On the Effect of Online Peer Knowledge Sharing on Iranian EFL Teachers' Professional Development

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Abstract—Online peer knowledge sharing is an effective way which can help English as Foreign Language (EFL) teachers improve their profession. The present study sought to explore the effect of online peer knowledge sharing on Iranian EFL teachers' professional development. To achieve the goals of this study, 50 Iranian EFL teachers were selected from Khorasan Razavi, Iran, based on their score in Teaching Knowledge Test (TKT) adopted from Pirtaj's unpublished thesis (2013). Then, they were randomly assigned to experimental (N=25) and control (N=25) groups. During the course lasting for 16 sessions, participants in the experimental group shared their knowledge (content knowledge, pedagogical knowledge, and pedagogical content knowledge) on the internet and the control group received the instructions being the same as those shared among participants in the experimental group without any knowledge sharing. Finally, at the end of the course posttest was administered which was the same as the pretest. Results of t-test confirmed that online peer knowledge sharing was significantly effective in improving Iranian EFL teachers' professional development. Pedagogically, the present findings help EFL teachers, students, and curriculum designers.

Index Terms—on-line learning, peer knowledge sharing, professional development, content knowledge, pedagogical knowledge, pedagogical content knowledge

I. INTRODUCTION

A community of practice encourages its members to accept their duty for sharing the information and solving the problems, to grow their own identities in the community, and to promote the ideas to unify their community (Yang, 2009). On the assumption that reflective practice is "the relationship between an individual's thoughts and action and the relationship between an individual teacher and his or her membership in a larger collective called society" (Leo, as cited in Yang, 2009, p. 12), for teachers, a community of practice is viewed as a suitable substitute for reflective practice (Yang, 2009).

Professional development simply implies as any progress achieved by EFL teachers through their career. Jansem (2014) asserts that after discussing the concept of professional teachers by Shulman (1987), it is teachers' knowledge base which illuminates the research in the area of education. Shulman (1987, as cited in Jansem, 2014, p. 252) introduced such categories of knowledge base as content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners, knowledge of educational contexts, and that of educational ends, purposes, and values. Among the mentioned categories, Shulman stresses on pedagogical content knowledge, explaining that this subset of knowledge represents the sphere where other categories intertwine. Afterwards, teachers' knowledge base was highlighted in not only teacher education programs, but also research (Jansem, 2014).

Content knowledge revealed in Jansem's study (2014). It is a type of language knowledge, including both language elements and skills. Jansem (2014) explained about the appropriate method of writing a topic sentence, pronouncing multi-syllable words, and identifying the main idea of a reading text represented the teachers' content knowledge. O'Neal Ringler, and Rodriguez (2008) state that "the role of teacher preparation programs has traditionally been to prepare future teachers with content knowledge, understanding of cognitive, psychological, and linguistic development, as well as the current and historic pedagogical theories and methodologies"(p.1). Chen Wei (2006) enumerates characteristics of teacher's knowledge structure as being purposeful, creative, comprehensive, open, advanced, diverse, and dynamic.

Because the employment of technology in EFL classroom is necessary, EFL teachers must "technologize" their professional knowledge, and to incorporate technology in their Pedagogical Content Knowledge (PCK) (Liu, Liu, Yu, Li, & Wen, 2014). The concept of Technological Pedagogical Content Knowledge (TPACK) was introduced by Koehler and Mishra (2008, as cited in Liu et al. 2014, p. 683). They explained that the three major knowledge types

including content, pedagogy and technology should be interacted into the teacher's professional knowledge to develop TPACK which is necessary for successful teaching to digitally intelligent students.

According to Koehler and Mishra (2008, as cited in Liu et al. 2014, p. 683) TPACK includes three types of knowledge. The first component of TPACK is Technological Knowledge (TK), which plays a key role in teachers' professional knowledge system. The second component is Technological Content Knowledge (TCK). Content knowledge is the "formal knowledge", widely referred to by educators as "the knowledge base" (Cochran-Smith & Lytle, 1999, p. 254, as cited in Liu et al. 2014, p. 683). For EFL teaching, English language itself is the content knowledge (Liu et al. 2014). When teachers integrate technology into this type of knowledge as TCK, they have a "deep understanding of the manner in which the subject matter (or the kinds of representations that can be constructed) can be changed by the application of technology" (Koehler & Mishra, 2008, p.16, as cited in Liu et al. 2014, p.682). The third component is technological pedagogical knowledge (TPK). An experienced teacher differs from a novice one since the former has more information about how to employ various teaching models and strategies and how to promote classroom communication (Nilsson, 2008, as cited in Liu et al. 2014, p. 684).

The application of Computer and Internet, recently, has paved the way for sharing information among the users. Different EFL teachers tend to employ different teaching skills and techniques. With the emergence of computer and its application in EFL contexts, EFL teachers can easily communicate with their professional counterparts in order to share their knowledge and experiences. Beneficial and effective teaching experiences of some EFL teachers can be exploited as new input of teaching by the rest of EFL teachers hence improving their teaching knowledge and skills.

According to Salmon (2002) networked learning communities provide opportunities for collaborative learning to develop via the sharing of teaching experiences, resources and the meaningful construction of knowledge. Similarly, Liaw, Chen, and Huang (2008) believe that the collaborative learning that improves the performance of learn, both for group knowledge sharing and the construction of individual knowledge, was supported by web-based technology.

Levin and Wadmany (2008) explain that educators and instructors can use technology for such purposes as formal training, time and practice and professional development opportunities. Teachers may refuse to employ technology because of two reasons: they might not be aware of the ease in which technology can be employed to facilitate learning, and they may not be aware of the fact that technology offers a much easier method of designing curriculum, planning lessons, galvanizing students and tracking students' achievement. Therefore, the ways to incorporate technology should be shared with instructors and instruction should be offered if necessary (Graham, Tripp & Wentworth 2009).

The present study aims at exploring the effects of online peer-knowledge sharing with a problem solving strategy on Iranian EFL teachers' professional development. To do so, two groups, experimental and control, were selected and the treatment was implemented. The objective of implementing the treatment was to prepare qualified EFL teachers for new era in which technology-based education will replace traditional one.

A. Statement of the Problem

The problem which arises here is related to problems EFL teachers encounter when presenting instructional materials in language classrooms. They need to enhance their teaching knowledge through effective ways. Knowledge sharing through yahoo-group can be viewed as an effective way to help EFL teachers benefit from their colleagues' experiences and knowledge. The present study aims at creating an environment in which EFL teachers are provided with an opportunity to discuss with their colleagues and share their knowledge (content knowledge, pedagogical knowledge and pedagogical content knowledge).

With the introduction of web-based contexts, EFL teachers can share their teaching information, knowledge and experiences regarding their teaching profession. Through such interactions and discussion, EFL teachers can benefit from their colleagues' knowledge and experience and try to improve their teaching. Teachers' sharing of their practices through blogging promotes collaboration and sharing of knowledge that benefits both the teachers and their students (Zandi, Thang, & Krish, 2014).

B. Research Questions

The following research question was posed by the researcher which were addressed throughout the study:
1. Does online peer knowledge sharing have any significant effect on Iranian EFL teachers' professional development?

C. Research Null-hypotheses

The following null-hypothesis was formulated:
H01: The online peer knowledge sharing does not have any significant effect on Iranian EFL teachers' professional development.

II. REVIEW OF LITERATURE

A. Pedagogical Knowledge (PK)

Mullock (2006) defines teacher's pedagogical knowledge base as the "accumulated knowledge about the act of teaching, including goals, procedures, and strategies that form the basis for what teachers do in classroom" (p.48). Badawi (2009) states that "pedagogical knowledge refers to teachers' knowledge about the basic teaching/learning

matters such as learning theories, teaching approaches, curriculum designs, evaluation techniques, and relevant managerial issues."(p.15). Lenhart (2010) defines it as any theory or belief regarding the process of teaching and learning which a teacher has, hence, influencing that teacher's teaching. Pedagogical knowledge refers to the ability to design and provide necessary instruments and materials; the skills related to time allocation for each task and classroom management; implementation, solving the problems, and teaching strategies; questioning techniques; and assessment (Lenhart, 2010).

B. Content Knowledge (CK)

Koehler and Mishra (2009) believe that CK is teachers' knowledge about the subject matter to be learned or taught. The content included in middle school science or history is different from what is included in an undergraduate course on art appreciation or a graduate seminar on astrophysics. They consider it as an important factor for teachers. According to Shulman (1986, as cited in Koehler & Mishra, 2009), CK covers a wide spectrum of knowledge, e.g. knowledge about concepts, theories, ideas, organizational frameworks, knowledge of evidence and proof, as well as established practices and approaches toward developing such knowledge. Knowledge and the nature of inquiry have great differences between fields, and teachers should understand the deeper knowledge fundamentals of the disciplines in which they teach (Koehler & Mishra, 2009). For instance, in the case of science, CK covers knowledge regarding scientific facts and theories, the scientific method, and evidence-based reasoning. Regarding art appreciation, the knowledge includes knowledge about art history, famous paintings, sculptures, artists and their historical contexts, as well as knowledge about aesthetic and psychological theories for evaluating art (Koehler & Mishra, 2009).

C. Pedagogical Content Knowledge (PCK)

It is viewed as a type of teaching knowledge according to which the expert teacher is different from the subject expert mastering only the content knowledge in a subject area (Seleim & Mahmoud, 2013). According to Lin, Wu, and Wang (2012) coining the term, PCK, contributes to effective teaching since it is associated with the capability of representing and formulating content in the class; that is, PCK relates to how to teach.

Various terms employed for describing teachers' PCK consider teacher knowledge as going beyond what the training or the disciplinary content has offered and consist of a qualitatively different body of knowledge including experience (Azma & Talebinejad, 2012). As Koehler (2011) argues, PCK differs from the knowledge of a disciplinary expert and also from the general pedagogical knowledge shared by teachers across disciplines. PCK relates to representation and formulation of the concepts, pedagogical techniques, knowledge about what makes concepts difficult or easy to learn, knowledge about students' prior knowledge, and theories of epistemology. It also entails knowledge about teaching strategies integrating suitable conceptual representations to address learner difficulties and misconceptions and to enhance meaningful understanding (Seleim & Mahmoud, 2013).

D. Technological Pedagogical Content Knowledge (TPCK)

As Mishra and Koehler (2006) argue, with the emergence of digital technology dramatic changes occurred in routines and practices in most fields of human work. Advocates of technology in education often "envisage similar dramatic changes in the process of teaching and learning. It has become clear, however, that in education the reality has lagged far behind the vision" (pp.1017-1018).

It is claimed that a conceptually based theoretical framework regarding the relationship between technology and teaching can transform the conceptualization and the practice of teacher education, teacher training, and teachers' professional development (Mishra & Koehler, 2006). Traditional classrooms employ different forms of technology, like textbooks, overhead projectors, typewriters in English language classrooms, and charts of the periodic table on the walls of laboratories. Recently, the more common employment of technology applies to digital computers and computer software, artifacts and mechanisms which are new and not yet a part of the mainstream. These modern technologies are combination of hardware and software including computers, educational games, and the Internet and the numerous online applications (Mishra & Koehler, 2006). According to Rashtchi and Hajihassani (2010, as cited in Saeedan, Ashraf, & Motallebzadeh, 2015, p. 325), integration of technology into language pedagogy is a reality in the 21st century and the Internet and weblogs are viewed by educators and teachers as effective tools which involve a vast amount of information from different sources.

Such reasons as a fear of change and lack of time and support can cause some teachers to not welcome the modern technologies; however, it is a fact that they are here to stay (Mishra & Koehler, 2006). Employing technology for pedagogy of particular subject matter could be expected to remain relatively static over time. Therefore, teachers could concentrate on the variables associated with content and pedagogy and make sure that technological settings would not change too dramatically over their career as a teacher (Mishra & Koehler, 2006). Technological knowledge, according to Mishra and Koehler (2006), is an important part of overall teacher knowledge.

E. EFL Teachers' Knowledge Sharing

Beyer apud Golombek (1994, as cited in Valencia, 2009, p. 77) has a statement which best demonstrates the significance of research in teachers' knowledge sharing: Research in which teachers share their stories may result in 'a humanizing and democratizing of knowledge'. EFL teachers appear to differ regarding the knowledge they have, the

methods they use and so on. Knowledge sharing can provide them with an opportunity of becoming aware of various teaching methods applied in EFL contexts. EFL teachers can also take benefits from their counterparts' teaching experience and knowledge. Knowledge can be shared through discussions, meetings, and conferences. These methods of knowledge sharing can take place in two contexts: real or virtual. Real contexts include real-world environments where an EFL teacher can establish face to face interactions with his/her counterparts. Virtual contexts, on the other hand, include web-based environments where EFL teachers can interact with each other outside real-world environments through electronic lines (E-lines). Specifically, teachers' beliefs about language teaching and learning are expanded through the dialogue between them hence stressing the significant role of sharing knowledge in professional development (Akyel, 2000; Kraft, 2002, as cited in Mede, 2010).

F. Related Empirical Studies

Yang (2009) in an article entitled "Using Blogs to Enhance Critical Reflection and Community of Practice" investigated the employment of blogs as a reflective platform in the training processes of EFL student teachers, who were learning to teach English for future employment in Taiwan. It was found that the student teachers actively discussed teaching theories and their implications via blogs. The participants were reflective, and some critically mirrored on their thoughts and made valuable comments; they also viewed technology as a useful platform for reflecting and communicating with each other. According to Yang's findings (2009), blogging provided student teachers with a more flexible time and space to reflect and discuss Posting messages did lead to a kind of inquiry that accentuated critical reflection. Moreover, a community of practice has a tendency to encourage every member to take responsibility for information-sharing and problem-solving, to develop their personal identities in the community, and to promote unification of the community. Language teachers can employ blogs to ask students questions, share perspectives and ideas, and encourage learners to discuss issues and express their concerns. Learners can collaborate with others to establish a specific topic of mutual interest (Yang, 2009).

Chou (2011) investigated educational practices associated with teaching practices, home teacher practices, administrative practices, and service learning from teaching blogs constructed by student teachers and online feedback. Chou's findings showed that (1)student teachers' teaching demonstration can improve the socialization strategy of 'job proficiency'; (2) teaching blog can offer student teachers' dialogues and feelings about 'goals and values' in the virtual community; (3) student teachers' cognitive sources for socialization strategies of 'school culture' is based on peer student teachers, mentor teachers, and internet communities; and (4) socialization strategy of 'role regulation' is based on teacher certification and school expectations. It was found that student teacher interactions with mentor teachers, peer student teachers, and students in practice schools affect the outcome of socialization (Killeavy & Moloney, 2010; Ward & McCotter, 2004, as cited in Chou, 2011, p. 190).

Cruz-Yeh (2011) used an online teacher professional development (oTPD) framework which integrated the principles of cognitive apprenticeship and informal mentoring in online environments to facilitate 1) the delivery of oTPD during a period of time, 2) the transfer and construction of teacher knowledge and skills that would directly influence teachers' practice and students' learning, and 3) the social interaction and collaborative attempts of international teacher-experts in the oTPD process. The results obtained from Cruz-Yeh's study indicated that teachers participating in this study took advantages from oTPD through the construction of new knowledge and skills.

Liu (2012) explored the effect of implementation of an online video-case discussion community on development of professional development among pre-service and in-service EFL teachers' in Taiwan. It was revealed that the pre-service and in-service teachers appeared to play different roles in discussing teaching video-cases online, respectively. Yet, what they paid attention to in the teaching events shifted from different to similar focuses after attending online video-case discussion for about one year. According to these teachers, the community provided them with professional learning opportunities, although several issues might prevent some of them from attending the discussion frequently (Liu, 2012).

Chen (2012) investigated the effect of telecollaboration between pre-service and in-service teachers on their two-way professional development. Their findings indicated the enhancement of the participants' reflective thinking through sharing knowledge and learning experiences-occupationally, pedagogically, and academically-with each other. Chen's study (2012) emphasizes on a need-based and task-based collaboration mechanism through a web-based professional community.

Seleim and Mahmoud (2013) employed a studio-based learning classroom to improve students/teachers' PK and explored the effect of this treatment on their PCK. Having analyzed the data, the researchers found that the treatment group significantly outperformed the other group on the post- administration of both the test and the rubric. In addition, the proposed studio-based learning classroom was found to enhance the PK of the targeted topics of the experimental group. Therefore, they arrived at the findings that it had a greater effect on enhancing the targeted PK topics for the experimental group compared to the traditional lecturing for the control group. Also, students/teachers' PK and developing their PCK were directly correlated (Seleim & Mahmoud, 2013).

Utilizing the theory of community of practice and through observing blog activities of teachers, Zandi, Thang and Krish (2014) explored the effects of blogging on teacher professional development. Their paper presented some preliminary findings indicating that teachers' sharing of their practices within the communities enhances collaboration and sharing of knowledge which benefits both the teachers and their students. It is based on a study involving seven

Iranian EFL teachers who shared their experiences and knowledge within the community through blogging for one semester. It was found that blogging had a positive effect on teacher learning within a community of practice. Zandi et al. study was framed by the theory of Community of Practice (Cop). The phrase 'community of practice' was invented by Lave and Wenger in 1991. In fact, (CoP) is a model developed in line with social constructivism's point of view on sharing experiences within a community (Zandi et al. 2014).

Saeedan, et al. (2015) explored effect of weblogging on Iranian English teacher professional development. The participants included 50 ELT teachers who were assigned to control and experimental groups. Both groups received the same treatment. However, participants in experimental group received it via the blog while the control group received it in the pamphlet format. The results of t-test indicated the experimental group's outperformance in the posttest.

III. METHODOLOGY

A. Participants and Setting

For the purpose of this study, the researcher selected a sample consisting of 50 EFL teachers in Khorasan Razavi, Iran based on their scores in Teaching Knowledge Test (TKT) adopted from Pirtaj's unpublished thesis (2013). Both males (N=44) and females (N=6) took part in this study. Their age ranged from 27 to 50. Their teaching experience ranged from 7 to 28 years. Only participants with BA and MA academic degrees were chosen. These participants were randomly assigned to control (N=25) and experimental (N=25) groups through which two females were placed in experimental and four in control group.

B. Instrumentation

In order to measure the effects of online peer knowledge sharing with a problem solving strategy on Iranian EFL teachers' professional development, the following instrument was employed:

C. Teaching Knowledge Test (TKT)

To assess the participants' knowledge in EFL teaching, this test containing 45 items was given to a population (N=90) of EFL teachers in Khorasan Razavi, Iran. The test was adopted from Pirtaj's unpublished thesis (2013) at Islamic Azad University of Torbat-e Heydarieh Branch, Iran.

The original test developed by University of Cambridge ESOL Examinations (2004) includes 80 multiple-choice items which was then modified and shortened to 45 items by Pirtaj (2013). The test was validated by two language professors in Torbat-e Heydarieh. The test reliability was recalculated by using SPSS to make sure that it was reliable. Coronbach's Alpha observed for the test was relatively high (α=.71).

Those participants whose scores were one standard deviation above and below the mean, were selected as the subjects of the current study. The same test which was used as the pretest was given to the participants of both groups at the end of the study as the posttest (Appendix A).

D. Procedure

First a population of EFL teachers in Khorasan Razavi (N=90) became aware of the purpose of the present study. Then 90 EFL teachers announced their contentment. They received TKT and their scores were calculated. Those participants whose scores were one standard deviation above and below the mean were selected as the participants of the present study. Therefore, 50 homogenous EFL teachers were selected as participants of this study. This test was administered via internet which was available on a special link. The participants were allowed to respond in a limited time (40 Min). In the next phase of the study, these participants were randomly assigned to control (N=25) and experimental (N=25) groups. Since the major purpose of this study was to investigate the effect of online peer knowledge sharing with a problem solving strategy on EFL teachers' professional development and knowledge, participants in experimental group created accounts in the yahoo group created by the researcher. The group was managed by the researcher and participants were asked to perform their online discussions on specific time. Based on an agreed schedule, all members had to be on line in two occasions per week to discuss the issue offered by the researcher (issues such as use of short stories based on EFL students' proficiency, use of internet and smart-boards in language classrooms, importance of establishing oral communications in EFL settings, error treatments, class management, CLT, professional issues). The treatment lasted for eight weeks (16 sessions).

Since the present study concentrated on EFL teachers' knowledge sharing on the net, issues assigned by the researcher ranged from content and pedagogical to pedagogical content knowledge as well as professional knowledge.

The first issue regarding the use of CLT in EFL classrooms was introduced by the researcher in the first session. Implementation of technological tools was another issue which was assigned by the researcher and participants in experimental group shared their information and experience, if any, with other members of this web based community.

During the study, these participants themselves took part in online discussions relevant to content, pedagogical and pedagogical content knowledge and some solutions to teaching problems were proposed (Appendix B & C). The researcher had access to this online information to collect his required data. These participants shared their teaching experiences, teaching information, various teaching methods and approaches and educational aids they have utilized in their classrooms (with a focus on content, pedagogical and pedagogical content knowledge). They gave their comments

regarding the efficiency of teaching and learning process and their teaching problems following every session. It is necessary to mention that, the participants were allowed to write as many relevant and appropriate comments as they liked in each session.

Participants in control group did not have any kind of peer knowledge sharing (with and without internet). They received instructions regarding teaching methods, approaches, educational aids and so on provided by the researcher. For example they received instructions on CLT, technological tools, teacher versus student centered classrooms, class management, and error corrections (Appendix E). Finally, at the end of the course (16 sessions within two months), Teaching Knowledge Test (TKT) was administered to participants of both groups.

IV. RESULTS AND DISCUSSION

A. Test of Normality

In order to ensure the normality of data, Kolmogorov-Smirnov test was conducted. The results are shown in Table 2. Null hypothesis of Kolmogorov-Smirnov test indicates the normality of data. If sig (p-value) is greater than 0.05 then the null hypothesis is accepted which confirms the normality.

TABLE 1
RESULTS OF KOLMOGOROV-SMIRNOV TEST

		Pretest	Posttest
N		50	50
Normal Parametersa	Mean	22.00	26.88
	Std. Deviation	6.667	7.044
Most Extreme Differences	Absolute	.162	.082
	Positive	.162	.082
	Negative	-.080	-.058
Kolmogorov-Smirnov Z		1.146	.578
Asymp. Sig. (2-tailed)		.144	.892
a. Test distribution is Normal.			

As Table 1 shows p-value for all data is greater than .05 (α=.144 for pretest; α=.895 for posttest), therefore the null-hypothesis is accepted which confirms the normality of data.

B. Results of Independent Samples T-test for Pretest

In order to check participants' performance at the outset of the study, this test was conducted through which means of two control and experimental groups in TKT pretest were compared (Table 2).

TABLE 2
RESULTS OF INDEPENDENT SAMPLES T-TEST FOR PRETEST

Group	N	M	SD	df	t	Sig (2-tailed)
Control	25	22.20	6.72	48	.21	.83
Experimental	25	21.80	6.74			

As Table 2 shows there is not any statistically significant (df=48; t=.21, sig=.83>.05) difference between control (N=25, M=22.20; SD=6.72) and experimental (N=25, M=21.80; SD=6.74) groups, thus confirming the participants' homogeneity at the start of the study. In order to ensure the study legitimacy it was necessary to select participants whose teaching knowledge was close to each other.

C. Results of Independent Samples T-test for Posttest

In order to compare participants' performance in the posttest, independent samples t-test was conducted again. Data are summarized in Table 3.

TABLE 3
RESULTS OF INDEPENDENT SAMPLES T-TEST FOR POSTTEST

Group	N	M	SD	df	t	Sig (2-tailed)
Control	25	24.64	6.62	48	2.35	.023
Experimental	25	29.12	6.85			

As Table 3 shows, participants in experimental group (N=25, M=29.12, SD=6.85) significantly (df=48, t=2.35, sig=.023<.05) outperformed those in control (N=25, M=24.64, SD=6.62) group in posttest. Accordingly, the null-hypothesis proposed by the researcher indicating that "The online peer knowledge sharing does not have any significant effect on Iranian EFL teachers' professional development" was rejected.

The findings indicated positive effects of establishment of virtual contexts in which EFL teachers can share their knowledge on a variety of issues related to teaching knowledge, teaching methods and techniques, teaching problems and so on. Teachers' views on language teaching and learning are expanded via the dialogue between them hence stressing the significant role of sharing knowledge in professional development (Akyel, 2000; Kraft, 2002, as cited in Mede, 2010, p. 38888).

Through the course the participants in the experimental group showed interest in attending online discussions and forums. Similarly, Yang (2009) found that the student teachers actively attended discussions held on teaching theories and their implications through blogs. Yang (2009) showed that the participants were reflective, and some critically mirrored on their thoughts and made valuable comments; they also viewed technology as a useful platform for reflecting and communicating with each other.

The present finding is in agreement with what found by Cruz-Yeh (2011) after employing an online teacher professional development (oTPD) framework which integrated the principles of cognitive apprenticeship and informal mentoring in online contexts. It was manifested that teachers participating in this study took advantages from oTPD through the construction of new knowledge and skills.

Similarly, Zandi et al. (2014) explored the effects of blogging on teacher professional development. It was manifested that teachers' sharing of their practices within the communities improves collaboration and sharing of knowledge which benefits both the teachers and their students.

V. CONCLUSION AND IMPLICATIONS FOR EFL TEACHERS

The present study concludes that the employment of online peer knowledge sharing had significant effects on Iranian EFL teachers' professional development. Through discussions held on the net, the participants of the present study shared their knowledge in a variety of teaching areas which helped them improve their teaching profession. Discussion has been found as a facilitator in increasing knowledge. Latif (2010) found that the discussions can play a key role in attaining knowledge about other teachers' teaching methods and strategies and integrating the effective ones into their own classrooms. Since the discussions were managed by the researcher, the topics were mainly about three types of teaching knowledge, e.g. content knowledge, pedagogical knowledge, and pedagogical content knowledge.

The present study was unique in that it was the first one which introduced the online forums and contexts where EFL teachers chatted concerning different areas of teaching. The employment of such virtual contexts was effective and motivated the participants to update their knowledge before the session. Similarly, Al-Madani and Allaafiajiy (2014) discussed the Saudi development framework for training its teachers on skills and knowledge regarding Information Communication Technology and found it helpful in knowledge dissemination, knowledge transfer, knowledge sharing, and knowledge production. It was found that teachers' continuous training and the employment of modern technology devices do not only support country's manpower but also strengthen the country's economy (Al-Madani & Allaafiajiy, 2014). Therefore, it can be concluded that use of modern technological tools, in general, and internet, in specific, will result in positive outcomes in the field of EFL teacher training, which can improve EFL students' academic achievement, which can finally have positive effects on all dimensions of the society and teachers.

EFL teachers can participate in online peer knowledge sharing in order to communicate with their colleagues on a variety of issues related to teaching career. Through such discussions they can enhance their teaching knowledge and learn how to behave in their class. since the present study covered a vast area of teaching profession including pedagogical knowledge, content knowledge, and pedagogical content knowledge, EFL teachers can be provided with a lot of teaching instructions and guidelines which can facilitate and improve their teaching profession. They need to employ internet technology as a teaching and learning tool in EFL contexts. It is not surprising if we claim that in future technology will replace traditional classrooms and virtual educational contexts will be created. Therefore, EFL teachers need to take steps to prepare themselves for this modern technological life.

A. Implications for EFL Students

EFL students can benefit from the findings. They can employ computer as an effective and friendly tool in order to facilitate their learning process. They need to learn about technology and consider internet as an informative source which can provide them with valuable information and knowledge.

B. Implications for Syllabus Designers

EFL syllabus designers need to emphasize on use of technology and virtual contexts in EFL programs. They should develop materials which require EFL teachers and students to use modern technology. For example, incorporation of computer-based tasks in text-books provides EFL classrooms with an opportunity of experiencing different computer programs. In addition, they should provide EFL teachers and students alike with instructions on how to integrate technology into language classrooms.

APPENDIX A. TEACHING KNOWLEDGE TEST (TKT)

In the name of God, the exalted

Dear participant;

This test which is part of an MA thesis schedule is exclusively designed, validated and standardized to investigate if online peer knowledge sharing affects Iranian EFL teachers' professional development or not.

***Read instruction for each section (i-vii) and then write your answers in the answer sheet provided"**

Time to answer: 40 Minutes

5 Points	**(i)**For questions 1-5, look at the following terms for language skills and three possible descriptions of the terms. Choose the correct option A, B or C. Mark the correct letter (A, B or C) on your answer sheet. **1.Summarising** is _____ . A. explaining a text in detail. B. writing the last sentence of a text. C. giving the main points of a text. **2.Interactive listening** is _____ . A.listening, responding and giving feedback. B.listening for detail, mood and attitude. C.listening and identifying word stress and linking. **3.Oral fluency** is _____ . A.speaking without making any mistakes. B.speaking naturally without hesitating too much. C.speaking without considering the listener. **4.Paraphrasing** is _____ . A. using phrases to say something instead of using complete sentences. B. connecting sentences together in speech or writing by using conjunctions. C. finding another way to say something when you cannot think of the right language. **5.Scanning** is _____ . A. reading a text quickly to get the general idea. B. reading a text quickly to find specific information. C. reading a text quickly to identify the writer's attitude.
6 Points	**(ii)** For questions 6-11, match the general advice on motivation with the techniques for encouraging motivation listed A-D. Mark the correct letter (A-D) on your answer sheet. You need to use some options more than once. **Techniques** A. Encourage learner autonomy. B. Find out what students think. C. Make your feedback positive and constructive. D. Build variety into your teaching. **Advice** 6.Listen to student feedback using a class 'suggestion box' or a short questionnaire. 7.Don't always do the same kinds of things in the classroom. Try new activities and change activities in each lesson. 8.Think about how you tell students about their progress. How can you praise or encourage them instead of just giving marks? 9.Choose activities that different students can respond to in different ways, for example, making posters or writing poems. 10.Give comments on students' work which are helpful and enable them to feel a sense of progress. 11.Train students to use reference resources to help them study successfully on their own.

7 Points	(iii) For questions 12-18, match the following learners' comments to the descriptions of learner preferences listed A-H. Mark the correct letter (A-H) on your answer sheet. There is one extra option which you do not need to use.

Comments

12. 'Most of the time should be spent doing grammar exercises.'
13. 'I prefer working with other students to speaking to the teacher in front of the class.'
14. 'I really like knowing how language works.'
15. 'Rules just confuse me – give some examples and let me work it out myself.'
16. 'Why should I listen to other students' mistakes? The teacher should talk most of the time.'
17. 'I just want people to understand what I mean. I don't worry if I make mistakes.'
18. 'I like deciding for myself what and how I learn.'

Preferences

A. This learner wants explanations of grammar rules.
B. This learner enjoys explaining language to other students.
C. This learner enjoys practicing language in pairs and groups.
D. This learner enjoys doing language practice that focuses on accuracy.
E. This learner doesn't want to work with other students.
F. This learner enjoys learning independently.
G. This learner focuses on communicating.
H. This learner doesn't want the teacher to explain grammar.

6 Points	(iv) For questions 19-24, match what the student does with the learning strategies listed A-G. Mark the correct letter (A-G) on your answer sheet. There is one extra option which you do not need to use.

What the student does

19. To learn new words, I always create pictures of them in my mind.
20. I always keep new vocabulary on cards which I separate into topics.
21. Whenever I can, I talk with native English speakers in social situations.
22. I work out the meaning of a new word from the language around it.
23. I pay attention to my own language to make sure it is accurate.
24. If I am not sure of the meaning of a word or of how to use it, I look it up in a dictionary

Learning Strategies

A. self-monitoring
B. guessing from context
C. memorizing
D. organizing learning aids
E. repeating
F. consulting reference resources
G. using opportunities for practice

7 Points	(v) For questions 25-31, match the statements with the teaching approaches that they describe listed A, B or C. Mark the correct letter (A, B or C) on your answer sheet.

Teaching approaches

A. Presentation, Practice and Production (PPP)
B. Task-based Learning (TBL)
C. Grammar-Translation

Statements

25. The teacher moves from providing models of language use to monitoring learners' use of language.
26. First the learners complete a communicative task: they are encouraged to use any English they know and they do not have to use any particular language item.
27. The written form of the language is more important than the spoken form.
28. The language focus is at the start of the teaching sequence, with fluency activities coming later.
29. The language focus comes after a communicative activity, so that learners notice gaps in their language.
30. Learners acquire language by trying to use it in real communicative situations.
31. The learners' first language plays a central role in the teaching.

7 points	**(vi)** For questions 32-38, match the classroom activities with the types of speaking practice listed A, B or C. Mark the correct letter (A,B orC) on your answer sheet.

Types of speaking practice

A. oral fluency practice
B. controlled oral practice
C. neither

Classroom activities

32. At the beginning of the lesson, we got into groups and talked about an interesting newspaper article that we had read.

33. The teacher gave us word prompts such as 'cinema' and 'friends', and we had to say them insentences using the past simple, e.g. 'We went to the cinema'; 'We visited some friends'.

34. The teacher read a passage to us, which we then wrote down.

35. The teacher gave us roles such as 'filmstar' or 'sports star' and we had to role play a party inwhich we chatted to each other.

36. We had a discussion about the advantages and disadvantages of the Internet.

37. The teacher read out some sentences, some of which were correct and some incorrect. We had to shout out 'Right' or 'Wrong'.

38. We had to ask our partner five questions about their abilities, using 'can', e.g. Can you swim?

7 Points	**(vii)** For questions 39-45, match the examples from teaching or assessment activities with the terms listed A-H. Mark the correct letter (A-H) on your answer sheet. There is one extra option which you do not need to use.

Terms

A. Sentence transformation
B. Jumbled sentence
C. Odd one out
D. Form-filling
E. Multiple choice
F. Categorizing
G. Labeling
H. Gap fill

Examples of teaching or assessment activities

39. Complete the sentence.
Last night I went _____ the cinema.

40. Complete the sentence.
The weather yesterday was ....
A. delicious   B. exciting   C. fantastic

41. Find the word that does not fit.
banana, apple, onion, pear, orange

Put the words in the list in the correct box.
Thai, India, Britain, Chinese, Swedish, Hungarian, Czech, Portugal

Countries	Languages
Malaysia	

43. Complete Sentence B so it means the same as sentence A.
A: The man built the bridge in 1982.
44. B: The bridge ....

Complete with your personal details.
Family name: ....
First name: ....
Date of birth: ....
Address: ....
....

45. put the words in the right order.
do – usually – what – in – you – do – summer

In the name of Allah, the exalted

Answer Sheet

Time to answer: 40 Minutes

Note: All your personal information and test results will be confidential.

It will be highly appreciated if your best is done answering the questions.

If you wish to know about your test results please provide your email address or mobile phone number in the boxes below.

Please send my test score via my email address [＿＿＿＿＿＿ @ ＿＿＿＿＿＿] or through SMS to the number [＿＿＿＿＿＿]

Please provide your detailed bio-data in the fields below. All fields are required to be filled in.

Name (optional) .... TEFL/TESL Experience: .... Years   Gender: Male ☐ Female ☐   City of Residence: ....

Date of Birth: /   /   First Language: ....   I teach English as a foreign ☐   second ☐ language.

Holding University Degree: Diploma ☐   2-year degree ☐   BA ☐   MA ☐   PhD ☐ Graduated from University of ....

Instruction: Write the matching letter for each item in the corresponding box

Important note: All questions are required to be answered

(i) For questions 1-5, mark the correct letter (A, B or C) in the boxes below.

1	2	3	4	5

(ii) For questions 6-11, mark the correct letter (A-D) in the boxes below.

6	7	8	9	10	11

(iii) For questions 12-18, mark the correct letter (A-H) in the boxes below.

12	13	14	15	16	17	18

(iv) For questions 19-24, mark the correct letter (A-G) in the boxes below.

19	20	21	22	23	24

(v) For questions 25-31, mark the correct letter (A, B or C) in the boxes below.

25	26	27	28	29	30	31

(vi) For questions 32-38, mark the correct letter (A, B or C) in the boxes below.

32	33	34	35	36	37	38

(vii) For questions 39-45, mark the correct letter (A-H) in the boxes below.

39	40	41	42	43	44	45

Number of Correct answers (C): [＿＿]

Number of Incorrect answers (I): [＿＿]

Number of Unanswered items(U): [＿＿]

Score: [＿＿＿＿＿＿] out of forty-five

APPENDIX B. LOOK UP TABLE FOR TOPICS DISCUSSED THROUGHOUT THE TREATMENT

Sessions	Topic	Shared Information& Knowledge
1.	Use of Communication Language Teaching	Pedagogical content knowledge
2.	Implementation of technological tools	Technological pedagogical content knowledge
3.	Teacher vs. student centered classrooms	Pedagogical knowledge
4.	English text-books used in EFL settings	Content knowledge
5.	Classroom management	Pedagogical knowledge
6.	Use of short stories based on EFL students' language proficiency	Content knowledge
7.	Establishing oral communications in EFL classrooms	Pedagogical content knowledge
8.	Types of error corrections and feedbacks	Pedagogical content knowledge
9.	Various teaching methods	Pedagogical content knowledge
10.	Approaches to language teaching and learning	Pedagogical content knowledge
11.	Educational aids	Pedagogical knowledge
12.	Teaching experiences	Pedagogical knowledge
13.	Cross-cultural issues	Content knowledge
14.	Needs analysis	Pedagogical content knowledge
15.	Psychological issues (EFL teachers' and students' autonomy, anxiety, …)	Content knowledge
16.	Extra-curricular activities (language clubs, out of class activities)	Pedagogical content knowledge

APPENDIX C. CLT

Participant	Idea
1.	CLT needs to be more emphasized in EFL classrooms.
2.	Due to the communicative use of language, CLT is an effective approach to teaching.
3.	Students should become familiar with CLT.
4.	It is better to improve students' spoken and written ability of communication.
5.	Speaking needs to be more stressed in such classrooms.
6.	CLT deals with students' real-life communications outside the classrooms.
7.	Students need to receive relative assignments to enhance their communication abilities.
8.	Use of group work and pair work is recommended in these classrooms.

REFERENCES

[1]   Al-Madani, F. M., & Allafiajiy, I. A. (2014). Teachers' Professional Development on ICT Use: A Saudi Sustainable Development Model. *Journal of Modern Education Review*, *4(6)*, 448-456.

[2]   Azma, M. & Talebinejad, M. (2012). Teacher's pedagogical knowledge and learner's success in EFL contexts. *ELT Voices – India, 2*(6). Retrieved from: http://eltvoices.in/EVI26/EVI_26_2.pdf (accessed 29/9/2014).

[3]   Badawi, M. (2009 March). Using blended learning for enhancing EFL prospective teachers' pedagogical knowledge and performance. Paper presented at *Learning & Language - The Spirit of the Age*, 14-15, Ain Shams University Guest House, Cairo, Egypt.

[4]   Chen, W-C. (2012). Professional growth during cyber collaboration between pre-service and in-service teachers. *Teaching and Teacher Education, 28*, 218e228.

[5]   Chen Wei (2006). A Study of Teacher's Knowledge Structure from the Perspective of Teacher's Professional Development. Master thesis under the guidance of Xie Limin from Shanghai Normal University.

[6]   Chou, C., M. (2011). Student teachers socialization development by teaching blog: Reflections and socialization strategies. *TOJET: The Turkish Online Journal of Educational Technology, 10 (2),* 190-201.

[7]   Cruz-Yeh, A.D. (2011). Facilitating teacher professional development in online learning environments: a study of Taiwanese English teachers in private language supplementary schools. PhD Thesis; University of Birmingham Research Archive.

[8]   Graham, C., Tripp, Wentworth, L. (2009). Empowering or compelling reluctant participators using audience response systems. *Active learning in Higher Education 8* (3), 233-258.

[9]   Jansem, A. (2014). Exploring non-native EFL teachers' knowledge base: practices and perceptions. *International Journal of Applied Linguistics & English Literature, 3*(6), 252-259.

[10] Koehler, M.J., & Mishra, P. (2009). What Is Technological Pedagogical Content Knowledge? *Contemporary Issues in Technology and Teacher Education, 9*(1), 60-70.

[11] Latif, F. (2010). The impact of collegial instruction on peers' pedagogical knowledge (pk): An EFL case study. *The Journal of Applied Linguistics 3*(1), 162-187.

[12] Lenhart, S. (2010). The effect of teacher pedagogical content knowledge and the instruction of middle school geometry, Ph.D. Dissertation, The Faculty of the School of Education, Liberty University. Retrieved from: digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1382... (accessed 10/2/2014).

[13] Levin, T., & Wadmany, R. (2008). Teachers' views on factors affecting effective integration of information technology in the classroom: Developmental scenery. *Journal of Technology and Teacher Education 16* (2), 233-263.

[14] Liaw, S. S., Chen, G. D., & Huang, H. M. (2008). Users' attitudes toward Web-based collaborative learning systems for knowledge management. *Computers and Education, 50* (3), 950–961.

[15] Lin, E., Wu, S., & Wang, J. (2012). Pedagogical content knowledge: A comparison between native and nonnative English speaking teachers in a Chinese context. Retrieved from: http://www.hokkyodai.ac.jp/international-c/conference/SS4-3_Emily_LIN.pdf. (accessed 3/5/2014).

[16] Liu, M-h. (2012). Discussing teaching video cases online: Perspectives of pre-service and in-service EFL teachers in Taiwan. *Computers & Education 59*, 120–133.

[17] Liu, S., Liu, H., Yu, Y., Li, Y., & Wen, T. (2014). TPACK: A new dimension to EFL teachers' PCK. *Journal of Education and Human Development, 3*, (2), 681-693.

[18] Mede, E. (2010). The effects of collaborative reflection on EFL teaching. *Procedia Social and Behavioral Sciences 2*, 3888–3891.

[19] Mishra, P., & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *The Teachers College Record, 108*(6), 1017-1054.

[20] Mullock, B. (2006). The pedagogical knowledge base of four TESOL teachers. *The Modern Language Journal, 90*, 48–66.

[21] O'Neal, D., Ringler, D., & Rodriguez, D. (2008). "Teachers' perceptions of their preparation for teaching linguistically and culturally diverse learners in rural Eastern North Carolina", the rural educator. Retrieved from: http://www.ruraleducator.net/archive/30-1/30-1_ONeal.pdf. (accessed 16/6/2014).

[22] Saeedan, A., Ashraf, H., & Motallebzadeh, K. (2015). The effect of weblogging on Iranian English teacher professional development. *British Journal of Education, Society & Behavioural Science, 5*(3), 321-340.

[23] Salmon, G. (2002). Hearts, Minds and Screens: Taming the Future, Keynote Speech. EduCAT Summit Innovation in e-Education, Hamilton New Zealand.

[24] Seleim, S.I.M., & Mahmoud, W.A.N.(2013). Using studio-based learning for enhancing EFL pre-service teachers' pedagogical knowledge and investigating the effect on their pedagogical content knowledge. *Journal of Education and Practice, 4*(25), 107-122.

[25] Valencia, J.A. Á. (2009). An exploration of Colombian EFL teachers' knowledge base through teachers' reflection. *Linguagem & Ensino, Pelotas, 12*(1), p.73-108.

[26] Yang, S.-H. (2009). Using blogs to enhance critical reflection and community of practice. *Educational Technology & Society, 12* (2), 11–21.

[27] Zandi, P., Thang, S.M., & Krish, P. (2014). Teacher professional development through blogging: Some preliminary findings. *Procedia - Social and Behavioral Sciences 118*, 530 – 536.

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