities.

Study boundaries

- 1) Human Boundaries: The sample of this study included a group of teachers of one of the private schools in addition to the school principal and the administrator from all majors, (mathematics, social studies, English, Arabic, science, religion, curricula and teaching methods).

- 2) Spatial Boundaries: The application of the study was limited to a private school belonging to the Education management in Qurayyat in northern Saudi Arabia.
- 3) Temporal Boundaries: This study was applied in the first semester of the academic year 1436 -1437.
- 4) Objective Boundaries: A prospective study to determine whether the application of this concept is possible in the current learning environment as a tool to raise teacher performance and increase the effectiveness of the educational process and what may hinder its implementation.

Study Procedures

Study Approach

The study aims at investigating opinions of a specific part of education staff, so questionnaire was used as a tool for answering study questions. A descriptive survey approach was followed to answer study questions through what the sample members say about the educational reality.

Study Community and Sample

The target community of this study is private schools teachers in Qurayyat. The sample consisted of a group of elementary classes teachers and the school principal. There was 16 participations including 13 teachers, 2 administrators and the school principal. 8 of the participants were Saudis, and 5 not Saudis. The average age was 30, the number of courses was 3, and 3 years of experience. The majors were, mathematics, Arabic language, English language, science, religion, and social studies, and art. The sample met in a private school in the north of the kingdom during the first semester 1436/1437.

Study Tools

To achieve the goal of this study, the researcher formed a questionnaire about using collaborative inquiry in the educational environment through looking at previous studies about collaborative inquiry as a tool of teacher's professional development. The questionnaire consisted of 33 items given to elementary school teachers, and they were divided into two parts, the first is demographic information, and the second is study topics including, exploring the possibility of collaborative inquiry implementation in the current educational environment in addition to obstacles may face it, requirement of collaborative inquiry related to teacher and educational aspects, obstacles that may face implementation in the current environment, educational environment requirements to suit the concept of collaborative inquiry, and the effectiveness of the current teacher's developmental programs. Quintet Likert scale (strongly agree, agree, don't know, strongly disagree) was used. Codified personal interviews were held. They discussed questions needing accurate answers since they provided deep answers and possibility of explaining questions. The interview questioned issues that cannot be answered except by the sample. Four teachers of the sample and the school principal were interviewed. It consisted of four questions and sub-questions for each according to whether the answer is no or yes, then there are sub-questions. The interview discussed many topics. The first question dealt with teachers' pre-knowledge of collaborative inquiry and their opinions of whether it provides solutions for education or not. The second question was about the quality of the required development,

the solutions it may provide and that may change school environment into learning environment, whether teachers accept implementation or not, obstacles that may hinder implementation and how to prove that collaborative inquiry is an effective tool for teacher's development. The third question discussed teachers' opinion of creating a collaborative atmosphere inside the school to implement collaborative inquiry and help teachers for doing this. The fourth question discussed teachers' readiness for learning collaborative inquiry skills to improve learning and face obstacles facing them.

Study Validity

To ensure study validity, the researcher viewed it for a number educational majors in Qassim University to give their opinions of sentences suitability for the topic, its clarity, and correction of its linguistic form in addition to suggest any deletion or addition. The tool was modified according to their opinions to get the final draft.

Consistency of Study Tool

To ensure study tool consistency, Spearman- Brown method was used to get reliability coefficient. It was applied to a 28-term questionnaire after dropping demographic information of the participants. It was divided into two parts, the first for uneven terms, while the second for the even terms, then Spearman- Brown correlation coefficient between the two parts was calculated, and it appears to be positive (0.848).

Study Results

Although study sample was a little bit small, it highlighted an important element of educational environment development, and its outputs development this is the change starting from the school and by the teacher to represent the concept of collaborative inquiry. There are lots of efforts for development, but noticing educational situation, one can notice good efforts and methods to change education into better situation. The results of the personal interview showed that teachers believe that there is a need for collaborative inquiry implementation. They also showed their willingness to implement it for the sake of studying and understanding problems facing them in the school. The majority of the teachers said that they discussed problems they face with their colleagues, and benefit from others' experiences even if collaboration is not as it is required. The school principal said, "collaborative inquiry will solve many of teaching problems in educational process development, and making school environment an attractive one. It will also serve teachers in light of their cooperation since it is development of both teachers and learners." The interviews showed that this concept's implementation will face some obstacles as teaching load and limited time. They may limit the benefit of its implementation despite the belief in its benefit and its great effect on the educational environment. One of the teachers pointed out that the large number of classes is an obstacle since the number of classes for each teacher doesn't give her a place for practicing other activities in the school. The school principal also mentioned that she made a collaborative inquiry to investigate and understand the current situation of the school, and identifying points of strengths and weaknesses. There were various opinions about futility of current efforts of development according to some teachers. However, the indoctrination style still exists, and this weakens teacher's role in development, and many teachers said

Teachers' attitude towards collaborative inquiry to change the reality of teachers' professional development

Term	Percentage of teachers' attitudes		
	agree	don't agree	don't know
1- Tries to solve problems in and out classroom	81.25	-	6.25
2- Teacher's development starts from the teacher not educational management	75	-	12.5
3- Changing processes the responsibility of all not, and	75	-	25
4- Use scientific research to solve problems.	81.25	6.25	25
5- Teachers solve problems collaboratively	75	18.75	18.75

Table 2. Teachers' opinions of difficulties that may face collaborative inquiry as a tool of changing teachers' professional development in the current educational environment with all elements of educational process

Term	Percentage of Teachers' opinions		
	agree	disagree	don't know
1- Many teachers' lack of knowledge of collaborative inquiry	80	13.3	6.6
2- School environment supports individual not collaborative work	66.6	33.3	20
3- Ministry's instructions prevent collaborative inquiry implementation	60	20	26.6
4- No training on how to make researches	66.6	6.6	26.6
5- Current school environment is only educational, and no place for researches	53.3	20	26.6
6- No enough time for research due to number of classes.	66.6	20	13.3

that it is important to make courses inside the school to initiate implementation of collaborative inquiry. Looking at statistics results of the questionnaire, we notice that a considerable number of teachers (31.25%) see that the current professional development of teachers doesn't develop teachers' educational practices. Also, the majority of teachers (87.5%) said that they are ready to implement collaborative inquiry with their colleagues. This reflects teachers' willingness of professional development in the school, and cooperation with their colleagues.

Percentage of teachers' attitudes

Looking at Table 1, it is clear that the majority of teachers believe in the importance of collaborative inquiry since it suggests many solutions for the current problems of development. It aims at achieving the required change in teacher's performance through, making development responsibility of all members of the school. On the other hand, we mustn't forget that it's implementation needs collaborative efforts to face challenges if we want to make the reality of education much better. The following table shows teachers' opinions of difficulties that may face collaborative inquiry implementation

- From table, it is noticeable that there are close percentages of agreement that collaborative inquiry helps in solving problems facing teachers. This concept used steps of scientific research to discover problems and their solutions.
- The are typical percentages of whether collaborative inquiry starts from the teacher, or change is teacher's responsibility.
- Despite teachers' lack of knowledge of collaborative inquiry, results shows differences between agreeing and disagreeing on the method of problem- solving by collaborative inquiry.

Table 2. shows that although teachers want to implement collaborative inquiry for professional development, they pointed out some obstacles that may prevent its implementation

- (80%) of the sample see that teachers' lack of knowledge of this concept may prevent implementation.
- (66.6%) of teachers think that current school environment is an individual one due to individual practices, while 33.3% said that collaboration exists in school environment.
- 20% said that there is time available for implementing collaborative inquiry inside the school.

Study Recommendations

According to study results and procedures, the researcher recommends to:

- 1- Spread the culture of collaborative inquiry, and exchanging experiences among teachers.
- 2- Develop skills of collaborative inquiry through implementing developmental courses and workshops inside the school.
- 3- Support cooperation between public education and higher education sectors to build research skills and strengthen schools capacities in research methods.
- 4- Support the researcher teacher, and work to find a society for collaborative inquiry implementation inside the school.

Study Suggestions

In light of study results, the researcher suggests to do the following studies:

- 1- A study similar to this study, but deeper, and within more time to know the benefits of collaborative inquiry implementation.

- 2- A study with a sample of the school society including a big number of teachers and management in the level of the Kingdom.
- 3- A study for finding collaborative research programs between schools.
- 4- A study to discover research capacities of teachers.
- 5- A study to explore the effect of unbeneficial developmental programs to provide the time required for making educational studies.

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