

A Non-Formal Experimental Study to Accelerate the Literacy among the Workshop Workers through “Workshop Workers’ Literacy School”

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Abstract

The objectives of this study were to literate the workshop workers through the literacy project “Workshop Workers’ Literacy School”, and find out the appropriate teaching strategy to literate the workshop workers via workshop workers’ literacy school. All the illiterate WWs of Bahawalpur city were the target population. A sample of 60 illiterate WWs was selected through purposive sampling technique. It was a quasi-experimental research design. Two experimental groups I, II were formed and each group consist of 30 WWs. Group I was taught for five days a week with 40 minutes of session while group II was treated twice a week with 100 minutes of a session. Teacher-made test was used as pre-test and post-test instrument. One sample t-test was used to compare the mean score of post-test with its pre-test mean score (tested value). After analysis, the results reveal that post-test mean score of group one was higher than mean score of group two. So, it was concluded that group I perform better in literacy skills in comparison of group II. On the basis of results, the study suggests that government may implement the literacy project “WWLS” to overcome the issue of literacy rate and to accomplish their literacy commitment goals.

Keywords: literacy, workshop workers’ literacy school, workshop workers, teaching strategy.

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Introduction

For the development of both nation and country, it is essential to boost up the education system and increase the literacy rate. Literacy skills like reading, writing and numeracy are considered crucial for the society's well-being because these skills help the individuals to solve their daily life problems. In today's societies, it is hardly to ignore the importance of literacy like according to Wilson (2016) literacy has an important aspect of our lives and it also assists us to struggle in daily life routine. A well-established society and economy of a country mainly depends on the healthy literacy rate (Mohanty, 2007). As we can see the advancement of technology is increasing gradually day by day, therefore, the attainment of literacy is important for everyone because it opens new ways for getting meaningful employment. (Sheikh, 2017)

When Pakistan appears on the world map as an independent country in 1947, at that time 85 percent of the population was uneducated, and the condition of backward areas and females was so feeble. So, at that time, the demand for literate persons increased for running the departments and offices. Therefore, the Pakistan implemented different kinds of strategies and plans for fulfilling the need of literate people like national educational policies 1972, 1979, 1992 and 1998. Pakistan government also makes links with different kind of international agencies (World Bank, UNESCO, UNICEF) and also developed national literacy department (NCHD, School Education and Literacy Department, L & NFBE) in order to overcome the issue of literacy.

The concept of literacy varies with geographical aspect and country to country. In Pakistan, the ministry of education defines the literacy as the person who have the ability to read and write the simple paragraph with understanding in any language and do the simple basic mathematical calculation will be known as a literate person (National education policy, 2017). According to the latest Pakistan Social and Living Standards Measurement (2019-20) survey that Pakistan literacy rate (10 years and above) remains stagnant at 60 percent in 2019-20 as in 2014-15. The survey also states that in 2019-20 the net enrollment ratio is declined to 64 pc as compared to the statistics of 2014-15 as 67 pc at national level. Pakistan literacy rate is not so much impressive when it is compared to their neighboring countries. Pakistan is considered to be the world worst country where the literacy rate is not so much more impressive. There are a lot of factors behind the low literacy rate like shortage of resources, corruption, lack of implementation of educational policies, ineffective planning and execution, having a communication

gap among agencies, inconsistency of politics and social problems (Hussain & Salfi, 2011).

The illiterate people may not benefit the societal development because the illiterate person cannot get maximum benefits from their potentialities and also remain unaware of their duties. The product of the healthy literacy rate expressed in terms of human development competencies and accelerates economy through skills and knowledge (Lindquist & Seitz, 2008). Literacy develops the life skills and mannerism among the individuals to live in the society. It also modified the individual behavior and attitude to become the active participant in the development of the society and the country. Creativity and critical thinking attributes can be observed in the literate society which helpful for attaining prosperity and progress of a country. Educated people play a significant role in community advancement and uplifting the economy of the country (UNESCO, 2005). Literacy develops the confidence, free will, independence and self-awareness among individuals.

The formal education system plays a pivotal role in providing education and to eradicate the illiteracy. According to National Education Policy (2016-17) in Pakistan almost 25 million children are deprived of getting a formal education. It's not easy for the government to provide formal education to these huge millions of uneducated children and illiterate adult. They can be facilitated with basic education opportunities more easily, economically and quickly through non-formal education. It is the most feasible approach in Pakistan to provide basic educational opportunities to such kind of illiterate adults and children who were out of school. Although, non-formal education is not the substitute of formal education, but it plays a crucial role in reaching out the uneducated children, illiterate adults and providing them a basic level of education.

Pakistan have different kind of signatory with international conventions in which the education targets were envisaged, as a Dakar framework of action for EFA (2000) in which the Pakistan set targets for achieving 85% literacy rate in the year of 2015. Another commitment of Pakistan with *Millennium Development Goals (MDGs) in the year of 2000 and set targets for 100% primary enrollment and completion in the year of 2015 but the government failed to achieve the commitment goals. Recently, the Pakistan has pledged with Sustainable Development Goals (SDGs) in 2015 to get the 100% literacy rate by the year of 2030. In National Education Policy (2017) it was suggested that the Pakistan will achieve 90% literacy in the year of 2025. Tracking the past statistics of*

literacy efforts, it seems that Pakistan may feel difficulty in achieving these targets if the government may not implement the proper plans.

Pakistan is a developing country where people hardly meet their needs. A poverty stricken family expects from their children to make a contribution for bearing the household expenses. Therefore, most of the poor families prefer to provide such kind of technical skills to their children which prove beneficial for their life. These families show less interest in enrolling their children in school because they knew that they cannot provide higher education to their children. They can provide only school education, and it is difficult to get a job having just 8th or 10th grade certificate in the 21st century. Moreover, their children learn the technical skills for eight to ten years instead of getting the school certificate and they would become a good proficient in their profession. There are a huge number of families who provide technical skills to their children instead of enrolling in school and this factor pushes the literacy rate back. So, the researcher made an effort for such kind of class by introducing the literacy project WWLS which may be helpful to improve the literacy rate. By the WWLS, they can run their workshop as well as continue their study. So, the present study introduced the valuable project WWLS to overcome the issue of literacy rate.

Literature Review

The perspective about defining the word “literacy” is different from country to country. Each country has their own criteria for defining the literacy, like Bangladesh define literacy as the ability to read and write in any language, while Canada government states that a person who holds the 9th grade certificate will be considered as literate. In china, a person who have a vocabulary of 2000 words is a literate person. So, all of these countries defines literacy according to their geographical perspective. Pakistan defines the literacy according to their culture and society. Dimensions of literacy were changed in Pakistan with the passage of time. In 1951, Pakistan just focused on the reading ability with understanding for a literate person. After ten years, in 1961, Pakistan slightly changed the definition of literacy as the person who can read a simple letter in any language with understanding was taken into account as a literate person. In 1982, Pakistan considered another dimension “writing skill” for literacy and defines the literacy as the ability who can read and write with understanding was considered a literate. In 2008, definition of literacy was modified and it was the first time when the numeracy skill was included and a person with having the ability of

reading, writing and doing the simple calculation was declared as a literate person (National Education policy, 2017).

The formal school system has been considered a crucial indicator for the promotion of literacy rate in a society. Such countries almost have 100 percent literacy rate where all children are enrolled in schools and completed their primary school education. The shortage of formal school system facilities does not meet the needs of all children and its consequences can be observed as growing the illiterate population in societies (Boissiere, 2004). As the 20th century begins, the developing countries started a different kind of literacy projects and programs to catch up the illiterate children and adults with the purpose to make them literate.

Pakistan first effort towards the literacy was the development of Literacy and Mass Education Commission in 1981 (Shakir, Adeeb, Lon, & Zafar, 2011). Another “Nai Roshni School” project was started in 1986 with the objective to opened 15 thousand schools all over the Pakistan. Due to the political conflict, this project was closed down in 1989. Later on, the Federal government launched a program with name “Non-Formal Basic Education Centers” in 1995; later its name was changed with ‘*Basic Education Community Schools*’. *The Punjab government started a project with title “Literacy and Non-Formal Basic Education” in 2000 with the purpose to eliminate the illiterate children and adults.*

Illiteracy is an obstacle to becoming the global active participants and it isolates you, your societies and your groups from the world (Babu, Foster, & Subramanian, 2000). The literate people remain excited not only improves their environment, but also makes economic indicator better in a society. Literate citizens have a pivotal role in a society for human resource development. As a result, Human Development Index (HDI) was established by the United Nations with the purpose to evaluate the development of a country through their peoples’ capabilities not by economic growth. According to United Nations development programs (2018), Pakistan is standing at 150th ranked out of 189 countries with 0.562 HDI which is the worst situation (Pakistan Economic Survey, 2019-20). Jhonston (2004) performed research on the relationship between economic growth and adult literacy and it was found that the government should increase adult literacy rate by providing the employment for better economic growth.

Pakistan literacy rate is increasing at a snail’s pace. In 1981, Pakistan’s literacy rate was 25.73 percent, while according to the statistics of 1998 population census, the literacy rate reached at almost

42.7 percent which means the increasing literacy rate per annum was less than one. During 1998 to 2005, the literacy rate reached at 49.87 percent and it is increased with the ratio of 1.02 percent per annum. In 2010, the literacy rate was 55.38 percent and it was moved to 1.10 percent each year. According to PSLM survey (2014-15) the literacy rate was declined two percent from 60 to 58 percent as compared to PSLM survey 2012-13. By PSLM survey 2018-19, Pakistan literacy rate was increased 2% and reached at 60 percent.

Objectives of the Study

The objectives of the study were to a) literate the workshop workers through the literacy project “Workshop Workers’ Literacy School”, b) find out the appropriate teaching strategy for the workshop workers to make them literate via workshop workers’ literacy school.

Hypothesis

The researcher performed an experiment by establishing the workshop worker literacy 1 and workshop worker literacy school 2 in order to find out the suitable teaching strategy to make workshop workers literate, so the following hypothesis was formulated.

Ho1: There is no significant effect of the literacy project workshop workers’ literacy school on the students’ learning achievement.

Research Methodology

In this study, the researcher conducted an experimental literacy project “WWLS” with the purpose to literate the WWs, and also find out the suitable teaching design or strategy to make the WWs literate. The chief principle of this study was to literate WWs in their leisure time without disturbing their workshop routine life. So, for this purpose, the researcher established two experimental schools WWLS1 and WWLS2 near the workshops to find out the appropriate teaching strategy for them. The researcher provided the necessary stationary (books, pencils, erasers, registers etc.) to the WWs for free. The material and the content of Urdu and Mathematics of Fourth standard were provided to the WWs.

This study involved a quasi-experimental research design. The researcher divided the illiterate WWs into two groups as group one and group two. The WWs of group one were taught in WWLS1 for five days a week for 40 minutes of a session and the WWs of group two were treated in WWLS2 twice a week for 100 minutes of a session. These groups were treated with different teaching methods like lecture method, discussion method, cooperative learning teaching method etc. for three

months. After performing an experiment, the inferential statistical techniques are used for hypothesis testing and One sample t-test is used to compare the mean score of post-test with its pre-test mean score (tested value) of WWs of both groups while Independent sample t-test was used to find out the mean difference between the post-test scores of both group I and II.

Characteristics of the Sample

The population of the study was illiterate WWs of the Bahawalpur city. The purposive sampling technique was used for selecting the sample for the study. A sample of 60 illiterate WWs was selected who were equally categorized into two groups as 30 illiterate WWs for group one and 30 illiterate WWs for group two. These two groups consisted of illiterate children and adults. The minimum age for becoming the part of the sample was considered 10 years because according to the Pakistan economic survey (2017-18), a person who can read and write a simple paragraph with having the age year of 10 and above will be considered a literate person. The demographic information of WWs was not considered as a compulsory variable because the main focus of this study was to literate the WWs without knowing their demographic background.

Research Instrument

A pre-test and post-test was developed keeping in view the definition of literacy defined by the government of Pakistan. Pre-test was developed to evaluate the WWs literacy skills for four aspects as reading, writing, comprehension and basic arithmetic calculation (addition, subtraction, multiplication). After developing the pre-test, it was validated through seeking the experts' opinion. The pre-test was comprised of 40 marks in which each literacy skills (reading, writing, comprehension, numeric skills) have 10 marks. The researcher followed the Shakir et al (2011) certain pattern for the eligibility as a literate person. He defined different types of literacy level; if a person who got 24 percent marks in a literacy test comes under in basic literacy level, a person who got 48 percent marks in a literacy test will be considered as moderate/middle literacy level, and if a person who got 70 percent marks in a literacy test will be considered as self-literacy level. After finding out the illiterate WWs, the experiment was conducted for three months. After the treatment, the same pre-test was used as the post-test. The statistical reliability value of this instrument is 0.809 which was obtained through Cronbach Alpha.

Procedure for Data Collection

Before performing an experiment, the researcher visited the workshops and communicated with the participants of the workshop and briefed them about this research study. The response from the owners of the workshops was cooperative. They fully cooperated with the researcher and were keen about getting literate. All kinds of stationary and learning material was provided by the researcher. The majority of the WWs were agreed that they do not have so much work in the morning, that's why they selected the morning time for joining the class. The data of the achievement scale pre-test and post-test was collected through the formal end term test (post-test).

Findings of the Study

Table I

One sample t-test on gain mean score of group I over the literacy skill

Skills	Gain I (Group I) Post-Test Mean – Pre-Test Mean	SD	t- value	df	p- value	Test value
Reading	5.30	1.36	21.31	29	0.01	2.43
Writing	5.04	1.03	26.61	29	0.01	1.56
Comprehension	6.13	1.13	24.30	29	0.01	0.63
Mathematics	6.27	1.41	24.30	29	0.01	1.46

The above table explains the performance of group one on different literacy skills (Reading, writing, comprehension & basic mathematics) by obtaining the gain score through deducting the pre-test mean from the their post-test mean and the gain score was tested statistically through applying One Sample t-test on the post test score by mentioning the pre-test mean as the tested value. The pre-test mean scores of group one were in reading skill 2.43, writing skill 1.56, comprehension skill 0.63, basic mathematics 1.46. The gain score of group one were as reading 5.30, writing 5.04, comprehension 6.13, basic mathematics 6.27 and these gain scores were tested statistically through one sample t-test with their pre-test mean. After applying the One Sample t-test, the result illustrates that reading skill of group one ($M=7.73$, $SD=1.36$) is statistically significant difference $t(29) = 21.31$, $p < 0.01$ and the mean difference 5.3 exists between the pre-test and post-test with the tested value 2.43. The writing skill of group one ($M= 6.63$, $SD= 1.03$) has significant mean difference of 5.04 and $t(29) = 26.61$, $p < 0.01$ with the tested value 1.56. The comprehension skill of group one ($M=6.76$, $SD=1.13$) also has significant mean difference of 6.13 and $t(29) = 24.30$, $p < 0.01$ with the

tested value 0.63. The basic mathematics skill of group one ($M=7.73$, $SD=1.41$) has a statistically significant mean difference of 6.27 and $t(29) = 24.30$, $p < 0.01$ with the tested value 1.46.

Table 2

One sample t-test on gain mean score of groupII over the literacy skill

Skills	Gain 2 (Group II) Post-Test Mean – Pre-Test Mean	SD	t- value	df	p- value	Test value
Reading	4.20	1.35	16.91	29	0.01	2.33
Writing	3.90	1.56	13.62	29	0.01	1.53
Comprehension	4.74	1.32	19.53	29	0.01	0.66
Mathematics	4.30	1.44	16.26	29	0.01	1.5

The above table explain the performance of group two over the different literacy skills (Reading, writing, comprehension & basic mathematics) by obtaining the gain score through deducting the pre-test mean from the their post-test mean and the gain score was tested statistically through applying One Sample t-test on the post test score by mentioning the pre-test mean as the tested value. The pre-test mean scores of group one were as reading skill 2.33, writing skill 1.53, comprehension skill 0.66, basic mathematics 1.50. The gain score of group one were as reading 4.20, writing 3.90, comprehension 4.74, basic mathematics 4.30 and these gain scores were tested statistically through one sample t-test with their pre-test mean. After applying the One Sample t-test the result shows that there is a statistically significant mean difference of 4.2 in the reading skill of group two ($M = 6.53$, $SD=1.35$) with the tested value 2.33 and $t(29) = 16.91$, $p < 0.01$. The group two has the mean difference of 3.9 between the pre-test and post-test in the writing skill ($M=5.43$, $SD=1.56$) with the tested value 1.53 and $t(29) = 13.62$, $p < 0.01$. The comprehension skill of group two ($M=5.4$, $SD=1.32$) has significant mean difference of 4.74 with tested value 0.66 and $t(29) = 19.53$, $p < 0.01$. The significant mean difference 4.30 exists in the basic mathematical skill of group two ($M=5.80$, $SD=1.44$) with the tested value 1.5 and $t(29) = 16.26$, $p < 0.01$. In the light of results, it is concluded that the WWLS has the positive effect. So, the following null hypothesis is rejected:

Ho1: There is no significant effect of the literacy classes of 'WWLS' on the student learning achievement.

Table 3
Independent sample t-test for the post-tests of groups I and II.

Groups	N	Mean	SD	t-value	df	p-value
1	30	28.83	3.99	5.126	58	0.001
2	30	23.46	4.11			

Table no.3 illustrates the students' mean score difference between the groups I and II on their post-test score. The independent sample t-test showed that the students of group one (M=28.83, SD=3.99) performed better than the students of group two (M=23.46, SD=4.11). The above table reports that there is a statistically significant difference between the mean scores of the groups I and II with the values as $t(58) = 5.126$, $p = 0.001$.

Table 4
Achievement level of experiment in terms of literate workshop workers

Groups	Basic literacy level	Moderate literacy level	Self-literacy level	Total
1	02	03	25	30
2	15	04	11	30

Table 4 explains the worth of experiments in terms of literate WWs. The table indicates that 60 illiterate WWs are selected for experiment in which 30 illiterate WWs were in group I and 30 illiterate WWs for group II. As earlier, it was mentioned in the portion of research tool that if a person got 24% marks in a post-test may fall in the basic literacy level, if a person got 48% marks in a post-test will be considered as moderate literacy level and a person who got 70% marks in post-test may come in the category of self-literacy level. The results describe that after the treatment, two WWs of group I and fifteen WWs of group II reached at the basic literacy level, three WWs of group I and four WWs of group II became as the moderate literate person. Self-literacy level is higher cognitive level and in this category, 25 WWs of group I and 11 WWs of group II became self-literate person. The result illustrates that WWs of group I performs better than the WWs of group two.

Discussion

This study has a vital contribution to cater the illiteracy among the WWs by introducing the literacy project WWLS. With the help of data, it is concluded that WWs of group I who are taught for five days a week

got good mastery over the literacy skills, while on the other side, the WWs of group II who are treated twice a week possessed the lowest mastery over the literacy skills. There are some reasons behind the low performance of group II like the huge time gap between lectures, time management for joining the class, duration of delivering the lectures and students' interest in learning. Let's put some light on these factors in detail.

WWs of group two were taught twice a week, which means that there is a gap of three days between the first and second lectures, so this gap leads to the inconsistency of learning. While on the other side, the WWs of group I were taught five days a week which means that there is a consistency of learning. So, the huge time break between the lectures becomes the hindrance in learning for the WWs of group II (Cramer, 2014).

As the first priority of the WWs was their workshop and the customers because these are the main sources to run their families' expenses. Sometimes, these factors became the obstacle in learning for the WWs of group two. Even though, the researcher decided to give lectures in their leisure time, but sometimes the customers came for repairing their vehicles during lecture then the WWs feel feeble in learning. So, students interest in studies plays a vital role in their academic performance (Sauer, 2012).

Another factor for the lowest performance of the WWs of group two is the lengthy lecture for 100 minutes and it leads to losing the students' interest in their studies. Mostly workers were remained busy in their workshops, so they need a short lecture of 30 to 40 minutes so that they can run their workshop as well as continue their studies together (Eze & Misava, 2017).

Conclusion and Recommendation

In the light of results, it is found that experiment proved beneficial for the WWs to make them as a literate person. After comparing the gain scores of both groups, it is revealed that WWs of group I who were taught for five days a week with a session of 40 minutes performed better than the WWs of group II who were taught for two days a week with a session of 100 minutes. There are some reasons behind the vulnerable performance of group II like problem of time management for joining class, lack of students' interest in study, inconsistency in learning due to the huge time gap between lectures and lengthy duration of lectures. Due to these factors, the performance of group I is as follows; the fifteen students reached at the basic literacy level, four students qualify as a

moderate literacy level and only eleven students reached at the self-literacy level, while the results of group II are as; two students reached at the basic literacy level, three students reached at the moderate literacy level and 25 students qualify for the self-literacy level. With the help of findings, it is concluded that the literacy project WWLS is suitable for those WWs who taught at least for five days a week for three months with 30 to 40 minutes of lecture.

As this study was about promoting the literacy among the WWs by introducing the WWLS, it is beneficial for the literacy department to achieve their targets. In the light of the conclusion, the researcher suggested the some recommendations for implementing this project. In order to literate the WWs, it is recommended that the literacy institutions (WWLS) should be established near the workshops. WWs should be taught at least five days in a week because it will keep the consistency in learning which remains for a long term. Duration of the lectures should be between 30 to 40 minutes because it may maintain the students' interest in their learning. WWs should be literate at their leisure time without disturbing their workshop routine. Another recommendation is that interested researcher should do more research on this area at the large scale.

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