The Effects of the Research Lesson Study (RLS) Model on Teachers’ Professional Development

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ABSTRACT

The aim of this study is to define the impact of the Research Lesson Study (RLS) Model on 27 pre-secondary and secondary school teachers belonging to the Istanbul Provincial Directorate of National Education, who were involved in the “Intel Teach - Advanced Online” (ITAO) teacher training course: 27 master teachers, selected from 105 teachers as a study group, were trained in three different sessions of ITAO. The study was initiated with five-day teacher trainings in the academic years 2013-2014 and 2014-2015 through an action research model. The 27 master teachers in this study were selected based on the criteria of their design skills, their aptitude for teamwork, and their willingness to participate in this study. Master teachers from different subjects were grouped in teams of 3 and collaborated to design their learning paths and to test the methods learned in their classrooms. At the same time, they took on the role of moderators during the ITAO teacher trainings and, in the final stage, they led teacher training during cascading seminars. The qualitative findings of the study indicated that the RLS Model enhanced the interaction among the teachers, peer learning and the perception of effectiveness. In addition, this model paved the way for the exploration of interdisciplinary teaching, innovative methods in instructional design, and the integration of ICT in classroom implementations and adult education.

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Keywords:
Research Lesson Study, Teacher Professional Development, Instructional Design

Introduction

With increases in the quality of the workforce, educational organizations have come under increased pressure to provide higher quality education. Much attention has been paid to “the professional development and quality of the teacher” (İlgan, 2013, p.1), as it is one of the most important factors affecting student learning. Looking at reforms in developed countries, it is seen that teacher training systems, teacher qualifications, working conditions and teacher motivation have all been considered as a whole (Milli Eğitim Bakanlığı [MEB], 2006). When the professional development of teachers and in-service practices overseas are examined, the range of practices and processes stands out. Continuous Professional Development (CPD) is considered a professional duty for teachers in over 20 countries. While it is a professional duty in France, the
Netherlands, Sweden and Iceland, participation is voluntary. In Spain, Luxembourg, Poland, Portugal, Slovenia and Slovakia, participation is also voluntary, however, this training is closely linked to career development and wage increases (Eurydice, 2008). According to the results of OECD (Organisation for Economic Co-operation and Development) 2005, in around one- quarter of OECD countries, teachers must complete professional activities to receive promotion and re-certification (Scheeren & Hendriks, 2009). Thus, OECD countries have created training plans for teachers' continual professional development. As part of the Lisbon process, the aim was to increase the quality and effectiveness of education and teaching systems in Europe by the year 2020 (Caena, 2014). The European Commission's Improving the Education Level of Teachers and Educators Education and Training 2020 (ET 2020) Working Plan is seen as supporting and tracking partnered learning, information exchange through computer conferencing, good examples and data sharing (TALIS, 2011). These plans may be developed as part of a local or school-based development plan. The General Directorate of Teacher Development and Education (MEB, 2007) states that in School Based Professional Development (SBPD), teachers are responsible for the development of their schools and themselves, and that they must ensure a holistic school-environment for this development, supporting it with time and resources, developing materials, sharing experiences and providing their close circles with the necessary opportunities.

One of the SBPD models, used widely in Japan, is the Research Lesson Study (RLS) model, which is an innovational approach focusing on cooperation between teachers (Lewis, 2000; Lewis & Tsuchida, 1998; Stigler and Hiebert, 1998; Yoshida, 1999). Stigler and Hiebert (2009) considers that RLS depends on the principle that "if you want to improve your teaching, the most effective place to do this is the classroom" (p.111). This model ensures that teachers cooperate, that they base their learning on cooperation, that they share ideas and take successful practices as models. In this way, a rise in teachers' self-confidence and self-respect is expected and their feelings are more likely to be more valuable and better supported in their development.

This model requires teachers to regularly meet in groups with the aim of designing, implementing, testing and improving one or two “Research Lessons” (Stigler & Hiebert, 2009, p.111). The collective lesson work implemented both in-service and during the pre-service period in Japanese schools begins with setting out aims that will ensure the learning and development of students (Lewis, Perry & Murata, 2006). According to Murata (2011), planning, implementation, and reflection in the RLS model are carried out in a cycle. Examining the lesson process in the RLS learning model shines a light on understanding professional development experiences that ensure the advancement of teachers’ teaching techniques (Rock & Wilson, 2005).

RLS provides a social constructivist framework that will enhance the teacher’s professional knowledge and development. Being included in the social interaction throughout teaching by means of social debate, discourse, and explanation that are included in the social constructivist approach, supports the idea that teachers must be engaged in activities that require verbal interaction, and generally keep in contact with specialists in their areas. Teachers who work at various levels are demonstrating professional collaboration by working together in analyzing their implementations via an RLS model sample (Rock & Wilson, 2005). Furthermore, teachers are likely to encounter different incidents or problems that will lead them to seek answers, to test and to evaluate in environments of social cooperation (Rock & Wilson, 2005). It appears that these principles of social constructivism correspond to features of creating various analysis, activity stages to be utilized by teachers throughout the RLS process, of evaluation and discovering opportunities for sharing their understanding with other teachers. Therefore, it is suggested that following up each step of the RLS process will significantly contribute to the improvement of professional knowledge and skills of teachers (Tracy & Rock, 2005, p.80).

A considerable amount of scholarly effort has been spent on examining RLS (Research Lesson Study). For instance, Stigler & Hiebert’s (2009) study, in which the RLS model is used as a basis, took six elementary school teachers working in inner cities in the southeast of America, gave them appropriate support. They observed that participants’ desire to participate in the lesson planning process increased and that participants enthusiastically carried out lesson preparations. Another research using the RLS model carried out by Lewis et al. (2010), presented the results of a three-year study in an elementary school in the U.S. In this process, it was observed how teachers gave progressively more importance to external intellectual resources (experts and researchers) and internal resources (each other’s lessons, student opinion, etc.), while students’ standard test results in mathematics in general increased to three times the regional average (Lewis, Perry, Hurd &
O’Connell, 2006; Perry & Lewis, 2010). Moreover, the RLS model supported by mathematical resources was shown to improve both teachers’ and students’ mathematical knowledge. Another study based on the RLS model, carried out at a four-year undergraduate department at Hawaii University by Myers (2012), conducted class observations of 20 candidate teachers registered on mathematics method lessons, with the aim to determine changes in perceptions of lesson effectiveness. The findings established that the perceptions of teacher effectiveness in this study among candidate teachers was changed, and that the observational abilities of candidates, which contribute to the development of teaching and learning, were improved. The multiple-example event study run by Myer (2012) looked at the effects of RLS on 13 middle school mathematics teachers and their students in a large central school. Based on the data, teachers developed design strategies in the field of self-reflection, they had been encouraged to learn cooperatively, they had consolidated their problem-solving effectiveness and their mastery over the content was seen to increase in two out of three events due to teacher cooperation.

The Bozkurt and Ozdemir (2016) study stands out among the research lesson studies conducted in Turkey, where they collaborated for about 5 months with three middle school mathematics teachers from MEB middle schools in the central district of the city of Usak, during the academic year 2013-2014. The study consisted of reflections of mathematics teachers gathered via individual and focus group interviews, and it was observed that participants considered the RLS having quite positive characteristics as a professional development model in terms of offering active roles to teachers during processes of professional development, handing over control to them, providing teachers with the opportunity to closely observe themselves and to see their own deficiencies in terms of teaching, offering a rich experience and learning opportunity regarding education, strengthening professional collaboration and communication skills, offering the opportunity to test the educational materials produced, increasing knowledge in students’ learning, improving the learning motivation of students who are included in the implementation classes, and being fun. They considered this model to be applicable to the Turkish education system. Participants stated that in order to implement it as an effective professional development model in Turkey, some preliminary preparations must be completed, such as financially encouraging teachers, establishing appropriate physical environments for research lesson studies in schools, administrators taking responsibility and encouraging teachers, making sure that research lesson study is conveyed by specialist and experienced educators, simplifying the lesson plan format used in research lesson studies, and organizing the studies at intervals when teachers are less busy (Bozkurt & Ozdemir, 2016).

The results of the aforementioned research have shown that RLS has a positive effect on mastery over the content, preparing for lessons, design strategies, and observational skill development, and improved teaching and learning motivation and students’ academic successes. The present study is important for being the first time that teacher training program has been implemented with RLS model in Turkey. The study aims to determine the participants’ roles in the professional development processes within the RLS professional development model, their gains with regards to their professional and personal development at the end of the education process and their class implementations, as well as their effects on their students. Furthermore, in order to assess the applicability of research lesson study in Turkey, which is quite new and different for the country, the aim is to obtain findings of the reflections of this model by the teachers in Turkey and to anticipate what the potential difficulties may be during its adaptation and implementation in Turkey. The obtained results are expected to shed light on the future research. Moreover, the results obtained are aimed at creating a new model for the provision of professional development to teachers. Finally, it is believed that the results obtained will stimulate new research projects in the field.

Considering the above, this study’s aim is to examine what change will occur in teachers’ professional development with a practice research-based Research Lesson Model implementation, and why. The study was carried out on three separate occasions, with the participant teachers taking on 3 different identities. “Teacher” is the identity of the participant who developed the post-training design, “Master” is the identity of the participant who developed the Master Teacher role, and “Disseminator” is the identity of the participant who took on the role to disseminate and deliver teacher training. The question that this study will seek to answer is as follows:

“What change is shown in teachers’ professional development when a Research Lesson Model (RLS) is implemented?”
a. What sort of change of the teachers can be observed after a 5-day teacher training programme?
b. What sort of change can be observed of the Master Teachers, who took the role to prepare and implement the learning paths?
c. What sort of change can be observed of the disseminator teachers, who took the role to disseminate seminars and teacher training?

Method

This research was carried out according to an action research design. Action research focuses on how teachers can improve their practice by carrying out systematic research to collect information on “how students can learn better and better be evaluated using teachers’ own teaching methods” (Yıldırım, 2013, p. 78). This study was carried out heeding the four steps for Action Research recommended by Mills (2003):

1. Defining an area of focus, laying out the general idea: designs created to make students active, to include high level thinking skills and to provide integration through web tools.
2. Data collection: looking at design effectiveness, overseeing implementation and taking in teachers’ comments about the process.
3. Analyse and interpret data: to analyse and interpret the data produced.
4. Developing the other practice steps: using the information gleaned from the collected data and related resources to create a practice plan. Remedy deficiencies, develop new designs and implement.

Action Plan

The lack of teacher training programmes for the professional development of teachers is the focus of this study. The teacher professional development programme ITAO (Intel Teach - Advanced Online) is one of the projects designed and implemented within the Intel Education Initiative of Intel Corporation for the advancement of education through technology (Arati, Todorova, and Merrett, 2011). This teacher professional development programme targeting the submission and activation of on-line platform helps to define the problem in our study. The blended learning programme has been deployed during the academic year 2013-2015 as part of a joint effort between Intel Corporation and Istanbul Provinical National Education Directorate. The master teachers’ views on the process are used to define the problem and the RLS model is preferred for the solution of the problem. ITAO has been designed to help school teachers to effectively integrate technology into learning and teaching, and to help students develop 21st Century Skills. The blended learning programme, based on an online platform focusing on innovative teaching practices and learning styles, aims to:

- improve the learning and teaching experience;
- encourage collaboration among teachers, pupils, and institutions;
- promote a virtual learning and collaboration environment.

Before implementing the programme, a call for teachers was sent to more than 5,000 schools; 135 teachers were eventually selected for training. Starting with three five-day teacher training sessions on different dates between 2013-2015, teachers from different disciplines formed working groups of three to work on designing learning paths throughout the teaching period. Throughout this period, every participant prepared at least three lesson designs and implemented them throughout the 2014-2015 school year. In designing these lessons, the aim was to retain the learning outcomes from the Ministry of National Education teaching programme while relating the lesson content from three different disciplines to one another and uploading it onto the five stations on ITAO Platform’s Learning Path section (conceptualization, skills required, application, resource requirement and evaluation). In preparing the ITAO learning path, special attention was paid to an interdisciplinary approach, to identifying questions, to the integration of online educational tools into the design and to the use of innovative methods. The learning paths and lesson designs created during this period were uploaded onto the Intel Online Platform. Feedback on completed learning paths and lesson designs was given by programme trainers. This feedback was shared online with designer master teachers using a google spreadsheet. In addition, designer master teachers met every Friday to discuss which aspects of their learning paths implementations had gone well and which had not, to evaluate their
processes and to give feedback in relation to their development. For each design, at least three sessions of feedback were given by programme trainers: at least one online and two face to face. In addition, topics such as the formation of new teams for new learning paths and the preparation of process content were considered in meetings every Friday. Every design made was evaluated, uploaded and then made visible to other users. In addition to the duty of preparing learning paths, master teachers who had created and shared at least three designs were also given the opportunity to act as a moderator during teacher training, thus gaining experience in adult education. In total, 56 learning paths and 112 lesson plans were prepared on the ITAO Platform. In order to introduce these learning paths to other teachers across the Istanbul Province Ministry of Education Directorate, and in order to make the platform accessible to a wider audience, the first seminars targeting 114 middle school and high school teachers were planned for June 22-23, 2015. The presentations and materials for the dissemination seminars were prepared and presented by 20 master teachers.

Working Group

The effect on teachers’ professional development of the RLS model with 20 high and middle school teachers who participated in a 5-day ITAO teacher training course, under the auspices of the Istanbul Province National Education Directorate was examined. The working group comprised 27 from the 105 teachers who attended the ITAO training sessions between 2013-2015. Of this group of teachers, which we called the master teacher group, 20 teachers were included in focus groups over the three different periods: 13 of them were female and 7 males.

Table 1. Intel Teach Advanced Online (ITAO) Teacher Training Programme in Istanbul

<table>
<thead>
<tr>
<th></th>
<th>1st ITAO TRAINING</th>
<th>2nd ITAO TRAINING</th>
<th>3rd ITAO TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>6-11 October 2013</td>
<td>3-7 March 2014</td>
<td>9-12 September 2014</td>
</tr>
<tr>
<td>Participants</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Selected</td>
<td>9</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

Data collection method

The data in this study was obtained through focus group work. According to Morgan (1997) focus group interviews are an interaction that results in a group around a problem relating to an issue being researched. Focus group discussions are interpreted through this interaction (Patton, 2002). In this study, 20 master teachers over three different time periods discussed four open-ended questions. The first focus group work took place after the teachers had participated in an ITAO training course, the second focus group discussions took part after the panel moderation during another ITAO training course, and the final focus group session was organised after completion of the dissemination seminars. During the focus group discussions, teachers were asked to share:

1. The knowledge and skills they had learned in education;
2. The ways in which they felt weak professionally;
3. The ways in which they felt strong professionally;
4. Where they could use the experiences they had gained during the teaching process.

Data Analysis

The obtained qualitative data was analysed using a content analysis method. The aim of the content analysis was to relate the collected data to concepts and relationships that could explain it. The process of the content analysis was to “bring together similar data within certain defined concepts and themes and to order and interpret them” (Yıldırım & Şimşek, 2013, p.228). In content analysis, the data summarized and interpreted in a descriptive analysis is subjected to a much more in depth process and, as a result, concepts and analyses that would otherwise not be noticed through a descriptive approach can be discovered. This study aims at uncovering certain hidden concepts in relation to teachers’ skills and experiences that contribute to their professional development, as well as to strengths and weaknesses observed at the end of the training they
received and to their in-class implementations. In this regard, content analysis is employed in order to define the data and to reveal the facts that may be hidden inside these data (Yıldırım & Şimşek, 2013, p.227). In addition to this, similar data and concepts were brought together under the title of professional and individual development, and they were organized and interpreted in a way that is apprehensible for the reader. The qualitative data obtained through focus group discussions was analyzed in four stages (Yıldırım & Şimşek, 2013):

1. **Coding the data:** The records of the focus group discussions between the master teachers were carefully read and matched to a predetermined code list, and the new data that emerged was added to the previously created code list.

2. **Finding themes:** The codes were brought together and common aspects were found; themes emerged through the categorization of the collected data using codes.

3. **Arranging codes and themes:** The themes and codes took their final form and were presented in relation to the themes that emerged with the aim of defining the collected data.

4. **Defining and interpreting the findings:** The discussion data was interpreted representing it according to codes and themes, using quotations from the master teachers, and providing examples and explanations.

**Table 2. An example of the data coding work**

<table>
<thead>
<tr>
<th>QUOTATION</th>
<th>Code</th>
<th>Category</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher 4:</strong> “This process lasted for about 1.5 years. I am more motivated, more aligned to current modern times, I feel full of creative ideas about how I can bring knowledge to my students and about how to bring across my lesson plans. I can now use online tools more effectively in my plans. I think this is definitely a positive way to be a learning leader, to make new connections in my mind and to look at events from a different perspective.”</td>
<td>Motivational development</td>
<td>Learning leader</td>
<td>Knowledge &amp; Skills</td>
</tr>
<tr>
<td></td>
<td>Learning society</td>
<td>Productivity</td>
<td>Learning &amp; Teaching process</td>
</tr>
<tr>
<td></td>
<td>Online educational tools</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**The Validity and Reliability of the Study**

In qualitative research, validity refers to the closeness of what we believe we are measuring to what we intended to measure (Roberts & Priest, 2006). Validity in qualitative research can be established by the researcher’s as-is and unbiased observation of the phenomenon they are studying (Yıldırım & Şimşek, 2005). The strategies in this study to ensure validity and reliability are employed in the order stated below;

- 4 open-ended questions were created and finalized after consulting an expert, in order to obtain the teachers’ opinions on the training and the implementation processes.

- In order to obtain generalizable data in determining the work group, teachers from various branches and levels were selected, and a work group is set up based on principles of maximum diversity.

- The data analysis section includes a detailed explanation of how the data is gathered, data coding process, and how findings are established through these data.

- Depth-oriented data was obtained by revealing some patterns that the participants were unaware of, by means of consistently comparing, interpreting, and conceptualizing the findings obtained throughout the research process.

- The relevant body of literature was continuously examined throughout the data gathering and analysis process, and theoretical context was utilized.

- The open-ended questions addressed to participants were organized under the themes regarding teacher’s professional development, and categories that apply to these themes were determined.
The data obtained were assessed, and described according to the codes and themes, while direct quotations from participants were used in the findings section in order to ensure the reliability in interpreting the themes.

Code-categories were determined for the relevance of findings, and they are matched with draft themes, while irrelevant words and sentences that are not related to the key concepts are eliminated.

Codes were gathered during data analysis, and commonalities among them were determined; through categorization of the gathered data through codes, the final versions of the themes emerged.

The final themes and codes were presented in relation to the themes that emerged, for the purpose of defining the gathered data. This study was successively conducted a few times, and the places of the codes and categories were changed in order to define the correct locations. The codes and categories that were determined at the end of this process were controlled by the thesis advisor, which gave the data analysis its final form.

In order to ensure reliability of the research study, attention was paid in ensuring the authenticity of the findings obtained from long-term interactions and participant confirmations, as well as consistency among the processes.

Data gathering was conducted and results were produced with an objective approach.

Findings and results throughout the research process were regularly checked, with an attempt to maintain consistency.

The pattern of the research, determination of the work group, characteristics of data gathering tools, and the ways in which they were prepared, as well as information on the data analysis process, were explained in detail under the method section of the study.

In the focus group discussions, which were carried out at three separate times, participant teachers coded their answers with 3 different identities and provided their findings with these codes. The coding of the identities of the participant teachers is represented in the table below.

Table 3. Table coding the roles of participant teachers

<table>
<thead>
<tr>
<th>Codes</th>
<th>Teacher</th>
<th>Master Teacher</th>
<th>Disseminating Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Participant Teacher</td>
<td>T1, T2, T3,.....T20</td>
<td>M1, M2, M3,..... M20</td>
<td>D1,D2, D3, .... D20</td>
</tr>
</tbody>
</table>

The teacher coded T1, M1 and D1 is the same teacher, but T1 is the role that developed the post-training design, M1 is the role that developed the master teacher identity, and D1 is the identity of the teacher who took a role in dissemination and teacher training activities. Four basic themes emerged from the content analysis of the answers given by the participant teachers during the focus group discussions. The themes that emerged were:

- the knowledge and skills they had learnt during teaching/work;
- their professional skills they considered to be weak;
- their professional skills they considered to be strong;
- how they were thinking to use their knowledge and skills.

Knowledge and Skills Gained During the Teaching/Working Process

By the end of the three focus group discussions carried out with the master teachers, it was established that they had changed their expressions and demonstrated differences. In the first focus group discussion, the master teachers spent more time talking about the learning and teaching process while discussing their gains from their teaching processes.

The reason for this is that the participants were there as teachers in a 5-day training process to be able to compare the concepts of asking fundamental questions, preparing for the learning process, the integration of online tools, the linkage between disciplines, innovative methods, and the evaluation and development of
the learning process. The training content was extremely innovative and participants expressed how different they found it. In this process, it was seen how the teachers discovered their identities as designers and focused on bringing these aspects into their classes. In the field of personal development, participants were observed to have discovered their identities as designers and teachers with cooperation between teaching units, innovation, productivity and 21st century teacher-student skills.

“I had the opportunity to remember and implement again effective and innovative methods that I had forgotten due to the curriculum anxiety of classical education; I didn’t just do this in Chemistry class, I did it in cooperation with other teachers. It was a stressful process but it was an exceptional opportunity” T2

“In this process, I felt more like a designer than a teacher. I became aware of my designer identity. This required me to reconsider all issues anew. I had the opportunity to meet, talk to and gain from the experience of peers from different schools and branches I had never met before.” T9

While analyzing the views of master teachers from the second focus group, it was observed that they had emphasized skills in personal and professional development like empathy, time management, leadership, moderation, and problem focused communication, which was felt to be necessary to manage and to steer a group in this process. The reason for this was that the master teachers had taken on the panel moderator role in their training, in addition to their designer duties, and that this was the first time that most of the master teachers in the group had experienced adult education. Through deepening and internalizing their first training on the duties of a moderator, they expressed that they felt more experienced and self-confident.

Moreover, in addition to regularly using the expressions “different teaching units” and “interdisciplinary cooperation” focused on by the RLS model, the master teachers in the second focus group also often used expressions such as “learning community” and “peer learning”. The experience and skills they gained in both the training and design activity in the School Based Professional Development (SBPD) process were initially seen in the groups they moderated; they then began to share their insights with their peers, and began to analyse their design and teaching methods.

“During this training course, I have learned a lot and gained an enormous amount of experience. In particular, I saw how when the time is used effectively, miracles can be created. Besides this, I noticed that I usually used negative sentences in describing myself, and I became more self-aware and am trying to find solutions to correct this. I have never taken part in adult education before; this was a very different experience for me. The teaching aspect in my moderation predominated, and I think I need to develop this; I have started my academic reading.” M5

“... At every stage in the training process from A to Z I had the chance to reconceptualise, and most of all as I was preparing for the learning process I was able to more comfortably explain the methods and techniques I had had trouble with in my plans, and I am now able to use new methods and technologies to deliver and to evaluate a lesson.” M16

“In this training process, I felt that the work I did with my group and the experience I was able to share were very valuable. By the way, I believe it is necessary to share my learnings with my school, and to disseminate it further” M7

Looking at the focus group discussion results of the third group, it is seen that these master teachers enriched their teaching and teaching skills, that they developed more creative and effective plans and that they felt more competent in this field. Moreover, in the dissemination training process, it was observed how they gravitated more towards adult education skills, such as presentation design and delivery. The basic reasons for this were the master teachers concentrating on the dissemination seminars and focusing on their teacher trainer identities. It was observed how they had begun to use expressions in the field of professional and personal development more often, such as cooperation among student societies, experience and sharing common values, evaluation and reflection. The fundamental reason for this is that this group had been doing collaborative work for at least one year and that they saw themselves as members contributing to this group during this process, and had adopted this group identity. Finally, it was observed how the master teachers discovered their researcher identities during this stage, and how they began to do more in-service training and academic reading. In the same way, they were observed to be using expressions about self-efficacy, such
as enrichment, bravery, self-confidence, respect, feeling happy and successful in the professional and personal fields much more often.

In the SBPD field, the master teachers were heard making comments about how resources could be used more effectively, how the reflective process and the experience could be shared, and how schools and social circles could co-operate. Moreover, due to their plans to carry out interdisciplinary studies in their own fields for at least one year, they used specialized field terms about the development of competencies that had not been used by the first or second groups.

“I think I have evolved my teacher role into a researcher. I am using richer tools, relationships, and sentences in classes. I even research whether there are new developments or interesting ideas on topics I feel confident about.” D8

“The most important thing I have gained from this training is seeing how there are people who are obsessed with education. Seeing that I wasn’t the only one, of course, helped me feel good. This feeling is very important for me to go to school and keep going with my career. You feel valuable, you have approval, you are criticized and evaluated by people who think in an education-focused way. This in turn makes you a happier, more successful teacher.” D13

“I think I have a good relationship with my students...During these exercises, I compared parent-student-administrator resistance. The training gave me the opportunity to take what I do back to its fundamentals; I will henceforth work more agreeably and effectively with parents and administrators. Showing me how the work I do is not meaningless has ensured I continue with my work.” D13

“I think my mastery over my field has increased. Up until now, I didn’t worry about the topics while teaching; I have started thinking about and researching a lot of things. First of all, you need to encourage the friendship of those on the other side in order to create good associations; but to do this, you need to present the contents of the topic to your team in a way that it relates to real life.” D14

Professional Weaknesses

In their discussions, the first focus group was heard using many expressions relating to the learning and teaching process, such as interdisciplinary associations, innovative methods and techniques, teaching planning, and the effective participation of students in the lesson. In the personal and professional development field, however, only very limited expressions such as cooperation between teaching units, timing, planning, and discipline were used.

“I am weak at interdisciplinary associations, and actually I have come to realise how useful they can be. By the way, I saw that we used to avoid creating solutions for some of the topics about which there were complaints in the class, and instead, we just complained back.” T1

“I have a problem communicating with teachers from different branches of my own because when I explain issues, I address them with scientific concepts. Another personal problem I have is working with other groups, so this has been a good exercise for me in terms of sharing wisdom.” T8

Looking at the expressions used by the second focus group in their discussions, we see that when it came to learning and teaching, they only talked about innovative methods and techniques and the effective use of evaluative tools. However, they touched upon more of the codes in the personal and professional development field. The reason for this is that most of the master teachers had at least once carried out a moderator role, and so had felt their skills were weak in certain areas during moderation, such as academic foundation, effective listening, moderation, group management, giving feedback, leadership and effective communication.

“In the group management and in my last moderating experience, it was unclear what management methods I needed to use, as they were educators. In this training, I was able to manage time appropriately all the way to the end.” M7

“Time management is also one of my problems, and I realized that we had created a chaotic atmosphere with positive and negative sentences about it. I am now using proper sentences when
speaking. My most frequent sentence is: ‘Can everybody hear me?’ This was one of the first sentences I learned here.” M3

Looking at the third focus group discussions, we see that compared to others, they used methodological and academic terms rather than classroom management speak; they claimed to be weak in elements necessary for adult education, such as preparing effective and dynamic presentations and motivating participants. In the same way, in the personal and professional field, they said they were weak and were trying to develop effective presentation skills, to improve how they communicate about their work and how they motivate participants. They also saw themselves as weak at communicating SBPD to experienced colleagues, which had not been mentioned by the other two focus groups.

“I think that believing that I could prepare a presentation was a very big thing at the start. Even if preparing a presentation is difficult for me now, it is something I am able to do, but I didn’t think it would be this difficult to stay organized during the course and to motivate the team.” D4

“... we learnt professionally in the classroom by sharing our insights and by supporting each other. I didn’t have any theoretical knowledge about methods and techniques. As I learnt the theory, I knew that in fact, I had used similar methods before, I just didn’t know their names. The training increased my theoretical knowledge, and it gave me an opportunity to put the methods into practice in my class. Not only that, but it has allowed me to share what I have done with other teacher colleagues, and to get them to evaluate my practices.” D13

Professional Strengths

According to the results of the first focus group, the teachers discovered that their strengths were in areas such as preparing materials, putting their plans into practice in the classroom and planning courses effectively. Looking at it from a personal and professional perspective, they believed their strengths were in using technological tools, professional experience, research, curiosity, cooperation and working harmoniously. The master teachers saw themselves as making a positive contribution to the training process through their professional strengths and capabilities in areas like creative drama leadership, information technology teaching, and educational coaching.

“As I am an IT teacher, I believe I am strong in the use of technology, but if you ask about integrating it into classes, I have learnt it here.” T5

“I have seen that I am able to produce good educational material when it comes to it and put it to use. Now I can design a course as well.” T16

Looking at the second focus group’s data, we see that the master teachers eventually saw that their strengths were the effective use of lesson plan methods and techniques, interdisciplinary associations and the integration of online tools into lesson design (all of which they considered to be their weakness during the first discussion). This is because the master teachers had continued working on educational course planning in collaboration with their teams. Moreover, after moderation, they highlighted other social skills as strengths, which they had used during their moderator duties (e.g. showing empathy, harmonious collaboration, being inclined to cooperate, effective listening skills, curiosity, being energetic, the effective use of multimedia).

“I believe my strong side is my ability to listen effectively; I have shown this when receiving comments and feedback, I have shown I really listen to the person in front of me. I think my ability to use this in adult education can be considered another gain.” M7

“My best side is my curiosity, no matter what the subject is. When I am curious about something, I work to learn about it to the end, no matter how long it takes me. This is very good for my personal development... In addition, I’m an IT teacher, and as long as using technological tools can be a new hobby for me, I’m happy using technology.” M5

In the third focus group (in contrast to the first two), a stronger emphasis was placed on the teaching and learning process, like making plans and using tools, with words such as “depth”, “mastery” and “effective” being used much more. The master teachers felt more qualified and were more self-confident in these areas, because of their long-term experience. In addition, they discovered new skills, such as effective presentation and planning in adult education, which they had just begun to discover, as well as preparing out of field
presentations and presenting. In addition, they mentioned changes in the student societies, social groups, and relationships they were part of. Finally, they used expressions (unmentioned by the other two groups) like including parents in the teaching course, getting the support of administrators and winning their trust.

“I can make more meaningful and comfortable links between class management, presentation skills, cooperation with other teachers and disciplinary matters.” D9

“I have more professional and academic relationships. This reflected well on my colleagues and students. I get more respect from the school administration.” D8

**Where to Use New Skills and Knowledge**

During the first focus group’s discussions, participants stated that they would use their newly-acquired skills and knowledge in teaching and learning, such as in-class exercises, the production of their own materials, school projects and lesson planning. Additionally, they stated that they would use them in the academic field and in distance education. Whilst they indicated that they would like to share these skills and knowledge in social circles with colleagues and friends, they also expressed reservations about doing this.

“I want to try out these skills in my class, with my own children at school. I am thinking of using them in all my lessons.” T17

“I examined Intel’s online platform, there are very good online education courses there and you can message others for support through a forum. That’s the best way to pass on your experience.” T12

“My friends at school are curious, they are open to learning. I will use these skills in both, my private and my work life. In fact, thinking of life skills, all this information will help me a lot when I change class or career. When I continue as an instructor I will share and enrich the information we use, and I will feel I have made a contribution.” M7

In the second focus group discussion, participants made clear that they would bring their skills and experience to a wider audience, such as school councils and staff meetings. They also emphasized that they would present them to other places, such as inter-faculty meetings, and to share them with teachers at other schools. Moreover, they expressed that they would use them for different purposes, like academic studies, career progression, and teacher training.

“I have just become a manager in my school. This will help me transfer what I have learnt more comfortably. In staff meetings and school councils, in particular, the minute that people begin to complain, I immediately begin to show them alternatives. What I have learnt here has strengthened the educational side of my management. I am able to comfortably suggest solutions.” M1

“My friends at school are curious, they are open to learning. I will use these skills in both, my private and my work life. In fact, thinking of life skills, all this information will help me a lot when I change class or career. When I continue as an instructor I will share and enrich the information we use, and I will feel I have made a contribution.” M7

Looking at the third focus group discussions, in contrast to the other two groups, what catches the eye is that they want to share their knowledge and skills with administrators and parents. Moreover, participants said that they could use their newly acquired skills for educational conferences in a social environment, to direct the people around them, on social media, and in e-twinning and other European projects. When talking about personal and professional development, they referred to various teacher training courses and seminars. When we examine these responses, we see that the master teachers are aware of their skills and want to evaluate them in new areas.

“I regularly share new knowledge I’ve learnt with my colleagues and other teachers at the institution I work for. I am thinking of creating a teaching plan with them during a seminar, in order to be able to inform them more comprehensively about this process.” D12

“We have been able to present our classroom measures as a case study at 1-2 conferences, and I think it got a lot of interest.” D2

“We have started dissemination seminars; we will at least have the chance to share our products with these educators.” D3
Discussion, Conclusion, and Suggestions

The research findings show that the RLS model strengthens teachers’ understanding of education planning, their interactions with colleagues, peer-to-peer learning, and their questioning skills. The master teachers who participated in focus group discussions over three different periods changed their expressions as they took up different roles. For instance, in the first focus group discussions, it was observed that teachers were emphasizing skills and learning acquisitions in relation to innovative methods, interdisciplinary relations, effective teaching and lesson planning, as they were attending a 5-day training as participants. Fernandez (2002) states that he brought groups of teachers together to plan the most important activities in great detail and to later discuss the lessons they delivered in class. Lewis, Perry & Murata (2006) define RLS as “a group of teachers who have collected data about teaching and learning and analysed it monitoring live classroom lessons” (Galanouli, 2010, p.18).

It was stated that the most appropriate environment to be examined in order to develop teaching practices is the class where the teachers’ areas and their pedagogical knowledge merge during the lesson (Hiebert & Stigler, 2000). During this process, the teachers expressed that the RLS develops certain teaching practices such as lesson analysis and assessment.

Throughout this study process, it is observed that the teachers have improved as designers due to an increase in teachers’ knowledge in how students learn, developing interdisciplinary lesson designs, which provided the opportunity to experience these designs that were produced. Similarly, it is determined that the RLS, and the lesson textbooks that teachers use significantly contribute to learning, and development of teaching materials. In this context, it appears that the RLS handles lesson material, teachers’ communities, and the knowledge and tendency of the teacher as a whole (Stepanek, Appel, Leong, Mangan & Mitchell, 2007).

In the second focus group discussions, due to their moderator roles, they emphasized skills for professional and personal development such as leadership, time management, empathy, solution-focused communication, and moderation. Gültekin and Çubukçu (2008) state that the teachers must be aware of the coming changes and new developments, so that “they can equip the new generation as individuals” (p.186). In their professional teaching approach, they state that teachers adopting a professional identity and raising individuals as “socially beneficial societal leaders are a precondition to raising conscientious, creative, responsible people balanced in body, mind, morals and feelings” (Gültekin & Çubukçu, 2008, p.188).

It is observed that the RLS ensures that educational ideas gain meaning in teacher practices, education and learning perspectives change and that teachers observe their practices from students’ eyes, and enjoy a collaborative support among colleagues (Takahashi & Yoshida, 2004).

In the third focus group, it was notable how teachers adopted more of a researcher identity, and moved much more towards the skills required for adult education. Meanwhile, the learning community in this group gave much room to expressions of personal development, such as inter-faculty work and collaboration. It was apparent how teachers enjoyed being a part of this group, and how it had a positive effect on their personal development. Looking at high-performing countries in an international sense, the aim was to “create societies for teachers in schools, teachers, and students who were professional learners” (Lemke, 2010,p.1). In addition, the third focus group, unlike the first group, was heard talking about SBPD and subject areas. The reason for this was that the master teacher group had at least one year of experience in classroom teaching, school, and teacher training, and knew how to test and evaluate learning.

Furthermore, the contribution of the academic support provided through experts during these studies to the development of teachers’ researcher identity, and the necessity to disseminate RLS nationwide, are highlighted. They mentioned that this way, the knowledge, and skills that were newly gained will not be limited only to the class and school, but they will help reach larger masses, and they suggested that the best method of doing so is through regional dissemination seminars.

Hence, their plans for the field were always related to real life, and they were obviously more comfortable in talking about their life skills. The SBPD model has continuous educational activities with a focus on problems with the interests, requirements, roles, and responsibilities within a particular school. From this perspective, “the model turns teachers actors responsible for the development of their schools” (Altun & Vural, 2012, p.155). This means that teachers have a positive effect on the profession when they are happier,
successful, respected and perceived as being competent. In previous research, teachers with a high level of self-efficacy proved to be more successful and passionate in choosing appropriate teaching techniques, in ensuring high levels of success for students, establishing effective communication with students, etc. (Guskey, 1988). In addition, master teachers who had discovered their productive and creative sides were observed to use their new experience, equipment and learning acquisitions more effectively, and to actively seek to spread them. As teachers feel they gain value through working with the RLS model, they improve their self-confidence and professional status, and begin to catch the attention of other teachers due to developments in the professional field, and therefore have an effect on the profession as a whole (Hayward, 2009).

The data acquired from the teachers who participated in the research study suggests that the RLS is a model that is applicable in our country as a teacher professional development program. Other different studies conducted in Turkey (Budak, 2012; Erbilgin, 2013) observed that teachers considered RLS to be an applicable model within the Turkish education system by teachers. Furthermore, in order to effectively maintain RLS studies, to contribute to teacher collaboration and to establish learning communities, necessary physical environments must be set up in Turkish schools, time must be allocated for joint studies, and school administrations must demonstrate the required attention and support for such work. In addition to this, it shall not be forgotten that for a successful implementation of this model in Turkey, primarily Turkish teachers must volunteer to show the utmost efforts and to spend time for this work, and they must take on responsibilities (Eraslan, 2008). Moreover, the presence of experts that assist lesson studies in a school or a region, and the professional support they provide have a crucial contribution to the continuity of RLS, and its effective conduct (Stepanek, Appel, Leong, Mangan & Mitchell, 2007). As a result, it is seen that RLS may be included in the Turkish teacher’s education system, but in order to evaluate the applicability of RLS in Turkey as quite a new and different model, a long-term and comprehensive discussion of the reflections of it on teachers in Turkey is necessary.

In short, this study looked at the effects of the RLS model on the professional development of middle school and high school master teachers in different branches of the Istanbul Province National Education Directorate. New research studies to be conducted may consider the effects of the model on the professional development of primary school teachers, and their results can be compared to the results of this study. Furthermore, examining the success of the schools from where master teachers participated in this study, may be beneficial for a subsequent study. In addition to this, the effects of the dissemination seminars of this study on the application in schools, and the professional development of teachers that participated in this study could also represent an interesting topic for further research.
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