Exploring the Role of Problem-Based Learning in Developing Conflict Resolving and other Soft Skills - A Quasi-Experimental Study

Sadia Deep[1]*, Berhannudin Mohd Salleh[2], Hussain Othman[3]

[1]Faculty of Science, Technology and Human Development, Universiti Tun Hussein Onn Malaysia, 86400 Parit Raja, Batu Pahat, Johor, Malaysia, [2]Faculty of Science, Technology and Human Development, Universiti Tun Hussein Onn Malaysia, 86400 Parit Raja, Batu Pahat, Johor, Malaysia, [3]Faculty of Science, Technology and Human Development, Universiti Tun Hussein Onn Malaysia, 86400 Parit Raja, Batu Pahat, Johor, Malaysia. *Email: sadiadeep@gmail.com

ABSTRACT

Problem-based learning (PBL) is widely regarded as a successful and innovative method of instruction for skills development in the recent decades. This empirical study therefore, intends to explore the perception of employees and assess the impact of 3 days PBL approach based training on the soft skills and traits of employees. A mixed method research approach was used for the study; the data for the study therefore, emerged from the semi-structured interviews, 53 items based survey, and observation of the training process. The employees belonging to the three development organizations from the area of Islamabad and Peshawar in Pakistan served as the sample of the study. Interviews and observation were transcribed and analyzed through thematic analysis while the data from the survey was processed in SPSS. The Findings from this study reveal the significant role of PBL in generating conflict resolving skills and other soft skills in employees.

Keywords: Problem-based Learning, Skill Development, Soft Skills, Traits, Workplace, Employees
JEL Classifications: I2, P36

1. INTRODUCTION

The modern workplace is more complex as compared to the one a decade ago. Today's workplace demands a range of soft skills on the part of employees which were not considered important in the past (Høye and Severinsson, 2010; Leidner and Kayworth, 2006). The lack of these skills in employees creates conflicts and problems at the workplace (Pandey et al., 2016). Communication conflicts are on the rise among employees at the workplaces in Pakistan (Bibi and Nawaz, 2012; Nasir and Bashir, 2012). These conflicts are widely avoided while there are no conscience efforts in the organizations to resolve them effectively (Farooqi et al., 2015). The lack of generic skills and especially conflict resolution skills in employees are considered as one of the basic reasons of these conflicts. Presently traditional approaches for delivering training are being used to enhance the knowledge and skills of employees (Ameen, 2013; Mirza et al., 2014).

While significant research indicates that traditional instructional approaches do not have the potential and capabilities to meet the desired change in employees (Sultana and Zaki, 2015). In order to develop these essential skills, the organizations organize training programs and capacity building training for their employees regularly (Adams, 2014; Chughtai and Lateef, 2015; Groh et al., 2012). The review of existing research indicates that students and learners develop an improved attitude towards learning, higher level thinking skills and other soft skills including communication skills, teamwork, critical analysis, problem-solving and reflection etc. when PBL is used (Carvalho, 2015; Gonzalez, 2013). Problem-based learning (PBL) is a student-centered pedagogy. One of the core differences is the role of the teacher between traditional lecture-based teaching and PBL teaching. Facilitator promotes a student-centered approach in PBL class. Instead of directing the learning process, the teacher asks questions to encourage discussion and probe the students for information (Salinitri et al.,

2015; Savery, 2015). Being an unfamiliar role for many instructors, this can be one of the most challenging aspects in PBL. All questions should be turned back through a conscious effort back toward the students (Pelikan, 2004).

Figure 1 shows the main difference in the instructional process of PBL and traditional teacher centered approach. PBL aims to enable students to acquire and structure knowledge in an efficient, accessible, and integrated way by facilitation instead of pouring all these.

Several desirable attributes, such as sharing information, teamwork, problem solving, respect for others, independent responsibility for learning, and communication skills are developed through group learning along with the acquisition of knowledge Hmelo-Silver and Barrows, (2015). Due to the acquisition of knowledge and with the development of generic skills, the PBL can be considered as a small group teaching method (Nasir and Bashir, 2012). Group work is one of the notable features of PBL approach.

Being a unique aspect of PBL, group work is also an essential for several reasons. Firstly, learning communities is developed through a group work in which students feel comfortable raising questions about the material and developing new ideas (Ertmer and Glazewski, 2015). Secondly, soft skills such as communication skills, conflict resolution skills, and students' ability to manage group dynamics are enhanced through group work (Lane, 2008). Finally, students become actively involved in the work and are held accountable for their actions by group members so it remains interesting and motivating for the students (Hande et al., 2015). Group work can enhance student achievement for this reason. However, without guidance groups do not always work effectively (Ertmer and Glazewski, 2015).

This is an account of an explanatory quasi-experimental study of exploring the effects and impact of PBL on the three groups of employees in Pakistan. The study was carried out as there is almost no amount of empirical research about PBL approach in the developing sector at the workplace in Pakistan. The following research questions guided this research.
1. How much effective the PBL approach is in terms of resolving communication conflicts?
2. How much effective the PBL approach is developing other soft skills?

2. CONCEPTUAL FRAMEWORK

The following conceptual model guided the conduction of this research study.

Figure 2 present the conceptual framework for this research study. The core concept of this study framework reveals that essential soft skills and traits are generated and developed created through the adaptation of PBL process and approach for the instruction in employee's development training which helps in reducing the communication conflicts among employees and eventually ensure into peaceful and productive organizational environment.

Figure 1: Comparison of problem-based learning with traditional teacher centered approach (Distlehorst, 2008)
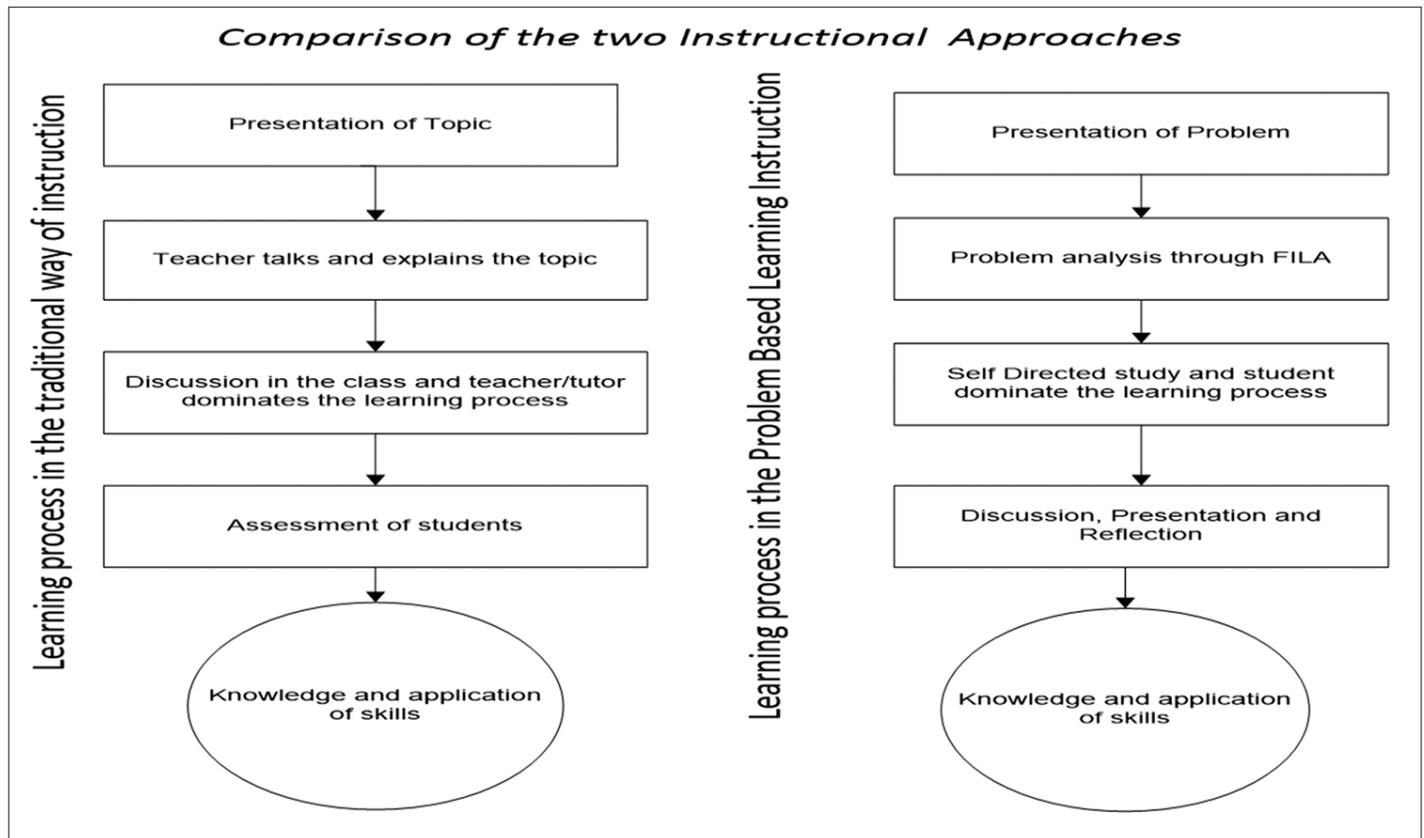
Figure 2: Conceptual framework of the study
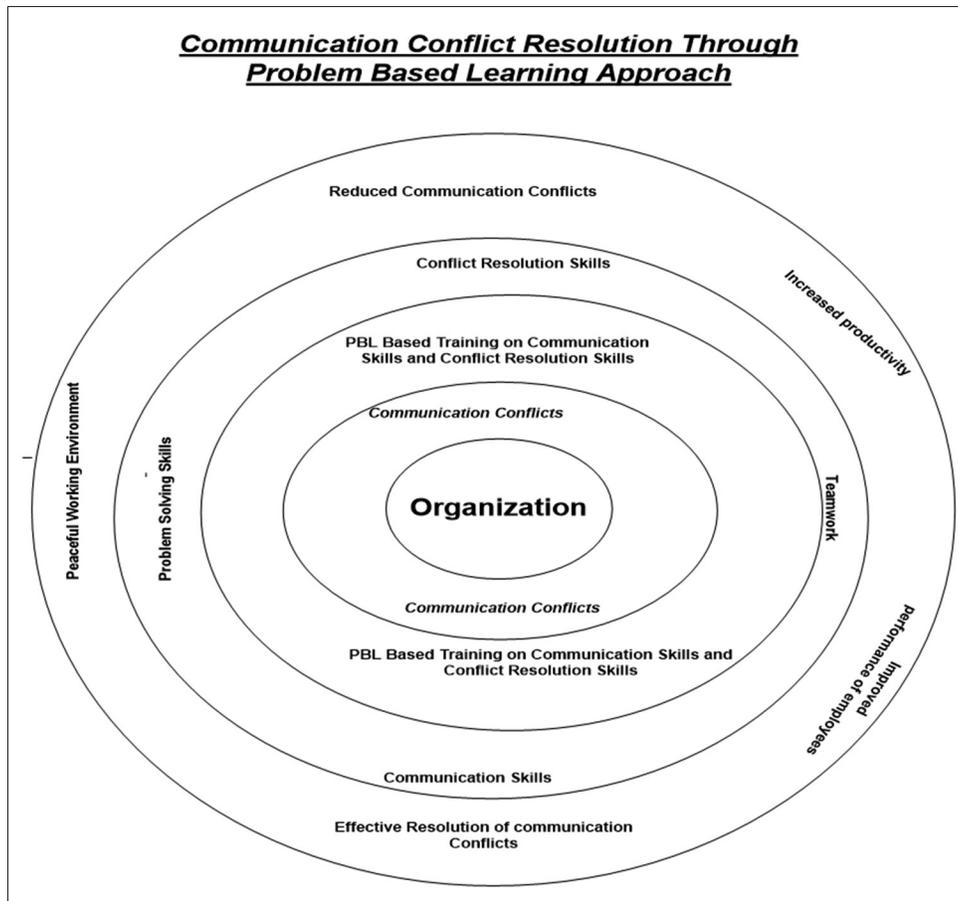
3. STUDY DESIGN AND METHOD

Research Skill and Development Organization (RSDO) facilitated deriving the sample for this study. Being an Islamabad-based Training and Consultancy Firm in Pakistan, RSDO (Research and Training Consultancy) delivers training to its different client organizations. It was thus made possible to select organizations for this study through RSDO being the prior workplace of the researcher. Three developing organizations namely Community Motivation Development Organization Peshawar, Read Foundation and International Catholic Migration Commission (ICMC) Islamabad, Pakistan thus, served the population for this study. The selection of these organizations was based on the willingness on the part of the head of these organizations. The researcher had contacted many organizations but three out of around six accepted the support and allowed their staff for the training and subsequent interviews. This study used a mixed method approach for collecting data from quasi-experimental research including qualitative and quantitative. To constitute the quantitative research, 40 employees served as the sample for the pre and posttests based on 53 items. For the qualitative aspect, semi-structured interviews were taken from 18 employees (sorted out from 40). For the observation, the researcher and one of the most senior employees from each training observed the sessions in the 3 days training. It is pertinent to mentioned here before delivering the training, the principal researcher attained a series

of training on PBL approach organized by AKEPT (training institute in Malaysia) in Malaysia.

This research effort, after 3 days training based on PBL approach, used pre and posttest survey to collect data quantitatively while for the qualitative method, 18 respondents out of the total 40 got selected for the semi-structured interviews. The 18 respondents out of total forty for the qualitative study were chosen on the basis of the willingness of the respondents. The sample had been filtered through criteria on the basis of their length of working experience and number of organizations served by a purposeful sampling approach. Since, the optimal sample depends on the purpose of the study, research questions, and richness of the data so there is no commonly accepted sample size for qualitative studies (Chaudhry et al., 2011). This study used a semi-structured interview method to collect the data qualitatively (Appendix 1 for the interview questions). In a semi-structured interview, the researcher asks a series of open-ended questions with accompanying queries that probe for more detailed and contextual data (Piercy, 2015). A semi-structured interview is a verbal interchange when one person, the interviewer, tries to elicit information from another person by asking questions. Although the researcher prepares a list of predetermined questions, but it provides the interviewer with a chance to explore what they feel are important (Longhurst, 2003).

The researcher opted for the semi-structured interview as the data collecting tool due to its suitability to the subject and its

benefits over other tools such as it allows the researcher to be prepared well in advanced and appear competent during the interview; besides, it also allow the respondents to express their views in their own terms (Cohen and Crabtree, 2006) as was required for this study. In order to support the quantitative data, qualitative method used to explore the subject deeply. Qualitative method was used based on the descriptive phenomenology as a total method for research in order to explore the subject deeply. The descriptive phenomenology not only focused on the data analysis but this structured phenomenological approach also applies to the interviewing that has questions based on the themes of contextualization of the experience, capturing the phenomenon, its clarification and exploration (Bevan, 2014). The method involved structural and descriptive questioning and as well as innovative use of imaginative variation in order to explore experiences. Qualitative research is an approach to explore and understand the meaning-the individuals and group give to a social or human problem (Creswell, 2013). All interviews were audibly recorded with the permission of the students being interviewed. All of the interview transcripts were read and organized by the researcher into themes and codes. The data was organized then into themes, sub-themes and further into coding whenever deemed necessary. Thematic analysis based on the phenomenological approach was used. Thematic analysis is a widely used qualitative research technique (Charmaz and Smith, 2003). The process of thematic content analysis is indeed often very similar in all types of qualitative research in that the process involves analyzing transcripts, identifying themes within those data and gathering together examples of those themes from the text (ion Sys and TVE). The aim of the thematic analysis is to obtain a condensed and broad description of the phenomenon (Braun, 2014). The major themes were first identified after going through the review of existing literature on the subject.

As far as the validity and reliability of the data are concerned, three independent researchers from University Tun Hussein Onn Malaysia were asked to verify and validate the accuracy of the categorization of themes and subthemes. After discussion with them, minor modifications were made to the analysis and coding. The data was also validated by pictures and videos of the respondents being an interview. The analyzed data was validated through sending it back in written form it to all the respondents for verification. As for as quantitative data is concerned, the items developed from available literature was processed for the reliability analysis in SPSS and it showed a higher Cronbach's Alfa of 0.953 for the 53 items.

4. FINDINGS FROM THE STRUCTURED INTERVIEW

The majority of the respondents expressed that PBL demands a lot from the learners in terms of knowledge and skills that can enhance their conflict resolution and other skills at the workplace. They mentioned the working in a diverse group in PBL process that makes everybody accustomed to interacting people from the different background at the workplace. Some of the quotes are the following from the interview.

Since there is group discussion in PBL and everybody have his own points of view. So after a lot of disagreements; the group members come to one point. During this process, patience, compromise, and tolerance are developed in members and this can help in resolving conflicts at the workplace. Collaboration and communication skills are developed through various activities. (RQ6G1R1)

Some of the respondents also expressed that the learners can develop conflict resolution skills while types of conflicts depend on the professional environment within the organization.

In my view, PBL approach can do help in creating and developing conflict resolution skills. Actually when you work in a group, you have to listen and tolerate all types of views whether you agree or disagree with it; still, you patiently listen and accommodate the opinions of others so in this way a lot of conflict resolution traits can develop in you (RQ6G2R13).

Another respondent expressed it in the following words:
"In PBL, you have to work in a group which may not be your favorite. So when you work with diverse people on diverse ideas, so you can definitely develop a lot of conflict resolution traits and skills which help in the future communication conflicts resolution (RQ1G2R10)."
Talking about the role of PBL in the different conflict resolution traits, a respondent shared that, Since we work in a group in PBL so working in a group on a problem, we may not agree with each other. At times, there may arise anger, stress and you have to manage it. You also have to listen actively the point of view of others and convey as well your own so, in this process, conflict resolution skills develop (RQ6G2R11).

Through the answers of respondents, it can be inferred that PBL and its process and especially group work can help create important skills and traits that also later help the learner in resolving conflicts at the workplace. In a group work, there are people from different backgrounds with different ideas and views which they have to tolerate and accommodate to promote a healthy discussion and peaceful environment.

The respondents were also asked their feeling about development other soft skills through PBL approach. They had different points of views:
PBL has the potential to create soft skills like communication, leadership, and problem-solving skills but it is a time taking process. 3 days training is not enough for creating and developing multiple soft skills. The duration of training based on this approach or course should be more than that (RQ7G1R1).
Another respondent had the following views in the favour of PBL approach. I have found PBL better than the traditional method of teaching in respect of skill development. I think PBL approach enables the learners to interact with other people who are different all together. So learners get an

opportunity to socialize, communicate with people and learn from each member of the group. Besides, they have to think and brainstorm on the solution of the problem thus developing critical and creative skills (RQ7G3R12).

Another respondent considered PBL as a time-consuming method. I feel that PBL does have the capability to develop soft skills in learners if given a relatively longer time. There should be more sessions/training on it like there should be more days because it is a time-consuming approach as compared to lecture method (RQ7G2R9).

Another respondent flavored using the PBL for skill development in the following words.

After attending a session on PBL approach, I think PBL can contribute in the development of various skills. You have to work on a lot of tasks in this approach such as reading, analyzing and comprehending the problem properly. Then you have to discuss various options and listen to diverse opinions and finally coming up with a solution. In all this process your various skills and traits are being developed (RQ7G1R4).

About the soft skills development, the role of PBL can be summed up as fruitful but at the same time, it is time-consuming as compared to the traditional teaching approaches. Despite its time-consuming factor, it has the potential to create and develop essential soft skills in learners such as communication skills, leadership skills, conflict resolution skills, creative skills, problem-solving skills etc.

The training module was based on the contents of "Technical Proposal Writing." Regarding the effectiveness of training module, the respondents had different views. Some of the respondents deemed it a time taking module.

"Module was good but PBL approach had made it too time-consuming. Fewer topics were covered due to the time taking the process of PBL. The numbers of 3 days were not enough. Moreover, it was good for the skills generation" (RQ8G1R6).

Respondents also talked about how to improve the PBL module. The module requires more time than was reserved for it. The self-directed study should be also given much more time so that learners could get an ample opportunity to avail a lot of resources. Otherwise, it is effective for skill development and knowledge acquisition (RQ8G2R11).

The respondents also talked about the improvement in the module i.e.,

The module can be improved a little like the pre-test was a higher level than mine. The concepts or problem were a little difficult for all as a whole. In terms of skills development, it is an effective module but needs improvement in reserved timings and contents (RQ8G2R12).

Overall, the employees were satisfied from the current modules. Mostly the suggestions were regarding the timings and duration of the training on PBL approach and regarding the concept of

training which could be made a little bit easier. Since the topic and subject of the training was of technical nature so that too made the respondents a little bit doubtful about the effectiveness of PBL.

5. QUANTITATIVE DATA ANALYSIS AND FINDINGS

In addition to the structured interview, Employees were asked to identify their skills in the survey after the completion of three training experience through PBL approach; a set of questionnaire having 53 items was administered in hard copy. The data was then analyzed using SPSS and the results were drawn.

This table cross-tabulates two variables "gender" and "Organization" from which the respondents belong to.

5.1. Demographics

According to Table 1, male outnumber female in the two organizations except ICMC. The two organizations didn't have female employees so that is why all the trainees were male. It was not planned to have the entire male rather it happened by chance.

The cross-tabulated Table 2 shows that more employees belong to the middle management, and then lower and finally top management. In terms of years of experience, 20 employees fall into 1-5 years of experience. We can conclude that majority respondents come from the middle management with 1-5 years of experience.

This Research study made the interpretation based on the value of mean score according to the Table 3.

The finding is presented as follows:

Table 1: Gender against organization cross tabulation

Gender	Organization name			Total
	CMDO	Read foundation	ICMC	
Male	15	12	5	32
Female	0	0	8	8
Total	15	12	13	40

ICMC: International Catholic Migration Commission

Table 2: Work experience against management level

Work experience	Level			Total
	Middle management	Top management	Lower management	
1-5 years	11	0	9	20
10-15 years	3	4	0	7
15 and more	0	1	2	3
5-10 years	6	4	0	10
Total	20	9	11	40

Table 3: Standard value of mean score (Wiersma, 1995)

Score mean	Level
1.00-2.33	low
2.34-3.67	Moderate
3.68-5.00	High

Respondents' Perception of Skills Development through PBL approach at the beginning and End of the 3 days training.

As per Table 4, there is no significant improvement in the individual skills difference is not so significant but there is a slight improvement in the overall mean of posttest and at the same time the mean stills lay in moderate range as per Table 3. The result seems to be quite optimistic while keeping in view the short duration of the training period. The Cronbach's alpha for the 13 items of communication skills item was derived as 0.937 for the pretest and 0.876 for the post-test through SPSS.

The findings from Table 5 clearly reveal the enhancement of conflict resolution trait, especially in overall mean. According to the table, the mean was 3 in the protest while it rose significantly after a short period of 3 days training. This result supports the findings of another study conducted in nursing school on students in Turkey. The total scores of conflict resolution skills and the scores of its sub-scale such as listening skills, empathy and anger management of the students taught by PBL were significantly higher as compared to those who were taught by the conventional method of education (Seren and Ustun, 2008). The Cronbach's alpha for the 10 items of conflict resolution traits skills item was derived as 0.493 for the pretest while 0.345 for the post-test.

Despite the lower reliability analysis for these items, the overall Cronbach's alpha of 53 items is much higher through SPSS.

Table 6 reveals that there is a slight raise in the overall findings of mean. These findings support the study conducted by (Moliner et al., 2015) in which teamwork of learners increased significantly through PBL instruction. The Cronbach's alpha for the 10 items of teamwork skills was derived as 0.872 for the pretest and 0.826 for the post-test through SPSS.

The result from the Table 7 is also significant if keep in mind the less duration of the training period as also indicated by the respondents of the study. Although the individual skills improvement is not so visible and significant but the total mean give a positive result. The Cronbach's alpha for the 10 items of research skills was derived as 0.866 for the pre-test through SPSS while 0.768 for the post-test.

As per Table 8, the research skills also slightly improved through PBL method. The Cronbach's alpha for the 10 items of conflict resolution skills was derived as 0.974 for the pretest and 0.973 for the posttest through SPSS. The skills were also assessed through their documents which validate the result.

Grand total	3.37	0.47	3.52	0.53

Table 4: Communication skills

Communication skills		
Description of skill	**Mean±SD**	
	Pre-test	**Post-test**
I have good reading skills	3.85±0.7	3.93±0.69
I have good writing skills	3.35±0.48	3.45±0.6
I feel that I am able to use proper language.	3.67±0.47	3.73±0.51
I prepare for all communications and think things through before I speak	3.5±0.51	3.65±0.62
I find it easy to listen to what other people have to say without interrupting	3.85±0.36	3.88±0.4
I am confident when I talk to people and speak clearly without mumbling	3.52±0.51	3.63±0.59
I find it easy to concentrate on what others are saying and don't lose my focus	3.7±0.46	3.7±0.46
I am good at getting my point across in a clear, concise manner without waffling (fail to make up mind)	3.5±0.51	3.6±0.59
I am good at reading the body language of others	3.5±0.51	3.55±0.55
I am good at summarizing the key points of conversations which I have with people	3.35±0.77	3.5±0.88
When other people in the group are quiet, I encourage them to contribute	3.5±0.51	3.53±0.55
When group discussions get heated, I am good at keeping everyone calm and on the point	3.32±0.47	3.33±0.47
I feel comfortable holding meetings	3.5±0.51	3.6±0.59
Total	3.5±0.52	3.62±0.58

SD: Standard deviation

Table 5: Conflict resolution traits

Conflict resolution traits		
Description of traits	**Mean±SD**	
	Pre-test	**Post-test**
Even when I know what people want to say, I listen to them without interrupting (listening skills)	3.5±0.51	3.55±0.55
When I have a problem with another person, I try to understand their feelings and thoughts (empathy)	3.32±0.47	3.33±0.47
I show patience while arguing with my colleagues	3.52±0.51	3.58±0.55
I am open-minded to alternative options	3.35±0.48	3.4±0.55
I find it easy to forgive (clemency)	3.65±0.48	3.65±0.48
I am tolerant in all situations at workplace	3.33±0.47	3.33±0.47
I try to compromise with other people if they are important to me	3.85±0.36	3.85±0.36
When I have a problem with another person, I try to learn their point of view (open minded)	3.52±0.51	3.53±0.51
I have high level of perseverance in all matters and dealings	3.35±0.48	3.35±0.48
I take criticism lightly from other people (patience, tolerance)	3±0	3±0
Total	3±0.43	3.46±0.44

SD: Standard deviation

Although in the pretest and as well as in the posttest the perception of respondents about their skills is within the moderate scale as per Table 3, with a mean score of 3.37.88 and standard deviation (SD) 0.47 for the preset and 3.52 and SD 0.53 for the posttest but this is still significant improvement keeping in view the short duration of training period. The result of the study support the similar findings of a study conducted to identify skills after they were taught through PBL. The result of that survey showed that all skills recorded higher mean scores (above 4.0) which are although slightly higher than the present study (Othman et al. 2013). The Cronbach's alpha for the 53 items was calculated as 0.953 for the pretest and as 0.916 for the posttest derived through SPSS.

6. FINDINGS FROM OBSERVATION

The participant observation is the frequently used research approach used. It is one of the data collecting methods that involve a systematic attempt to take out the knowledge of an individual or group who are pivotal in improving the future lessons and learning (Lashari et al., 2013). Observation makes it possible to record behaviour as it is happening (Merriam and Tisdell, 2015). The observation method provides valuable outcomes and rich description of the happening in the classroom. The observation checklists were divided into two categories namely skills and traits. The skills like communication skills were denoted with speaking, listening and writing and readings; the conflict resolution skill was

Table 6: Teamwork skills

Team work skills		
Description of skills	**Mean±SD**	
	Pre-test	**Post-test**
I can communicate well with others in a team	3.53±0.506	3.53±0.51
I enjoy working in a team	3.7±0.758	3.7±0.76
I give constructive feedback to the team members	3.5±0.506	3.6±0.59
I keep my self-updated about each other's job responsibilities	3.53±0.784	3.53±0.78
I am able to easily collaborate with others in a team	3.35±0.483	3.4±0.55
I feel free to express my opinions in the team/group	3.7±0.46	3.7±0.46
I am usually regular in the team meeting	3.5±0.506	3.5±0.51
I get preparation for group meetings	3.18±0.385	3.28±0.55
I regularly contribute in the development of a team/group by offering ideas	3.35±0.483	3.4±0.55
I try not to show disruptive behavior in the meetings of group	3.85±0.36	3.85±0.36
Total	3.52±0.41	3.55±0.56

SD: Standard deviation

Table 7: Research skills

Research skills		
Description of research skills	**Mean±SD**	
	Pre-test	**Post-test**
I can make logical decisions	3.5±0.506	3.5±0.51
I am good at information gathering skills	3.53±0.506	3.58±0.55
I know how to collect the right kind of information	3.35±0.77	3.38±0.77
I know how to organize information effectively	3.33±0.474	3.43±0.59
I am good at information handling skills	3.35±0.483	3.38±0.49
I know how to analyze the collected information/data	3.33±0.474	3.33±0.47
I know how to synthesize the collected information/data	3.33±0.474	3.43±0.59
I know how to critically evaluate information and just too quick to jump to the conclusion	3.33±0.474	3.38±0.54
I can articulate the information in the best presentable form	3.18±0.385	3.38±0.67
I usually apply knowledge practically after deriving conclusions	3.5±0.51	3.55±0.55
Total	3.37±0.51	3.43±0.57

Table 8: Conflict resolution skills

Conflict resolution skills		
	Mean±SD	
	Pre-test	**Post-test**
I have active listening skills	3.80±0.41	3.85±0.43
I am open minded and am willing to change my viewpoint based on the valid opinion of others	3.80±0.41	3.85±0.43
I don't shout and point at people when we have a heated conversation (anger management)	3.70±0.65	3.80±0.52
I have only a few friends (social adaptation)	3.30±0.56	3.40±0.63
I frequently argue with other people (anger management)	3.53±0.51	3.60±0.59
I argue with constructive outcomes in mind	3.53±0.51	3.55±0.55
I feel alone (social adaptation)	3.33±0.47	3.42±0.59
I negotiate well in all matters with my colleagues	3.35±0.48	3.47±0.60
I am able to convince people through my persuasion skills	3.35±0.48	3.35±0.48
I am able to manipulate conflicting situation through my diplomacy skills	3.15±0.36	3.15±0.36
Total	3.48±0.48	3.54±0.52

coded with patience, active listening, cooperation, tolerance in group work; likewise, research skills were coded with the search for information, information gathering techniques, information analysis and its presentation.

Both the researcher discussed the results of observation at the end of each day and compiled it finally on the 3rd day and the same followed in the each training program. The common ethical issue to the participant observation was to keep the privacy. The obtained information was, however, used for research purpose and kept as strictly confidential. The skills and traits of employees were thus assessed and evaluated through observation method during the training session to validate the qualitative and quantitative data. The observation was conducted by the researcher himself supported by one of the senior most employees in the training participants of each organization to assistant with in the data collection to improve the accuracy of the data. The observation of the 1st day of three of the training is compiled together for the presentation.

Table 9 presents observation data of the 1st day training. On the 1st day of the training, trainees were little curious about the training topics and methodology. But after the 1st day training, they seemed much satisfied and content.

On the 2nd day of training observation as per Table 10, the trainees did the sessions more confidently than the 1st day as they were acquainted with the methodology and process of the PBL training.

The Table 11 shows the observation data on the 3rd day of the training. On the final and 3rd day, the trainee participant expressed their overwhelming views about the methodology of training. The observation was further supported by training session videos, pictures, and trainees work.

7. DISCUSSION

The findings from the mixed methods approach reveal that the PBL approach can help develop essential conflict resolving traits and other soft skills in employees required in employees in the today's workplace. The majority of the respondents shared their feeling that due to the interactive nature and group involving, PBL remains a holistic approach for professional development. Although some limitation of PBL approach in training delivery are described by the respondents such as they termed it as a time consumption approach and also claimed that only its frequent application can bring about the desired skills and traits. Further, the data yielded from the observation of the training indicate that learner can develop the conflict resolution traits and other soft skills during the process of PBL approach.

The implication of the study is important for the development professional and as well as for other people from academia in the context of Pakistan. The findings from this mixed method study are useful in terms of understanding the impact of PBL approach on the perceptions, skills, and traits of employees. Moreover, the results of this work are expected to provide

Table 9: 1st day observation

Observers		
Sadia deep		
One of senior most trainee from each training		
Sessions and target skills	**Observation**	**Comments**
(9:00-9:30) Ice breaking, communication skills, curiosity, speaking skills, thinking skills	After watching the video, Every trainee member expressed their feeling about the video. Every one gave his own point of view about the message of video	Initially the participants were comparatively reserved. Their different skills were developed like communication skills, active listening skills, and critical skills etc., in this session (The skills were judged by their points of views)
(9:30-10:30) Trigger, communication skills, problem solving skills, conflict resolution skills, persuasion skills, patience, tolerance, discussion and argumentation skills, curiosity, and creativity	There is a lot of interaction between the members in groups. They are writing, discussing and arguing on the given problems	They tend to develop analytical skills, problem-solving skills, patience and accepting the opinions of others through heated discussions and disagreements
(10:30-12:30) Self-directed study, research skills, information gathering skills, communication skills, conflict resolution skills, persuasion skills, patience, tolerance	During the self-directed study, they worked on computers, tried to Google about the different aspects of problems. They also tried to take help from the already available material about the given problem	In this session, they seem to develop writing skills, listening skills, argumentation, decision-making, acceptance, patience, anger management, motivation and persuasion, documentation etc.
(12:30-3:30) Meetings, discussions, persuasions, decisions, conflicts, communication skills	There were a number of meetings between the group members. They kept on discussing and arguing on various aspects towards the solution of given problem	They developed discussion skills, documentation, and decision-making skills at this stage
(3:30-4:30) Presentations, communication skills, persuasions skills, presentation skills, reading skills	Each member of the group presented the solution in parts	They seem to build their confidence for speaking and expressing their point of views with arguments

Table 10: 2nd day observation

Observer		
Sadia deep		
One of senior most trainee from each training		
Sessions and target skills	Observation	Comments
(9:00-9:30) Review, communication skills, speaking skills, thinking skills, active listening skills	All of the trainee members reviewed the 1st day proceedings in their own words	As compared to the 1st day, the members were more vocal. Their different skills were developed like communication skills, active listening skills, and critical skills etc.
(9:30-10:30) Trigger, communication skills, problem solving skills, conflict resolution skills, persuasion skills, patience, tolerance, discussion and argumentation skills, curiosity, and creativity	There happen to be a lot of interaction between the members in groups. They are writing, discussing and arguing on the given problems	They tend to develop analytical skills, problem-solving skills, patience and accepting the opinions of others
(10:30-12:30) Self-directed study, research skills, information gathering skills, communication skills, conflict resolution skills, persuasion skills, patience, tolerance	As usual, they are utilizing computers, searching Google about the different aspects of problems. They are also trying to take help from the already available material about the problem given	They seem to develop writing skills, listening skills, argumentation, decision making, acceptance, patience, anger management, motivation and persuasion etc.
(12:30-3:30) Meetings, discussions, persuasions, decisions, conflicts, communication skills	There were a number of meetings between the group members. They kept on discussing and arguing on various aspects towards the solution of given problem	They seem to develop discussion skills, and decision making skills at this stage
(3:30-4:30) Presentations, communication skills, persuasions skills, presentation skills, reading skills	Each member of the group presented the solution in parts	They seem to build their confidence for speaking and expressing their point of views with arguments
(4:30-5:00) Post-test and showing examples, comprehension skills, writing skills, reading skills, reading skills, analytical skills	Each member worked on the post test and was shown and read the examples	They tend to develop writing, reading skills and analytical skills

Table 11: 3rd day observation

Observer		
Sadia deep		
One of senior most trainee from each training		
Sessions and target skills	Observation	Comments
(9:00-9:30) Review, communication skills, speaking skills, thinking skills, active listening skills	All of the trainee members reviewed the first 2 days' proceedings in their own words. They also shared their feeling about PBL methodology	As compared to the last 2 days, the members were comparatively more vocal and confident. Their different skills were developed like communication skills, active listening skills, and critical skills etc.
(9:30-10:30) Trigger, communication skills, problem solving skills, conflict resolution skills, persuasion skills, patience, tolerance, discussion and argumentation skills, curiosity, and creativity	There is a lot of interaction between the members in groups. They are writing, discussing and arguing on the given problems	They tend to develop analytical skills, problem-solving skills, budgeting skills, patience and accepting the opinions of others
(10:30-12:30) Self-directed study, research skills, information gathering skills, communication skills, conflict resolution skills, persuasion skills, patience, tolerance	During self-directed study, they work on computers, tried to Google about the different aspects of problems. They also tried to take help from the already available material about the problem given	In this session, they seem to develop writing skills, listening skills, argumentation, decision making, acceptance, patience, anger management, motivation and persuasion etc.
(12:30-3:30) Meetings, discussions, persuasions, decisions, conflicts, communication skills	There were a number of meetings between the group members. They kept on discussing and arguing on various aspects towards the solution of given problem	They seem to develop discussion skills, and decision making skills at this stage
(3:30-4:30) Presentations, communication skills, persuasions skills, presentation skills, reading skills	Each member of the group presented the solution in parts	They seem to build their confidence for speaking and expressing their point of views with arguments
(4:30-5:00) Posttest and showing examples, comprehension skills, writing skills, reading skills, reading skills, analytical skills	Each member worked on the post-test and was shown and read the examples	They tend to develop writing, reading skills and analytical skills

information to the trainers teachers, leaders and managers in applying PBL approach in training and teaching delivery. For example, information from this research could help employees attain not only the content knowledge more effectively but also the essential skills which otherwise are difficult to be developed in them in the traditional one-way teaching and delivering approaches.

The finding of this study supports the result of many other recent studies. A study using a mixed-method approach examined the impact of PBL on student attitudes toward science, problem-solving skills and their perceptions of the learning environment. 48 student of chemistry in three regular high schools participated in the study. Results based on the student a survey questionnaire, journal entries, approaches to solving a problem, and teacher classroom observations indicated a significant increase in student attitudes toward science, problem-solving skills and positive views of the learning environment. The use of PBL also facilitated the development of a sense of community (Ferreira and Trudel, 2012).

PBL is also increasingly used in management education for its promising potential to promote transferable skills, including problem-solving, critical thinking and teamwork skills. However, this relationship is seldom assessed. In another study, through structural equation modeling, the effectiveness of PBL was measured through students' perceptions of satisfaction and skills development. The results have a positive impact on the perception of students and skills (Carvalho, 2015).

In a nut shell, the finding and results support the findings from other studies as well which validate the findings of our study as well.

8. CONCLUSION

This paper conducted a mixed method approach to collect the data from the employees of three developing organizations in Pakistan. A semi-structured interview, Survey, and observation were used as the main data collecting tools. After analysis of data, the findings revealed the significant role of PBL in developing skills of employees which could further help them in resolving conflicts at the workplace. Besides, it was known that PBL approach can create and develop conflict resolving skills and other essential soft skills in employees but the duration of training/course should be prolonged or repeated frequently in different training. Employees found the PBL approach more interesting and motivating for learning than the conventional training methodologies.

9. ETHICAL CONSIDERATION

The researcher took official permission from the head of three developing organizations from which the researcher drew a sample for this study. The employees were debriefed on the description of the study at the beginning of the study so that they could be in better position to respond to their perception. As an ethical requirement, all the records and participants identities were treated as confidential.

REFERENCES

Adams, J. (2014), Practical advice for developing, designing and delivering effective soft skills programs. IUP Journal of Soft Skills, 8(2), 7-15.

Ameen, K. (2013), The need and impact of learning personality development & communication skills in LIS education: A case study. Malaysian Journal of Library and Information Science, 18(1), 15-25.

Braun, V., Clarke, V., Terry, G. (2014), Thematic analysis. Qual Res Clin Health Psychol, 95-114.

Bevan, M.T. (2014), A method of phenomenological interviewing. Qualitative Health Research, 24(1), 136-144.

Bibi, Z., Nawaz, A. (2012), Demographic impacts on interpersonal conflict, mistreatment and discrimination: A survey of labor in public sector of Balochistan, Pakistan. African Journal of Business Management, 6(35), 9823-9826.

Carvalho, A. (2015), The impact of PBL on transferable skills development in management education. Innovations in Education and Teaching International, 53(1), 1-13.

Charmaz, K., Smith, J. (2003), Grounded Theory. Qualitative Psychology: A Practical Guide to Research Methods. London: Sage. p81-110.

Chaudhry, A.A., Sajjad, M., Khan, I. (2011), Employees' conflict management strategies and demography: A case of Pakistan. African Journal of Business Management, 5(9), 3549-3555.

Chughtai, M.W., Lateef, K. (2015), Role of emotional intelligence on employees performance in customer services: A case study of telecom sector of Pakistan. International Journal of Advance Research in Computer Science and Management Studies, 3(2), 101-108.

Cohen, D., Crabtree, B. (2006), Qualitative Research Guidelines Project. New Jersey: Robert Wood Johnson Foundation.

Creswell, J.W. (2013), Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Thousand Oaks: Sage Publications.

Distlehorst, L. (2008), In: Barrows HS, Lynda, W.K.N., editor. Principles and Practice of aPBL. Singapore: Pearson Prentice Hall. p160.

Ertmer, P.A., Glazewski, K.D. (2015), Essentials for PBL implementation: Fostering collaboration, transforming roles, and scaffolding learning. Essential Readings in Problem-Based Learning: Exploring and Extending the Legacy of Howard S. Barrows. West Lafayette, IN: Purdue University Press. p89.

Farooqi, M.T.K., Khan, H.M.A., Akram, M., Iqbal, A. (2015), Conflict management styles of educational managers in Pakistan. The AYER, 1, 294-304.

Ferreira, M.M., Trudel, A.R. (2012), The impact of problem-based learning (PBL) on student attitudes toward science, problem-solving skills, and sense of community in the classroom. The Journal of Classroom Interaction, 47(1), 23-29.

Gonzalez, M.A., Abu Kasim, N.H., Naimie, Z. (2013), Soft skills and dental education. European Journal of Dental Education, 17(2), 73-82.

Groh, M., Krishnan, N., McKenzie, D., Vishwanath, T. (2012), Soft Skills or Hard Cash? The Impact of Training and Wage Subsidy Programs on Female Youth Employment in Jordan. The Impact of Training and Wage Subsidy Programs on Female Youth Employment in Jordan (July 1, 2012). World Bank Policy Research Working Paper(6141).

Hande, S., Mohammed, C., Komattil, R. (2015), Acquisition of knowledge, generic skills and attitudes through problem-based learning: Student perspectives in a hybrid curriculum. Journal of

Taibah University Medical Sciences, 10(1), 21-25.

Høye, S., Severinsson, E. (2010), Professional and cultural conflicts for intensive care nurses. Journal of Advanced Nursing, 66(4), 858-867.

Lane, T. (2008), Problem-based Learning in Dentistry: An Introduction to Undergraduate Problem-based Learning (PBL) at the Faculty of Dentistry, the University of Hong Kong: Faculty of Dentistry, University of Hong Kong.

Lashari, T.A., Alias, M., Kesot, M.J., Akasah, Z.A. (2013), An affective-cognitive teaching and learning approach for enhanced behavioural engagements among engineering students. Engineering Education, 8(2), 65-78.

Leidner, D.E., Kayworth, T. (2006), Review: A review of culture in information systems research: Toward a theory of information technology culture conflict. MIS Quarterly, 30(2), 357-399.

Longhurst, R. (2003), Semi-structured interviews and focus groups. Key Methods in Geography. London: Sage. p117-132.

Merriam, S.B., Tisdell, E.J. (2015), Qualitative research: A guide to design and implementation. New Jersey: John Wiley & Sons.

Mirza, F.M., Jaffri, A.A., Hashmi, M.S. (2014), An assessment of industrial employment skill gaps among university graduates: In: The Gujrat-Sialkot-Gujranwala Industrial Cluster. Vol. 17. Pakistan: International Food Policy Research Institute.

Moliner, M.L., Guraya, T., Lopez-Crespo, P., Royo, M., Gamez-Perez, J., Segarra, M., Cabedo, L. (2015), Acquisition of transversal skills through PBL: A study of the perceptions of the students and teachers in materials science courses in engineering. Multidisciplinary Journal for Education, Social and Technological Sciences, 2(2), 121-138.

Nasir, M., Bashir, A. (2012), Examining workplace deviance in public sector organizations of Pakistan. International Journal of Social Economics, 39(4), 240-253.

Othman, H., Salleh, B.M., Abdullah, S. (2013), 5 Ladders of Active Learning: An Innovative Learning Steps in PBL Process.

Pandey, N., Pandey, A., Kothari, D.A.K. (2016), Soft skills in defense services--need of the hour. Macro and Micro Dynamics for Empowering Trade, Industry and Society, 161.

Pelikan, M. (2004), Problem-based learning in the library: Evolving a realistic approach. portal: Libraries and the Academy, 4(4), 509-520.

Piercy, K. (2015), Analysis of Semi-Structured Interview Data. Logan, UT: Department of Family, Consumer, & Human Development.

Salinitri, F.D., Wilhelm, S.M., Crabtree, B.L. (2015), Facilitating facilitators: Enhancing PBL through a structured facilitator development program. Interdisciplinary Journal of Problem-Based Learning, 9(1), 11-18.

Savery, J.R. (2015), Overview of problem-based learning: Definitions and distinctions. Essential Readings in Problem-Based Learning: Exploring and Extending the Legacy of Howard S. Barrows. West Lafayette, IN: Purdue University Press. p5.

Seren, S., Ustun, B. (2008), Conflict resolution skills of nursing students in problem-based compared to conventional curricula. Nurse Education Today, 28(4), 393-400.

Sultana, M., Zaki, S. (2015), Proposing project based learning as an alternative to traditional ELT pedagogy at public colleges in Pakistan. International Journal for Lesson and Learning Studies, 4(2), 155-173.

Walker, A., Leary, H., Hmelo-Silver, C.E., Ertmer, P. (2015), Essential Readings in Problem-Based Learning: Exploring and Extending the Legacy of Howard S. Barrows.

Wiersma, A.E., van de Steeg, L.M. (1995), U.S. Patent No. 5,415,893. Washington, DC: U.S. Patent and Trademark Office.

APPENDIX

Appendix 1:

Interview

Name   Age   Gender

Time   Designation

Being a doctoral student at UTHM Malaysia, I welcome you to take part in a research study on the "Use of Problem-Based Learning Approach for Employees Training" in Pakistan. The research is part of my doctoral thesis at the Faculty of Science Technology and Human Development in University Tun Hussein Onn of Malaysia. Taking part in research is open to everyone and your response will be recorded with complete confidentiality. You can also withdraw from the survey at any stage of answering with no objection on my side. When responding to questions, you should keep in mind that your feelings and expression is going to contribute to the development of new research findings. Participation in research will not take more than maximum 15 minutes; your cooperation is therefore requested. Please note that this research study is approved by the faculty of Science, Technology and Human Development, UTHM Malaysia and I would like to thank you for your time and support in this regard.

Q 1)   How PBL approach can help develop conflict resolving skills in learners for dealing with communication conflicts.

Q 2)   How PBL approach can help develop other soft skills in learners?

Appendix 2: Personal Statement

The author expects the following outcomes of PBL training approach at the workplace

1. PBL training approach is helpful in creating essential soft skills in employees at the workplace.
2. Employees through PBL approach can help reduce and resolve communication conflicts.