

The Effects of Implementing the Lesson Study Strategy on Developing the Student Teachers' Professional Competencies

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Abstract: This research paper is the product of a research grant project (54/2012) that was approved and supported by the Deanship of Scientific Research at the University of Bahrain. The study reports how implementing the lesson study strategy helps in developing the cooperative teacher's professional skills and student teachers of Cycle 1 in their teaching practice course. The study sample consisted of 10 cooperative teachers and 20 student teachers who were doing their teaching practice course. Questionnaires and interviews were implemented to collect data. The study findings indicate that the lesson study strategy helped both parties develop their professional and teaching skills in terms of critical thinking, reflections as well as raising confidence and developing positive attitudes towards the profession.

Keywords: Lesson study, Teaching Practice, Cooperative Teachers, Reflection Teaching Competencies.

1. Introduction

The current teacher education and teacher training programs offered in many colleges and institutes are generally believed to be focusing more on the theoretical orientation aspect of the teacher candidates than paying sufficient consideration to the professional and practical practice that these candidates should perform while implementing their teaching practice courses in the real field in their schools (Duwaiger, 2002). This reflects the nature of strategic planning and future vision towards what skills and how these new teacher candidates should be prepared to be able enough to join the real practice.

In the literature, several studies indicate the absence of a clear strategy for preparing teacher candidates to perform in the real field within the international standards that enable them to implement higher quality of teaching and achievement. This is supported by other studies which indicate the importance of teaching practicum for teacher candidates. Ameen (2005) mentions that teacher candidates should be provided with the practical opportunities to think and reflect on their professional practice while they are inside the classroom and illuminate the theoretical aspects they have been exposed to in their pre-service programme.

Consequently, Rowey and Hart (2002) state the lack of ideal instructional strategies that teacher candidates can get feedback or reflection on their performance during their teaching practice at school. In addition, they claim that the current strategies are not sufficient enough to supply these teachers with the thinking activities that reflect deep analysis in the performed lesson and provide suggestions for improvement.

In the Arab world and within the Gulf region, serious actions have been taken to improve the educational system and teacher education programmes to enable the new generation of teachers cope with the new trends in instruction and dealing with the learners. Specifically speaking, in the Kingdom of Bahrain a newly founded college, Bahrain Teachers College (BTC) (2008) has been established to fulfill the needs of preparing well-trained and qualified teachers who could lead to make change in the real field and modernize the instructional strategies that are delivered to the Bahraini students. Moreover, a major project of reform to the education section has been launched according to the Bahrain vision 2030. This project is based on enforcing professional development for teachers in order to enable them cultivate their professional skills and manage them within the new theories (BTC Prospectus, 2012).

According to the BTC initial teacher education programme, nine competencies are identified for the teacher candidates to achieve before they graduate from the college. These competencies are: content knowledge, student development, diverse learners, instructional strategies, learning environment, assessment, communication and instructional technology, school community, civic engagement, and reflective practice, ethics and professionalism (BTC Prospectus, 2012).

Based on this, the collaborative teacher (CT) is considered one of the fundamental pillars in developing and cultivating the professional skills of the student teachers in the teaching practice programme. The CT in this regard is expected to perform certain supervision, administrative and evaluation tasks to the students teachers while they are in the real field (BTC Teaching Practice Guide, 2012).

Contrary to what have been mentioned in the above, the student teachers' professional skills have been found to still be below the expected international standard of performance the BTC has always sought. This was clearly emphasized in the summative reports sent to the teaching practice group by the college supervisors whose feedback highly focused on the current role the CTs were playing and the actual role they should be performing. This situation has led to the fact that student teachers who are sent to schools to do their teaching practice course are believed not to gain the professional skills they are expected to do. This was evident in the university supervisors feedback and course assessment reports submitted to the Teaching Practice Office. In addition, formative feedback gained from the principals' observation upon the concerned students indicated this finding as well (TP Course Final Report, 2011-2012).

Reviewing the literature shows that many studies emphasize the importance of improving the professional and supervision skills of the collaborative teacher as he/she is considered the real reference for those student teachers' training to enable them fulfill the target BTC competencies. For instance, Shaker (2003) calls that collaborative teachers face serious challenges while supervising student teachers during their teaching practicum and suggests that definite orientation programmes should be designed to those teachers to equip them with the fundamental skills and knowledge of the roles they have to do with their student teachers. Moreover, Sonya (1991) suggests that collaborate teachers should be engaged in reflective thinking activities and interviews done with the student teachers. She stresses that practicing reflection during practice on the part of the CTs will have its positive impact on these student teachers. Market. Al. (N.A.) conducted a study on educational

supervision and concluded that collaborative supervision is an effective method to foster communication and determine the learning outcomes for the CTs. The study also indicates that collaborative supervision will lead to experimenting new and innovative ideas and taking group decisions. In the same trend, Marry and Linda (1998) echo the necessity of continuous collaboration between the CTs and their student teachers.

On terms of the collaborative teachers' roles, AlQahtani (2004) indicates that CTs are still not well identified of their roles as supervisors and collaborators of teaching and learning with their student teachers during the teaching practice programme. He also states that CTs are usually found to perform away from their student teachers which lead the latter to feel isolated while in school. In this regard, Ashoor (2002) suggests a new design of the training programmes for the CTs that are based on rephrasing their current practical practices in order to enable them to restate their beliefs and values about the profession.

As an attempt to go over this dilemma of preparing teacher candidates for practice in the real context, new strategies have been designed to ensure full involvement of the major professional community in the teaching practice context who are the student teacher, college supervisor and the collaborative teacher. One of these strategies that is considered significant is lesson studies. According to this strategy, the three parties of the professional community (i.e. the student teacher, the university supervisor and the collaborative teacher) are the participants who work together in a very close interaction along all the steps of the lesson starting from planning through implementation till evaluation of the implemented lesson (Fernandez; 2002). In this regard, Lewis et.al. (2004) mention seven key performance skills as a result of implementing the lesson study strategy. They are: 1) increasing subject-content knowledge, 2) increasing lesson structure knowledge, 3) having organized observation to the learners, 4) raising collaborative learning among students, 5) focusing more on long term objectives, 6) motivating students to learn more, and 7) becoming more professional in producing high quality lesson plans. In addition, the lesson study strategy suggests that the partners collaborate in creating contextual situations of teachers teaching inside the classrooms and provide the new student-teachers with great opportunities to simulate, contextualize and reflect on these situations (Rock & Wilson, 2005).

This strategy reveals the significant role the collaborative teacher would play in this strategy (Lewis, 2005), however, high dissatisfaction of the

assigned role of the collaborative teacher in assisting and supporting the new teacher candidates within the lesson study strategy has been indicated. One reason for this dissatisfaction could be linked to the current traditional approach those collaborative teachers are still adopting for their teaching while they are with the new teacher candidates (Ashoor, 2002). Another reason is the lack of preparation of the collaborative teachers to enable them interact and deal positively with the student-teachers when they are working together in the real school context (AlQahtani, 2004).

At this stage, it can be inferred that the lesson study strategy is considered an effective instrument by which both the collaborative and student teachers can develop their professional skills and successful learning and teaching can occur plus reshaping their beliefs about their role in the teaching practice course (Hubbard, 2005). In addition, this strategy is believed to have its positive effects on students' learning inside the classroom (Podhorsky, 2005). Nevertheless, Lim et. al. (2001) find it is necessary to persuade teachers of the benefits of the study lesson strategy. The study also indicates the importance of offering the required tools to support this strategy, such as the assigned curriculum, teaching resource books, assessment examples and the resource persons who can act as leaders to the collaborative teachers in the school. Therefore, I believe that in this study that implementing the lesson strategy in the teaching practice programme for the teacher candidates will assist more in developing these teachers' professional skills.

Based on the above, this study intends to investigate the importance of implementing the lesson study strategy for teacher candidates during their teaching practice programme in school. It also seeks to fill the gap of having lack in such studies in the lesson study field in the Arab world.

In this study, the following terms are defined as follows:

Lesson Study Strategy:

It is a means through which professional communities in practical context can interact, deal and work together depending on collaboration between the student-teacher, the collaborative teacher and the university supervisor along the lesson stages.

Teaching competencies:

Specifications that are reflected in teacher's performance that indicate quality and innovation.

Collaborating teacher:

A key participant in the teaching practice team in school who is administratively and professional and

socially responsible of the student-teacher during the teaching practice course in school.

2. The study

This study investigates the effectiveness of implementing the lesson study strategy for the new teacher candidates when they are doing their teaching practice in schools. Specifically, the study aims at:

- 2.1 determining the actual role of the collaborative teacher within the lesson study strategy.
- 2.2 Identifying the effects of implementing the lesson study strategy by the collaborative teachers in developing the student teachers' professional and subject-matter skills on the undergraduate level.

3. Study questions

This study attempts to answer the following major question:

What is/are the effect(s) of implementing the lesson study strategy by the collaborative teacher in developing the student teachers' professional skills at the undergraduate level specializing in math and science at the Bahrain Teachers College (BTC) at the University of Bahrain?

Two minor questions can be derived from the above question:

- 3.1 What is the impact of implementing the lesson study strategy by the collaborative teacher on developing the student teachers' teaching competencies in their specialization?
- 3.2 How do the collaborative teachers perceive their roles after implementing the lesson study strategy?

4. Significance of the study

The present study is considered significant for the following:

- 4.1 It contributes in determining a specific theoretical framework about the lesson study strategy that enables the collaborative teachers to develop and enhance their performance while working with the students teachers inside the classroom.
- 4.2 It responds to those professionals who are calling for creating new strategies for preparing teachers and assisting them develop their professional skills.
- 4.3 This study can be considered as an action plan to how collaborative teachers should implement the lesson study strategy in their own lessons and what teaching skills they should develop in this regard. Hence, this study may be considered – to the best of the researcher's knowledge – the only

study carried out in the Bahraini educational context.

5. Limitations of the study

This study is limited to the following perspectives:

5.1 The objective perspective: the study investigates the collaborative teachers and their effects on using the lesson study strategy when supervising and working with the student teachers during their teaching practice course in school. It also investigates the teaching competencies that exist in the performance evaluation forms utilized at the BTC.

5.2 The location perspective: the study was conducted on 20 student teachers and 10 collaborative teachers.

5.3 Period of study: the study was carried out within the period between 15th, Sept. 2011 till 15th, Nov. 2011.

6. Methodology and procedures

The study follows two research methodologies to achieve its aims:

- It employs the descriptive approach in reviewing literature that deal with lesson study strategy and its effects in developing teaching competencies for student teachers.
- It also employs the experimental approach – one way independent group – through pre-post evaluation of using lesson study strategy by the collaborative teacher in developing student teachers' teaching skills.

Regarding instrumentation, two main instruments were used:

- Interviews: to investigate collaborative teachers' perceptions of using lesson study strategy while teaching inside classroom and supervising student teachers.
- Performance evaluation forms: the evaluation forms designed and utilized by the BTC to assess and evaluate student teachers' performance while they are in their teaching practice (see appendices 1 & 2).

An approval for conducting the study at the BTC was obtained from the college administration and head of the teaching practice Group at the BTC.

With regard to procedures, the study was conducted as follows:

- A pre-post assessment performance form for the student teachers was constructed using the current performance evaluation form.

- Interviews were conducted with assigned collaborative teachers before using the lesson study strategy.
- A general meeting was held with the student teachers and their collaborative teachers to explain and clarify the target strategy and role of each party during the course.
- Implementing the lesson study strategy by the collaborative teachers for 4 weeks, the duration of the teaching practice course at the BTC. This was done as follows:
 - The professional community involving the collaborative teacher (CT) and the student teacher (ST) meet to prepare for the lesson and then explain to the university supervisor (US) how the lesson was planned for.
 - Student teachers teach in their classes and take notes of points of strength and weaknesses then suggest ways of improvement.
 - Meeting after classes to exchange opinions and discuss ways of improvement.
 - This process lasted for 8 days covering 56 training hours after which collaborative teachers were interviewed (post evaluation) and compared their responses to those evaluation forms gathered by the USs about the student teachers evaluation.

7. The study sample

The study was conducted on 10 collaborative teachers and 20 student teachers who were in their 3rd year in the Bachelor in Education Programme (B.Ed.) – Math and Science specialties at the BTC during the 1st semester of the academic year 2011/2012.

According to Table 1, the evaluation of the student teacher's performance is done by stating one of the descriptions to the teaching competencies. In case, the student teacher's performance was found to exceed 2 or 2.5 then performance can be classified as exceeding competency and vice versa.

8. Data analysis

To answer the first question: What is the impact of implementing the lesson study strategy by involving all the three parties, that is the collaborative teacher, the student teacher and the university supervisor on developing the student teachers' teaching competencies in their specialization? A comparison was made between the general percentage of performance evaluation of the student teachers before and after using the lesson study strategy by the collaborative teacher. This comparison can be shown in the following table:

Table 1: Comparison of Student teachers' Performance Before and After Using the Lesson Study Strategy

Teaching competencies	Performance Description	The level of performance of the qualifications of teaching competencies					
		Before			After		
		Students	Top of Form PercentageBottom of Form	overall percentage	Students	Percentage	overall percentage
Familiarity with the content of planning	Exceeded efficiency	13	65%	71.8%	14	70%	75.5%
	Efficient	6	30%		6	30%	
	Not Efficient	1	5%		-	-	
	Not available	-	-		-	-	
Familiarity with the methods of teaching	Exceeded efficiency	8	40%	20.2%	12	60%	32%
	Efficient	2	10%		5	25%	
	Not Efficient	6	30%		2	10%	
	Not available	4	20%		1	5%	
Familiarity with learners' characteristics	Exceeded efficiency	5	25%	18.6%	8	40%	30.6%
	Efficient	4	20%		7	35%	
	Not Efficient	7	35%		3	15%	
	Not available	4	20%		2	10%	
Assessment & evaluation skills	Exceeded efficiency	7	35%	42.6%	11	55%	65%
	Efficient	5	25%		7	35%	
	Not Efficient	5	25%		1	5%	
	Not available	3	15%		1	5%	
Occupational characteristics	Exceeded efficiency	6	30%	37%	10	50%	57.7%
	Efficient	5	25%		6	30%	
	Not Efficient	7	35%		3	15%	
	Not available	2	10%		1	5%	
The overall performance of the qualifications of teaching competencies				63.4%			87%

The figures in the above table show that a significant improvement has occurred in the student teachers' performance after implementing the lesson study strategy by their collaborative teachers. This can be seen from the average performance registered for the student teachers (87%) while it was (63.4%) before implementing the lesson study strategy which indicates an increase above the normal level with more than 80% than 50% for their performance before implementing the lesson study strategy.

This comparison between the student teachers' level of performance before and after the use of lesson study strategy by their collaborative teachers corresponds to what Rock and Wilson (2005) indicate in their study that teachers' teaching competencies improves when they implement the lesson study strategy techniques in their teaching.

In addition, the study findings reveal that using the lesson study strategy improves student teachers'

collaboration skills and this can be seen in the competencies that registered before and after using the strategy (71.8%-75.5%), (20.2% - 32%), (18.6%-30.6%), (42.6%-65%), (37%-57.7%) which indicate the influence of this strategy on fostering collaboration among the professional community for better performance. Sims and Walsh (2009) support this and argue that analyzing lessons is essential to identify the areas of collaboration between the teachers in schools.

With regard to the occupational competencies, the results show a slight improvement of not more than 37% before while it became 57.7% after application. This increase can be referred to the use of the lesson study on the part of the collaborative teacher while he/she was accompanying the student teacher. This implies the importance of professional support as it positively affect the student teachers' psychological and professional growth plus that it fosters the positive work ethics and values that they should adopt in their future career.

Yet, the percentage registered for the student teachers for evaluation competencies (42.6%) before and (65%) after application can be considered acceptable as it still indicates an improvement in those teachers' performance.

Overall, the findings indicate that 18 student teachers registered exceeded competency and only 2 student teachers were below the average which indicates the improving those teachers have achieved on the level of reflection and deep thinking of their performance after the application of the new strategy.

To conclude, the above discussion represents an answer the study question (1) as it implies a significant improvement on the part of the student teachers in their teaching competencies after being applied by their collaborative teachers.

With regard to the second question: **How do the collaborative teachers perceive their roles after implementing the lesson study strategy?**, the analysis of the respondents' responses from their interviews shows a shift of perception of their roles after using the lesson study strategy. The following tables, (2) and (3), illustrate this more clearly:

Table (2) demonstrates that the CTs' perceptions before they use the lesson study strategy reflect an unclear if not a mist understanding of their roles as collaborative teachers to their student teachers. This was clearly indicated in item 2 which is relevant to evaluation and assessment. This contradicts with what they perceived of their roles after implementing the new strategy as is shown in table (3) in which they

Table (2): Perceptions of collaborative teachers of their roles before their use the lesson study strategy

Frequency	Perceptions of collaborative Teachers of their Roles
1	I do not have a clear vision for the work assigned to him toward students, teachers.
2	Do not have time to offer feedback to students teachers.
3	Attend student teacher with me in grade without knowing the purpose of attending
4	Student teacher is responsible for himself inside the school.
5	I do not know the name of the entire student teacher.

Table (3): Perceptions of collaborative teachers of their roles after their use of the lesson study strategy

Frequency	Perceived Roles after implementing the lesson study
1	I feel that the strategy of lesson study help me in my experience for students, teachers better
2	Accustomed to attend daily meetings to discuss and reflect on teaching practices.
3	Older immediate feedback to students, teachers
4	Older teachers for all students and I feel my responsibility towards them.
5	I love the student teacher for the teaching profession, and always encourage him
6	I see the need to use the lesson study strategy on an ongoing basis
7	I see the need to change the culture towards practical education teacher.

view themselves as being more aware of themselves and their planning towards their student teachers. This goes with what Sotirhos' (2005) suggestion that using lesson study strategy leads teachers to become more aware of their professional role as supporters of collaborative work and careful planning. In addition, Hubbard (2005) and AbdulJawad (2008) stress that using lesson study in teaching motivates teachers more to collaborate and work together and this is what is stated in this study as well as it is revealed in table 5.

9. Implications

The study findings imply the necessity of implementing the lesson study strategy during the teaching practice course on the part of the collaborative teachers. This implementation can be achieved through:

- a road map prepared and carried out by the BTC to involve the collaborative teachers in implementing the lesson study strategy while supervising their student teachers in the teaching practice programme at the BTC (Lim, 2011; Fernandes, 2002; Rock & Wilson, 2005; Lewis et al., 2004; Lewis, 2005; Hubbard, 2005; Podhorsky, 2005).
- Designing specific training programmes for the collaborative teachers at the BTC to facilitate their roles in supervising and leading their student teachers, and also to overcome the challenges when they use the strategy (Podhorsky, 2005).
- Motivating collaborative teachers to implement the lesson study strategy and persuade them to benefit from using it with their student teacher and this can be achieved through decreasing their administrative tasks, promotion, etc. (Evans, 2001).
- Offering the necessary tools that will support the collaborative teachers in getting more involved in the lesson study strategy, such as getting access to curriculum materials, books, assessment examples, and most importantly the resource persons who can lend support to these teachers and let them successfully implement the lesson study strategy.

10. Conclusion

The results obtained in this study imply that collaborative teachers should use the lesson study strategy when they are supervising their student teachers while the latter are in their teaching practice course. This is because this strategy fosters those learners' professional skills and creates a more professional environment that is full of support and collaboration.

References

- Abdulrahman Moh'd, A.J. (2008). Effectiveness of Lesson Study Strategy in Developing Professional Development for Math Teachers according to the Japanese Experience in Achieving certain National Standards. 20th Scientific Conference for Educational Curricula and Cultural Identity. Egyptian Association for Curricula and Instruction. University of Ain Shams Proceedings: Dar AlDiyafa, 2, 589-641
- AlGahtani, S. A. (2004). Role of Collaborative Teacher in Preparing Trainee Teachers during their Teaching Practice Period. *Arabian Gulf Message Journal*, 15(1), 37-79.
- Ashoor, Khalid Khamees. (2002). Practical Field Experiences in the Initial Teacher Education Programmes Based on Performance. 12th Conference of Educational Curricula Research. University of Ain Shams: Dar AlDiyafa.
- Bahrain Teachers College. (2010). Teaching Practice Guide for Bahrain Teachers College Students. University of Bahrain: Bahrain Teachers College.
- Bahrain Teachers College. (2012). Bahrain Teachers College Prospectus 2010. University of Bahrain.
- Duwayger, Layla. (2002). Suggested View to Develop Educational Supervision in the College of Education at the University of Bahrain. *Journal of Educational and Psychological Studies*, 3(1), 43-70.
- Fernandez, C. (2002). Learning From Japanese approaches to professional development: The case of lesson study. *Journal of Teacher Education*, 53(5), 393- 405.
- Lewia, C. Perry, R-, & Hurd, J. (2004). A deeper look at Lesson Study. *Educational leadership Journal*, 61(5), 18- 23
- Lewis, C. (2005). How do Teachers learn during Lesson Study? In P. Wangiverson & M. Yoshida (Eds.) *Building our understanding of Lesson Study*. Philadelphia: Research for better school.
- Lim, C. Lee, C- , Saito, E. & Haron, S. (2011). Taking Stock of Lesson Study as a Platform For Teacher development in Singapore. *Asia- Pacific Journal of Teacher Education*, 39 (4), 353- 365.
- Moh'd Ameen, Eman. (2005). Effect of Using Microteaching in Preparing Kindergarten Teachers in Developing their Teaching Skills and Performance. 14th Scientific Research Conference: Educational Curriculum Under the Light of Performance. Egypt: University of Ain Shams, 213-228.
- Moh'd Shaker AbdulKereem, Osama. (2003). Managing and Organising Teaching Practice in the Colleges of Education in Egypt. *AlTarbiya Journal*, 30, 95-139.
- Puchner, L. D- & Taylor. A. R. Lessons Study, Collaboration and Teacher efficacy: Stories Form Two Schools – based math Lesson study groups. *Teaching and Teacher Education Journal*, 22 (7), 422 – 934.
- Rock, T.C- & Wilson, C- (2005)- Improving Teaching Through Lesson Study. *Teaching Education Quarterly*, 32(1), 77- 92
- Rowley, J- & Hart, P- 2002. Print and Video Case Studies: A comparative analysis. In J.McIntyre, & D.M. Byrd (Eds.), Thousand Oaks, CA: Corwin Press, Inc.
- Sonya, T.C. (1991). Characters of Reflective Thought During the Student Teaching Experience. *Journal of Teacher Education*, 50(3). 173– 181.

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Appendices:**Appendix (1) Teaching competencies implemented in the performance evaluation forms for students teachers****Teaching competencies implemented in the performance evaluation forms for students teachers**

Ranking	Competencies	No. of items	Percentage
1	<i>Familiarity with the content (planning)</i>	3	15%
2	<i>Familiarity with the methods of teaching (teaching)</i>	6	30%
3	<i>Literacy teachers (creating an educational environment and taking into account the needs of students)</i>	5	25%
4	<i>Skills assessment and evaluation (observation and meditation)</i>	3	15%
5	<i>Occupational characteristics (psychological commitment to growth and professional when students, promote the values of basic civil)</i>	3	15%

Appendix (2) Description of performance level and performance evaluation competency in the evaluation form

Description of performance level and performance evaluation competency in the evaluation form

Performance Description	Performance Degree
exceeded efficiency	2
Efficient	1
Not Efficient	0
Not available	0