

การประเมินโครงการขยายโอกาสความร่วมมือในการ ปฏิรูปการศึกษา: ศูนย์วิทยากรเครือข่ายการประกันคุณภาพ การศึกษาระดับพื้นฐาน

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บทคัดย่อ

มหาวิทยาลัยนเรศวรเป็นศูนย์เครือข่ายหนึ่งของสำนักงานรับรองมาตรฐานและประเมินคุณภาพการศึกษา (สมศ.) มีหน้าที่สนับสนุนส่งเสริมให้สถานศึกษาสามารถวางระบบประกันคุณภาพการศึกษาภายในสถานศึกษาได้อย่างยั่งยืนโดยการจัดอบรมเชิงปฏิบัติการให้ครู และผู้บริหารสถานศึกษาจำนวน 1446 คน จากการจัดอบรมทั้งสิ้น 12 ครั้ง ใช้รูปแบบการประเมินของเครือจักรภพ โดยได้ติดตามผลผู้เข้าอบรมหลังเสร็จสิ้นการอบรมแล้วอย่างน้อย 6 เดือน เก็บข้อมูลเชิงปริมาณโดยใช้แบบสอบถามและแบบตรวจสอบรายการ ส่วนข้อมูลเชิงคุณภาพใช้การสังเกตแบบมีส่วนร่วม การเยี่ยมโรงเรียน และการสนทนากลุ่ม ได้นำเสนอผลการประเมินทั้งเชิงปริมาณและคุณภาพ ตามมิติ 4 ด้านของเครือจักรภพ ได้แก่ ด้านปฏิบัติการ ด้านการเรียนรู้ ด้านพฤติกรรม และ ด้านผลลัพธ์ต่อองค์กร ดำเนินการอภิปรายใน 3 ด้าน คือ ก) ประสิทธิภาพของโครงการ ข) ความเชื่อมโยงเชิงสาเหตุระหว่างมิติทั้ง 4 ของรูปแบบเครือจักรภพ และ ค) ผลจากการเก็บข้อมูลแบบผสมวิธีที่ส่งผลต่อความตรงของผลการประเมิน

An Evaluation of the Extended Project for Collaboration in Educational Reform: Guest Lecturer Networking Center for Basic Educational Quality Assurance, Thailand

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ABSTRACT

Naresuan University runs a resource person networking center with the Office for National Educational Standards and Quality Assessment (ONESQA) to support the establishment of a school quality assurance system. Participants numbering 1,446 school teachers and administrators from seven provinces near the university were involved in 12 training workshops. The Kirkpatrick evaluation model was employed for the training project evaluation. Mixed methodology of data gathering was used during training and after participants had been back at their schools at least six months. Quantitative methods used were questionnaires and check-lists while qualitative methods used were participant observation, school visits and focus group discussions. Findings are presented both quantitatively and qualitatively according to the four areas of reaction, learning, behavior and results. Discussion includes these three aspects: (a) the effectiveness of the project; (b) causal linkage between four levels of Kirkpatrick's model and; (c) whether or not mixed methods contributed to the validity of the evaluation's findings.

Background

The Thai National Constitution 1997 stated that all individuals should have equal rights and opportunities to receive basic education provided by the state for the duration of at least 12 years. Such education, provided on a nationwide basis, shall be of quality and free of charge. Thus, the first Education Act, initiated in 1999 significantly focused on Educational Standards and Quality Assurances. There shall be a quality assurance system within institutions, and internal quality assurance should be regarded as a part of educational administrative activity that is done continuously.

An Office for National Education Standards and Quality Assessment (ONESQA) shall be established as a public organization responsible for development of criteria and methods of external assessment of all educational institutions at least once every five years and the outcome should be submitted to the relevant agencies and publicized.

Educational Quality Assessment is quite new for Thailand. Confusion between quality assurance and quality assessment occurred right after the announcement of the 1999 National Education Act. Every assessment activity should be finished within six years of the first round. The ONESQA has initiate and operate various exercises such as develop the external assessment system and the criteria, and then conduct the external assessment.

Schools must establish an internal assessment system to support the external assessment from the external assessors. The ONESQA requires the schools to prepare their Self Assessment Report (SAR) and submit it to the parent organization including ONESQA. After that, the external assessors, certified by ONESQA, will be sent to conduct the school assessment. Most schools have no confidence in the quality assurance system and lack knowledge about the SAR. Consequently, only a few SARs have been submitted and the ONESQA estimated that there will still be many schools waiting for the assessment in 2005, the last year of the first round. Therefore, the ONESQA will not be able to complete their tasks on time.

It has been determined necessary to initiate alliances to reform and improve education standards by establishing 13 networking centers with the cooperation of the

regional higher education institutes. These centers will provide knowledge and good understanding of both external and internal quality assurances in accordance with the ONESQA stand. The short term goal of this project is to encourage schools to submit the SAR for assessment while the long term goal is the establishment of a sustainable school quality assurance system.

Naresuan University, located in the lower northern region of Thailand, has served as one of the ONESQA's networking centers. In the fiscal year of 2004, there were 1,446 school teachers or administrators from seven provinces in the lower northern region who participated in 12 workshop projects titled "Project for Collaboration in Educational Reform: Guest Lecturer Networking Center for Basic Educational Quality Assurance, Thailand."

Similar training workshops for the following fiscal year 2005 will be continued. Therefore, the evaluation project should be implemented to monitor and inspect the effectiveness of the former project including recommendations for better performances in the future.

General objectives

To evaluate the effectiveness of the training project and search for recommendations to develop better performance in the future.

Specific objectives:

1. To evaluate the effectiveness of the project.
 - 1.1 To monitor the participants' reactions of the training project.
 - 1.2 To measure the learning gained from the training.
 - 1.3 To evaluate the participants' behavior.
 - 1.4 To evaluate any results that training has had on organizational goals.
2. To search for the recommendations to improve the future project.
 - 2.1 To identify the problems and obstacles found in the training.
 - 2.2 To propose a framework for the future project.

The Significance of Evaluation

The ONESQA and Faculty of Education, Naresuan University, has reviewed for achievements from the prior project in order to optimize methods for future projects.

Definition of Terms

The effectiveness of the project: Evidence demonstrated that the trained schools have established a sustainable quality assurance system and the submitted SAR within six months. Moreover, the participants have shown a positive reaction toward the project including reflecting a good understanding of the content provided, and also respond accordingly throughout the project.

Reaction: The participants' point of view toward the process of training, public relation, registration, venue, timing, topic and guest lecturer.

Learning: The explicit ability in explaining and practicing the educational quality assurance.

Behaviors: The attitudes toward the educational quality assurance and the capability of transferring the knowledge gained from the training in their works.

Result: The ability to practically apply their learning gained from the training such as planning, SAR preparation, self assessment, Plan Do Check Act cycle application, preparation for external quality assessment and the school's continuous improvement.

Related Works

1. The Workshop Characteristics

“An Extended Project for Educational Reforming Collaboration: Guest Lecturer Networking Center for Basic Educational Quality Assurance” was a workshop project held 12 times a year in seven provincial education regions in the lower northern region in Thailand.

The objectives of this project were:

1. To educate and provide knowledge and a good attitude toward internal and external quality assurance to educational administrators and personnel.

2. To establish a sustainable internal quality assurance system among the schools.
3. To prepare the educational institutions for external quality assessment.
4. To encourage the schools to submit SAR for quality assurance in a timely manner.

2. Kirkpatrick's model and evaluation

Kirkpatrick (1976) proposed the four-level model assessment as follows (a) reaction (b) learning (c) behavior and (d) results. The data collection for those four levels should be done during the training and post-training. Kirkpatrick's model has gained much popularity over 30 years for many reasons:

1. they addressed the need of training professionals to understand training evaluation systematically (Shelton & Alliger, 1993)
2. the information about the level four outcome proved very valuable and
3. the fourth level model also is a function of its potential for simplifying the complex process of training evaluation (Bates, 2004)

Even though this model has been widely accepted for many reasons over the years of time, there is some limitation in this model. Bates (2004) criticized that the four levels were not logically related to each other.

3. Mixed Method Research

Both quantitative and qualitative researches are distinctively beneficial and important. The variations among the two research methodologies exist to best answer different questions. The objectives of the third methodology, the mixed method, were to draw from the strengths and minimize the weaknesses of both single research and multiple studies. The mixed method is positioned the center with the quantitative method on the right hand and the qualitative on the left hand. That is to say, mixed method is regarded as the third paradigm. This method was widely discussed by many researchers such as Onwugbuzie and Leech, (2004a) Creswell (2003), Sechrest & Sidana (1995), Brewer & Hunter (1989).

Green, Caracelli and Graham (1989) proposed the reason for the mixed method as follows:

1. triangulation
2. complementary
3. initiation
4. development and
5. expansion.

Various types of mixed method were provided by other researchers such as Johnson and Onwuegbuzie (2004). They suggested the 8-level mixed method consisting of (a) determination of evaluation question, (b) determination whether mixed design is appropriate, (c) selection of mixed method or mixed model design, (d) data collection, (e) data analysis, (f) data interpretation, (g) data legitimation, and (h) drawing conclusion. Each step can be accomplished freely and repetitively if needed.

Method

The evaluators implemented the evaluation questions to set up the project objectives and designs.

The processes of data collection are presented in Figure 1 Table 1 and Table 2:

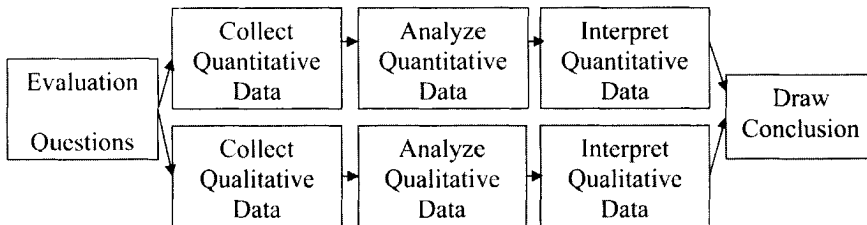


Figure 1 Mixed-method and mixed-model design

Table 1 Evaluation Question and Framework

Evaluation question	Source of data	tools/ methods	Analysis
1. Was the training project effective?			
1.1 What was the reaction of participants toward the workshop training?	Trainees Guest lecturers	Questionnaire Observation Conversation Video recording	Fundamental statistics Content analysis
1.2 What was the participants' level of knowledge and comprehension of the quality assurance system?	Trainees Guest lecturers Schools	Test Conversation Observation School visit	Fundamental statistics t-test Content analysis
1.3 What were the participants' behaviors during and after the workshop?	Trainees Guest lecturers School	Attitude survey Observation Video recording School visit	Fundamental statistics Content analysis Inductive conclusion
1.4 How did the results of the training workshop affect schools?	Trainees Schools	Questionnaire Observation School visit Focus group	Fundamental statistics Content analysis Inductive conclusion
2. What would be the recommendations for the improvement of future projects ?	Trainees Guest lecturers	Questionnaire Conversations Focus group	Content analysis Inductive conclusion

Table 2 Quantitative and Qualitative data collection during and post-training according to factors of evaluation.

During training:	Post- training:
<p>Reaction:</p> <p> Quan.: Reaction Questionnaire</p> <p> Qual.: Informal Conversation</p> <p> Participant Observation</p> <p> Video Recording</p> <p>Learning:</p> <p> Quan.: Pre-post Achievement Test</p> <p> Qual.: Participant Observation</p> <p> Video Recording</p> <p> Informal Conversation</p> <p>Behavior:</p> <p> Quan.: Reaction Questionnaire</p> <p> Implementation Questionnaire</p> <p> Qual.: Learning Performance</p> <p> Learning Product</p> <p> Video Recording</p>	<p>Learning :</p> <p> Qual.: Focus group Discussion</p> <p>Behavior :</p> <p> Quan.: Attitude Survey</p> <p> Implementation Questionnaire</p> <p> Qual.: Focus group Discussion</p> <p> School visit</p> <p> Non participant Observation</p> <p>Results:</p> <p> Quan.: Implementation Questionnaire</p> <p> Qual.: Focus group Discussion</p> <p> School visit</p> <p> Authentic Assessment</p> <p> Non participant Observation</p> <p> Informal Conversation</p>

Source of Data

The source of data taken from the participants in each training session were varied according to the following details:

1. During the training

1.1 The quantitative data providers were participants of the training sessions which contained about a hundred participants each. The trainees consisted of 1,120 school administrators and teachers who were in charge of educational quality assurance.

1.2 The qualitative data providers were trainees who had talked informally to the guest lecturers and interviewed with three guest lecturers as well.

2. Six months after the training

2.1 The quantitative data providers were 200 teachers. Responsible for the school quality assurance system, each was the representative from one of the 200 schools obtained by stratified random sampling with respect to the provinces and sizes of the schools.

2.2 The qualitative data providers were 67 trainees who participated in focus group discussions. The focus group discussions were held in seven provinces, once for each province. Each focus group discussion consisted of 9–10 trainees. These trainees were target-selected from the post-training visit at eight schools in seven provinces.

Data Collection Tools

There were four tools used in collecting quantitative data: (a) The 43 item rating-scale questionnaires about the participant reaction to the training project, (b) The 23 item multiple-choice tests of knowledge and comprehension of the quality assurance system, (c) The questionnaire of attitude toward the educational quality assurance (d) The 45 item questionnaires about the school quality assurance system establishment.

The qualitative data were obtained via (a) the questions used in the group discussion, (b) the field research logbooks, (c) the eight data collectors, doctoral students, at the six months after training period.

Results

The results of the training project evaluation were assessed in the two objective questions as follows:

1. Was the training project effective?

The fulfillment of the project effectiveness was analyzed by processing the data taken from the answers of the four questions of Kirkpatrick's model as follows:

1.1 What was the participant reaction toward the workshop training?

The result analysis showed that the average rating of the trainee reaction to the training was categorized as "Good." Scoring between 4.09–4.48 from a total of 5,

the rating of satisfaction was at 81.80–89.60 percent. There was a high satisfaction rating at the guest lecturers' obvious preparation, the acquaintance of the guest lecturers, the guest lecturers' knowledge of the content, and the communication skills of the guest lecturers. Meanwhile, the lowest satisfaction rating was the convenience of the traveling to the training place which was found among the trainees from some provinces.

On the guest lecturers' and evaluators' observations, it was found that, at the beginning, the trainees attended the workshop unenthusiastically, but soon after the introduction session of the training, they paid more attention to the lecture and smiled when the guest lecturers got down from the stage. In addition, they attempted to discuss with the three guest lecturers on any available occasions.

In summary, the trainees apparently comprehended the concept of quality assurance, regardless of how many times in the past they had attended the quality assurance trainings after which they usually ended up with confusion; this training helped them feel confident to take some action when they returned to their schools. Some of the trainees requested a copy of presentation files in order to educate their colleagues while some invited the guest lecturers to give the lecture at their schools. The trainees' late arrival and absence were not evident on the second day of the workshop. Most of them eagerly participated in activities like the workshop on quality development planning, SAR analysis, SAR report writing and group dynamic of quality assurance which all promoted knowledge, understanding, pleasure, enjoyment and impression. As the participants watched the VCD and the other multimedia presentations, they were assisted in better learning.

1.2 What were participants' level of knowledge and comprehension of quality assurance system?

Before the training, all groups of trainees had knowledge and understanding of quality assurance at a percentage ranging from 53.45–67.55. Similarly, they had clearer understanding and knowledge after the training at the mean percentage of 62.82–85.86. Considering the level of understanding, it was found 10 groups of the

trainees achieved the excellent level with the mean percentage of 77.27–85.86 which was higher than the expected 75 percent. Apart from this, the other two groups of trainees showed the understanding performance at percentages of 62.82 and 65.50 respectively.

Regarding the school visit and group discussion, it was discovered that the trainees had accurate knowledge and comprehension of quality assurance. For example, a school administrator said, “After joining the quality assurance workshop of Naresuan University, I saw quality assurance in a more integrated perspective and was able to explain the concept of the quality assurance system to my colleagues at school.” Concordantly, another school teacher stated, “I used to get bored with the quality assurance work because it was regarded as an extra burden for school teachers, but not anymore after the training, I found that it was incredibly interesting and useful for teachers and students. In fact, we don’t need to make up any documentary evidences. It is easier that we can use our authentic pieces of work as the references. I feel more relaxed when talking about the quality assurance job.” Another teacher informed the evaluators, “Last year, my school quality assurance work was real chaos, trying to make up documentary reference, because we knew very little about the system. In contrast, this year the person responsible for the assurance job attended the training and learned a lot about the whole system and was capable to train the colleagues at school to work on the quality assurance more effectively.”

To conclude, it was assumed that both the quantitative and qualitative results had confirmed that the training project did improve the trainees’ learning.

1.3 What were participants’ behaviors during and after the workshop?

During the training, the participants joined several activities such as planning a proposal to develop an educational quality assurance system, practicing analysis of SAR components, and joining a workshop in SAR writing. After each workshop, the trainees or their representative were required to present their work. Some analytical reading and writing tasks were randomly selected to demonstrate on the stage and then received critical comments from the trainers. The above activities and the trainees’ behaviors had reflected the understanding of quality assurance practice.

At the post-training period, the evaluators visited some trainees at school, having non-participant observation, and conducted the focus group discussions which demonstrated that the trainees could create the Gantt chart and use the Plan Do Check Act in any task. In additions, they became more careful filing reference documents, so they were able to identify the standards and indicators of every project or activity. The document organization and filing system brought about the measurable quality assurance according to criteria and evidences which led to allocating evidences to indicators, prioritizing the goal, and periodically monitoring the task.

After six months, it was found that the trainees held the attitude toward quality assurance training at the mean of 3.79 with the standard deviation of 0.51. The three highest ratings (1= lowest, 5= highest) were on the following items: “Quality assurance improves the school development,” “Quality assurance creates a practical system in school administration,” “Quality assurance encourages teachers to be more enthusiastic at work.” All were at the mean value of 4.30–4.45 with the standard deviation of 0.60–0.64. All of these are the essential parts of quality assurance work. Therefore, it was concluded that the trainees’ behavior resulted from successful training.

1.4 What were the results of the training workshop affecting schools?

According to the National Educational Act, every school should establish an internal quality assurance system. The evaluators randomly selected 181 schools and found that they performed the major tasks as follows:

The results affecting the SAR production: 95.60 percent of schools assigned a committee to be responsible for the school quality assurance system. About 92.30 percent of schools transferred the training knowledge to their colleagues. 90.60 percent of schools prepared a meeting for the quality assurance plan. 83.40 percent of schools planned the quality assurance project. Also, 83.40 percent supervised and monitored the quality assurance project.

The results affecting the school self- assessment: It was found that 96.50 percent of schools arranged the traceable evidences; furthermore, meetings were held to assess the standards and indicators at the percentage of 85.10.

The results affecting the external assessment: It was found that 92.30 percent of schools arranged meetings to inform the staffs and to assign jobs. Also, 92.30 percent were found to arrange the traceable evidences.

The results affecting the ONESQA's goals: 87.30 percent of schools submitted the SAR to the ONESQA. However, when referring to the office of regional education and the interview with the regional chief supervisors who were in charge of the quality assurance, it was reported that there were 3,551 schools of the 7 provincial regions that were externally assessed. As of June 30, 2005, there were still 73 schools or 2.05 percent left which hadn't received the external assessment.

Only 36.20 percent of schools had applied the quality assessment findings to the working development. Likewise, only 49.70 percent of schools had distributed the assessment report for general public audiences.

The consistency of the quality assurance could be assessed through feedbacks from the trainees. One of the elementary administrators proudly told us, "To start the SAR plan, I make my colleagues realize how important quality assurance is for our educational work. It was an essential part of the teaching and learning process of the school. There was no need for anyone to handle more tasks, just do your own routine work, but we needed to record our works more systematically".

Likewise, a school teacher said, "To mention the quality assurance job in the past was unpleasant for me because we already had plenty of routine tasks and teaching. I saw no virtue to waste our time on it. When approaching the deadline to submit the SAR, everybody crammed up to get things done. Some school staffs even made up false evidence to prepare for the external assessment. Now things are getting better. We feel free to introduce the assessors to our real school by letting them interview students, teachers, and parents that will give a more accurate assumption".

There were not only the positive feedbacks as stated above. There also were a number of negative feedbacks. For instance, an administrator of a small school reflected on his quality assurance job saying that "It was compulsory work for us. We all thought that quality assurance work was a real waste of time and money.

We were in a small school that lacked teachers. Nobody was happy to do that, and there was no money left, too.” Another administrator supported that: “We had to use the other schools’ SAR as a model for making our own. Sometime I visited the model schools and copied their files. It helped us to save time and make minimal mistakes.” These informants manifested that there was nothing the training could do to create the quality assurance project in schools because it mainly dealt with the schools’ circumstances. Moreover, when questioned about how the training affected the quality assurance project in schools, they couldn’t explain how the training project affected because the staffs could also get abundant information from many sources like newspapers, television programs, governmental and private homepages, and etc.

2. What would be the recommendations for the improvement of the future project?.

Answering this question there will be four subtopics presented as follows:

2.1 Problems from the trainees

The trainees’ opinions on problems were collected from the answers to the open-ended questions.

2.1.1 The training started too late after most schools had already worked and made mistakes on the quality assurance on their own. This was the main factor causing early retirement of many senior teachers and consequently not having enough teachers.

2.1.2 Even though the training was well understood, the trainees were not sure if they could explain it clearly to their colleagues.

2.1.3 The schools administrators paid too little attention to the importance of quality assurance; they would leave the tasks to teachers after training.

2.2 Suggestions from the trainees

2.2.1 The training should be held sooner and be more public. If possible, it would be a good opportunity for every teacher in school to attend the training.

2.2.2 The ONESQA should issue an example SAR of a successful school as a good model.

2.2.3 Universities should support and lead the quality assurance system in selected schools to be a good example for other schools.

2.3 Guest lecturers' comments on the problems

2.3.1 The local guest lecturers who were administrators from various sizes of schools had different experiences in the quality assurance works which brought about contrasting ideas in the discussion. The disagreement made trainees from small schools feel discouraged to keep up the instructions. Furthermore, those administrators didn't work on the quality assurance by themselves, so they couldn't be a good model for the other trainees.

2.3.2 The trainees came from school of a variety sizes. Those from small schools felt that they were inadequately supported. The instructions administrators from large schools couldn't be applied to small schools because of the different number of teachers and students.

2.3.3 The Regional Education Office should have the updated database of school quality assurance stages in order to accurately notify schools needing to attend the training.

2.3.4 The participants' number was not stable. There were more participants than the expected figures, which made the training venue become crowded and some trainees felt that they were unequally served.

2.4 The suggested framework for the upcoming training

2.4.1 There should be a classification of the trainees according to their school's size and educational context, so their experiences can be shared within the typical group.

2.4.2 The training approach should be more behavioral and the guest lecturers should exemplify the acquainted situations in the lecture for each group of trainees.

2.4.3 There should be more topics on school administration and improvement; for example, the workshop and implication of the strategic planning should especially focus on the key standards and indicators such as the students' analytical and critical thinking skills.

2.4.4 The local guest lecturers for each trainees group should be from the same size as the trainees' school.

2.4.5 The networking center should provide regional training workshops for schools of different sizes and select a model school to be a case study for other schools in the area.

2.4.6 The regional education supervisors should be well instructed about the quality assurance processes and principles so that they can give accurate advice to schools and be the nearest supporters.

2.4.7 The ONESQA should produce a short movie on VCD of excellent schools to demonstrate their effective administration so that trainees and lecturers can pick up some points for discussion.

Discussion

The discussion will cover only three main aspects: (a) the effectiveness of the project (b) the rational linkage of Kirkpatrick's four-level models and (c) the value of mixed method assessment

1. The effectiveness of the project

The effectiveness of the project can be measured by investigating the goals attained based on Kirkpatrick's model.

The reaction: The participants' reaction ranged in the good level (4.09–4.48 out of 5 scales) and it reflected that the participants cooperated well and concentrated on the project. Some of them commented that this training was one of the most distinctive and objective projects in which they have ever participated.

The learning: After the training, two groups of participants suggested they gained a good level of knowledge while another 10 groups placed in the excellent level. The outcome of pre and post-training reflected a significant statistical difference at the 0.001 level. After the school visit, the participants confirmed that they learned and gained more knowledge and better understanding.

The behavior: The participants had shown a positive attitude toward quality assurance with an average rating of 3.79. Most of them strongly believe that quality assurance improved their schools working system. The schools are much improved and the teachers are more energetic. The participants participating in all appropriately provided activities including the quality development planning and SAR analytical reading have transferred their learning into their routine works such as Gantt chart application, PDCA cycle utility and systemized evidence collection. They also are able to assess in accordance with the criteria and evidence provided. Moreover, they are able to choose the appropriate evidence for any standards and indices and also do the follow-up periodically.

The effects on the organization: 87.30% of the trainees' schools were able to submit the SAR within 6 months. From the follow-up survey, all of the expected schools that submitted their SAR and the ONESQA were able to punctually assess every school by August 2005. However, some aspects of the long-termed or sustainable quality assurance system were inadequately applied; examples include the application of the assessment result, the training of quality assurance and skills, and the distribution of the assessment result to the public. These aspects were less practice especially the distribution and the application of the assessment result since most schools hadn't received the formal external assessment report yet. Meanwhile, the assessed schools had not been officially informed by the ONESQA. Some of the schools practiced irrational assessment such as copying the file from the experienced school and easily adapted for themselves while some of them did not even recognize the true intrinsic merit of the assessment.

Employing Kirkpatrick's four level methods, it is quite difficult to draw a conclusion of the projects effectiveness since this model did not consider individual or contextual influence such as characteristics of the organization, working environmental and individual difference which is the most significant input factor (Cannon-Browers, Salas, Tannenbaum, & Mathieu, 1995, p.143). These factors also included organizational objectives and values (Ford, Quinones, Sego, & Sorra, 1992), learning cultures (Tracy, Tannenbaum, & Kavanaugh, 1995), and behavior modification support

and knowledge transferring climate (Bates, Holton, Seyer, & Carvalho, 2000; Rouiller & Goldstein, 1993). However, it is quite difficult to measure solely for effectiveness of the project since the knowledge provided in the training also is easily acquired through different sources such as journals, gazettes, radio and television programs, and even the seminars or trainings held by other organizations. The National Education Act seemed to be most influencing factor for school quality assurance. The above items are just the intervening factors which made it difficult to conclude whether or not the project was effective.

This evaluation, therefore, has been done to inspect the progress of school quality assurance situation. It also stimulates awareness about the importance of quality assurance to the school along with the establishment of evaluation culture in the institutes (Scheerens, 2004). Training should not be regarded as an extravagance or resource draining (Alliger & Janak, 1989, p 333). We hereby wanted to convince trainees that training is the goal-oriented project anticipating the practical outcome for the schools involved.

2. The Rational Linkage of Kirkpatrick's Model.

Kirkpatrick's model has been widely accepted for over 30 years for three important reasons: (a) this model addressed the need of training professionals to understand training evaluation systematically (Shelton & Alliger, 1993), (b) the training evaluation outcome is the most valuable for organization, and (c) this model simplifies the complex process of training evaluation (Bates, 2004).

Kirkpatrick's model data has perpetually compounded so it assumes that there is a casual linkage among each level. This model manifested an assumption that the positive reaction lead to greater learning, which produced greater transfer and subsequently more positive organizational result. In his 1994 research, he stated that "if the training is going to be effective, it is important that trainees react favorably We partially agreed with this statement since the effectiveness of the training project not only depended on the reaction but also many other factors. Suppose that if the training provides an overload of knowledge, such as a package of activities, the

trainee will be able to obtain a lot of knowledge. Thus, they can effectively apply the knowledge in their work; even though they reflect that the training is overloaded and uncomfortable. This outcome shows that even if the training is hard and uncomfortable, the project's effective. As stated by Knowles, Holton, & Swanson (1998) and Rodin & Rodin (1972)

“It ignores the fact that learning is often difficult, and that effective learning often challenges participant to the points that they may experience training as uncomfortable”.

Moreover, Kirkpatrick (1994) stated that “Without learning, no change in behavior will occur”. However, it was inapplicable in all cases. Suppose Mr. A had acquired knowledge about PDCA cycle and applied it in his work; it showed that he had changed his behavior after learning. On the contrary, Mr. B has learned about the same content but did not apply in his work. It meant that no changes occurred after learning because neither did he know the importance of the knowledge nor did he want to change his unorganized working habits. In the meantime, Mr. C was a naturally well-organized worker who always monitored his works without being told or informed about the PDCA. He was apparently using the PDCA though, so this kind of person modeled self-instruction learning. While Mr. D had learned and practiced PDCA before the training, this training gave him a review of the previous knowledge, so he performed the PDCA behavior which might not be the result of the latest training. We can hereby conclude that learning will occur without changes in behavior and behavior will occur without learning from the training.

The outcome of this evaluation showed that the participants positively responded and improved their knowledge 2-4 by points or at the percentage of 8.69-17.39. However, the assumption that the positive reaction influenced better understanding couldn't be stated here since better understanding might be affected by the appearance of post-test. Being aware of the post-test, they concentrated on the specific content. Also they probably had prepared for the test in order to perform well.

The aspect of behavior: As observed from the task sheet activities, the participants showed knowledge transfer during the training but it wasn't certain if they would have the permanent transfer or not. After six months, the evaluator visited and interviewed them at their schools. It was found that some of them still possessed the acquired behavior while others didn't. It was difficult to conclude whether or not that the behavior was the consequence of the training.

The aspect of the benefits for the schools: 87.30 percent of the schools submitted their SAR within six months, but the quality assurance system of some schools was far different from the ideology and reflected the non-sustainable system. The sustainable quality assurance could be accomplished through the full cooperation of everyone in the school. Only two trainees from each school could hardly bring about sustainable quality assurance to their schools. Individual factors such as the number of teachers, the unity and sense of belonging, and the characteristic of trainees influenced the accomplishment of sustainable quality assurance. The participants should examine this matter within their contextual environment. Training alone was unable to provide sufficient assistance to their schools, so sustainable quality assurance by the well-trained participants could not be expected.

The above issues reflected that the prior factors are not rationally related to the followed factors according to Bates's article (2004) --a critical analysis of evaluation practice : the Kirkpatrick model and the principle of beneficence.

3. The validity of the findings by mixed method data collection

The quantitative data collection may accord or conflict with qualitative data collected. The qualitative data collected from different sources may provide different outcomes. Although triangulation had been conducted to find its accordance, the distinct frame still occurred without any mistakes being found. Comparing it to a jigsaw puzzle, each piece is the fact collected from different sources by different methods. Each piece of the jigsaw could have different color even though they belong to the same picture. Johnson & Turner (2003) stated that

“Researcher should collect multiple data using different strategies, approaches, and methods in such a way that the resulting mixture or combination is likely to result in complementary strengths and non-overlapping weaknesses”.

Despite having the quantitative data in hand, some researchers didn't implement them in the findings. Similarly, some were limited only to the quantitative method and ignored the qualitative data. These people lose their chances to design the complete framework for the project evaluation method during the data collection process (Sechrest & Sidana, 1995). Therefore, the validity of the findings by mixed method data collection can be accomplished by minimizing the weakness from preliminary design.

The parallel method of data collection has been applied in this evaluation paper and the outcome analysis has been interpreted based on across-stage mixed model design. The author found the related picture between quantitative and qualitative data on trainees' reaction and learning. However, we discovered a contrasting outcome of the trainees' behavior and organizational results. We presented both pictures in this paper as Onwuegbuzie & Leech (2004b) suggested that

“if the findings are corroborated across different approaches the greater confidence can be held. In a singular conclusion; if the findings conflict then the researcher has greater knowledge and can modify interpretation and conclusion accordingly. In many cases the goal of mixing not to search for corroboration but rather to expand ones' understanding”.

The quantitative and qualitative data on behavior were established by different variables, so we not can draw the conclusion that a parallel or conflicting picture was provided. That is to say, different data collection methods did not prove the invalidity of the method, the tools, and the inadequacy or the inappropriateness of the sample. The well-trained evaluators are able to incorporate safeguards into their inquiries in order to minimize confirmation bias and other sources of invalidity (or lack of trustworthiness) that have the potential to exist in all research.

References

- Alliger, G. M., & Janak, E. A. (1989). Kirkpatrick's levels of training criteria: thirty years later. *Personnel Psychology*, 42, 231-342.
- Bates, R. A., Holton III, E. F., Seyler, D. A., & Carvalho, M. A., (2000). The role of interpersonal factors in the application of computer-based training in an industrial setting. *Human Resource Development International*, 3(1), 19-43.
- Brewer, A. J., & Hunter, A. (1989). *Multimethod research: A synthesis of styles*. Newbury Park, CA: Sage.
- Cannon-Bowers, J. A., Salas, E., Tanenbaum, S. I., & Mathieu, J. E. (1995). Toward theoretically based principles of training effectiveness: a model and initial empirical investigation. *Military Psychology*, 7, 141-164.
- Creswell, J. W. (2003). *Research Design: Qualitative and Quantitative, and Mixed Approaches*. Thousand Oaks, CA: Sage.
- Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11, 255-274.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.
- Johnson, R. B., & Turner, L. A. (2003). Data collection strategies in mixed methods research. In A. Tashakori and C. Teddlie (Eds.), *Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.
- Kirkpatrick, D. L. (1976). Evaluation of training. In R. L. Craig (Ed.). *Training and developing handbook: A guide to human resource development*. New York: McGraw Hill.
- Kirkpatrick, D. L. (1994). *Evaluating training programs: the four levels*. San Francisco: Berrett-Koehler.
- Knoeles, M. S., Holton, E. F., III, & Swanson, R. A. (1998). *The Adult Learner*. Houston, Texas: Gulf Publishing company.
- Onwuegbuzie, A. J., & Leech, N. L. (2004a). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. Manuscript submitted for publication.

- Onwuegbuzie, A. J., & Leech, N. L. (2004b, February). Enhancing the interpretation of significant findings: The role of mixed methods research. Paper presented at the annual meeting of the Eastern Educational Research Association, Clearwater, FL. *Social & Behavioral Research*. 209-240 London : Sage Publications.
- Bates, R. A., (2004). A critical analysis of evaluation practice: the Kirkpatrick model and the principle of beneficence. *Evaluation and Program Planning*, 27(3), 341-347.
- Rodin, M., & Rodin, B., (1972). Student evaluations of teachers. *Science* 177, 1164-1166.
- Rouiller, J. Z., & Goldstein, I. L. (1993). The relationship between organizational transfer climate and positive transfer of training. *Human Resource Development Quarterly*, 4(4), 377-390.
- Scheerens, J., (2004). *The Evaluation Culture Studies in Educational Evaluation* 30, 105-124.
- Sechrest, L., & Sidana, S. (1995). Quantitative and qualitative methods: Is there an alternative ? *Evaluation and Program Planning*. 18, 77-87.
- Shelton, S., & Alliger, G. M. (1993), "Who's afraid of level 4 evaluation?", *Training & Development Journal*, Vol. 47 No. 6, 43-46.
- Tracy, J. B., Tannenbaum, S. I. & Kavanaugh, M. J., (1995). Applying trained skills on the job: The importance of work environment. *Journal of Applied Psychology*, 80, 239-252.