Research Article

Readiness towards using Blended Learning Approach for Teachers Preparation

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Abstract

Blended Learning is viewed as an integrated combination of traditional face-to-face learning with web-based online approaches, the combination of media and tools employed in an e-learning environment and amalgamation of a number of pedagogic approaches irrespective of learning technology used. The various learning management systems (LMS) and online learning platforms provide an opportunity to connect learners and teachers and equip teachers to provide assistance for students to engage in collaborative and cooperative learning activities even beyond classrooms. It is believed that collaborative learning leads to better student involvement, better performance and higher productivity. Investigator of this paper is involved in developing a package based on a blended learning approach for teacher's preparation (Internship activities) which will be used in pre-internship activities of pupil teachers. In the present paper, the investigator has explored readiness of various stakeholders of teacher education towards using a blended learning approach for pre-internship activities.

Key Words: Readiness, Blended Learning, Teachers Preparation

Theoretical Background

Blended learning which is mostly termed as open, flexible, hybrid and distributed learning, is a formal education program in which a learner learns, at least in part, through online delivery of content and instructions with some elements of learners control over time, pace and space, and at least with some part of offline or face to face instruction (Graham, 2006). Blended learning is known for integrating instructional modalities, instructional methods and amalgamating online and face-to-face instruction (Rooney, 2003; Orey, 2002; Singh & Reed, 2001; Thomson, 2002; Rosset, 2002). The rapid usage of such advanced educational technologies has resulted in changing perceptions of students, teachers and educational administrators (Whitelock & Jefts, 2003). Rainie (2010) reported that in the 21st century, the teaching and learning has become more effective with wide use of smart devices, internet and low-cost technology. Technological devices have been significantly enhancing the learning of students through online lectures and distance learning effectively.

The students who depend only on

online mode for learning may not be able to understand such content in real context; hence, there is a need to depend on other modes of learning too. In this context, the role of a teacher cannot be ignored. Teachers have to provide a learning platform where various activity-oriented learning environment could be created as well as ample time for assessment and feedback can be provided to know the learning growth of the learners. The teacher's role is to provide hands-on experience in order to comprehend content so that the contextualized knowledge and understanding could be gained by students. All the learning has to be contextualized for meaningful learning and students should gain sensory experiences to make learning real and contextual. Moreover, there are many process skills that can be developed only through direct experience and hands-on activity. It is in this juncture that the technology alone fails to contextualize any content and also fails in developing subject specific skills, especially the process skills. Hence, the role of a teacher cannot be disregarded if any learning has to be meaningful. The concept of 'Blended Learning' brings together the advantages of both online as well as face-to-face learning.

Blended learning can be applied at various levels of learning in school education, higher education and in professional courses etc. where a blend of online and face-to-face learning can be used in a meaningful manner. Learners are important partners in any learning process and therefore, their backgrounds and characteristics affect their ability to effectively carry on with learning. Selim (2007) has listed three main factors that affect blended learning i.e. effectiveness of instructor, technology and students' characteristics. Hence, every student may not be able to use technology in an appropriate manner for appropriate results. The teacher's characteristics include teacher's knowledge, understanding and use of ICT skills, how well the teachers can integrate technology in classroom teaching-learning, along with having ICT skills, Teachers' characteristics also include their technological, pedagogical and content Knowledge (TPCK). These all factors or proficiencies play an important role in determining their attitude towards using ICT. The teacher's knowledge on the recent developments in technology can help them to use blended learning in their classroom teaching. The learners who participate in blended learning should also be aware of using different technology for learning but not to be totally dependent on technology alone. The students' needs to be motivated to learn from the real environment through different perceptual performing activities and gaining real life experiences in order to develop various subject specific skills. Hence, Blending of Online and face- to-face mode of learning can be a more useful pedagogical approach in the 21st century where every teacher has to be trained in using blended learning in their classroom.

Need and Significance of Study

From last one year we have seen a drastic paradigm shift in teaching learning from offline to online mode of education due to COVID-19 pandemic conditions.

Now we all are familiar and are using various online platforms and learning management systems for delivery of content and interacting with learners. In the National Educational Policy, 2020 it is clearly mentioned that while promoting online and digital different learning, the significance of face-to-face in-person learning should be fully recognised. Subsequently, different efficient models of blended learning should be identified for appropriate application in different subjects.

Blended learning is effective, interesting and offers better satisfaction to the learners (Muniyandi, 2016; Chitra & Singaravelu, 2016). Blended Learning is indeed proven to be an efficient measure to develop learning gains among learners to a great extent (Cross et. al., 2014). It is also seen that blended learning has significantly contributed to the learning of a particular subject in blended learning settings.

In the present research, the investigator has explored the readiness of various stakeholders of teacher education towards using a blended learning approach in teacher preparation (Pre -Internship activities). The results of this research will help in developing a package based on blended learning for developing various teaching and managerial skills in pupil teachers.

Objectives of the research

The present problem endeavours for realization of the following objectives:

1. To study the readiness of teacher educators, research scholars and pupil teachers towards using blended learning approach for teachers' preparation.
2. To compare mean readiness scores of male and female participants towards using a blended learning approach for teachers' preparation.
3. To compare the mean readiness score of rural, urban and semi-urban participants towards using a blended learning approach for teachers' preparation.
4. To compare mean readiness scores of teacher educators, research scholars and pupil teachers towards using blended learning approach for teachers' preparation

Methodological Orientation

Research Design

The purpose of this study was to explore the readiness of teacher educators, research scholars and pupil teachers towards using a blended learning approach for teachers' preparation. The research title itself indicates that a descriptive approach of research is best suited for this kind of studies. Therefore, a descriptive survey method has been used for conducting the present research.

Sample and Sampling

Since this research was conducted in the pandemic condition of COVID-19, the investigators decided to collect data through online mode. A total of 490 participants were selected through convenient sampling techniques.

Tool for Data Collection

To assess the readiness of teacher educators, research scholars of education discipline and pupil teachers

towards Blended Learning Approach, a Readiness Scale was developed and standardised with eight dimensions of blended learning generally stated in available literature. The initial draft of Readiness Scale towards Blended Learning Approach was developed and applied on 383 respondents (86 Teacher Educators, 76 Research Scholars of Education Discipline and 221 Pupil Teachers) for standardisation and establishing reliability and validity of the scale. Final draft of the scale has 35 items in total representing 8 dimensions of readiness.

Results and Interpretation

Analysis and interpretation of the results has been done objective wise as follows:

To study the readiness towards using a blended learning approach for teacher's preparation.

After scoring, the scores of all the 35 items were added to obtain the total score of an individual on the scale. The range of the total score was 35-105 as the scale was constructed with 35 items on 3-point Likert Scale. Therefore, the level of readiness was considered from Score of the answers and was classified into 3 levels to the Best's Criteria (1977) which use the range of highest score and lowest score which is further described by levels of readiness.

Table-1: Percentage of Participants against each Level of Readiness towards using Blended Learning Approach for Teachers Preparation

S. N.	Range of Scores	N	Percentage	level of readiness towards Blended Learning Approach
1.	83-105	458	93.46	High
2.	59-82	32	6.54	Average
3.	35-58	00	00	Low
	Total	490	100	

From table-1, it is evident that 93.46percent participants have high readiness towards blended learning approach so, it can be concluded that participants were found to have high readiness towards using a blended learning approach for teacher's preparation.

Table-2: Mean, Standard Deviation and Coefficient of Variation of all the Participants towards using Blended Learning Approach for Teachers Preparation

Criterion Variable	N	Mean	Standard Deviation	Coefficient of Variation
Readiness towards Blended Learning Approach	490	2.73	0.22	8.00%

From table-2, it is evident that the Mean scores of readiness towards blended learning approach was found to be 2.73 and standard deviation was 0.22. The Mean readiness scores of all the respondents towards blended learning approach is (2.73/3)*100=91.00percent favourable with 8.00percent deviation which is quite low. Hence it reflects that participants have high readiness towards using blended learning approach for teachers' preparation. The results also indicate that as a group, the readiness towards blended learning approach was almost irrevocable and favourable. It may, therefore be concluded that all participants of teacher education have high readiness towards using a blended learning approach for teachers' preparation.

Readiness of Male and Female participants towards using Blended Learning Approach for Teachers Preparation

The second objective of the investigation was to compare mean scores of readiness on the basis of Gender towards using Blended Learning Approach for Teachers Preparation. The Investigators selected a total no of 490 participants (236 male and 254 female) associated with teacher education in different capacity with the help of purposive sampling technique. A self-made standardized blended learning approach readiness scale was used to collect data from these participants. For comparing the mean scores of readiness of the male and female participants the researcher decided to use an independent sample t-test, before applying t-test, statistical assumption of normality of the scores of dependent variables was tested with the help of Kolmogorov-Smirnov[a] test.

Table-3: Tests of Normality for Readiness Scores of male and female participants towards using blended learning approach for teachers' preparation

Criterion Variable: Readiness towards Blended Learning Approach							
	Gender	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Readiness Scores towards Blended Learning Approach	Male	.112	236	.000	.938	236	.000
	Female	.133	254	.000	.917	254	.000

From table-3 it is evident that the statistical value of Kolmogorov-Smirnov test of the Readiness Scores of male and female participants towards Blended Learning Approach is 0.112, 0.133 respectively, whose probability of significance at df (236) and df (254) is 0.000 which is less than 0.01, hence significant at 0.01 level of significance. In this perspective the null hypothesis "The given distribution of the readiness scores of male and female participants towards using a blended learning approach for teachers' preparation does not differ significantly from the normal distribution" is rejected.

Therefore, it can be concluded that the assumption of normality of Readiness Scores of male and female participants towards blended learning approach is not satisfied or it can be concluded that readiness scores towards blended learning approach were not normally distributed. Therefore, the data was analysed with the help of Mann Whitney U test (Alternative Non-Parametric Statistics). Further before applying Mann Whitney U test, all the assumptions of this test were also tested. The assumptions related to Mann Whitney U test with the results of test are given below:

Assumption#1- Independence of the Groups

According to this assumption, there should be independence of observation in collecting samples i.e., there should not be any relationship between the observation in each group of the independent variable. It is clear from the observation of independent variable that all the selections of male and female group participants do not affect each other i.e., independent of each other.

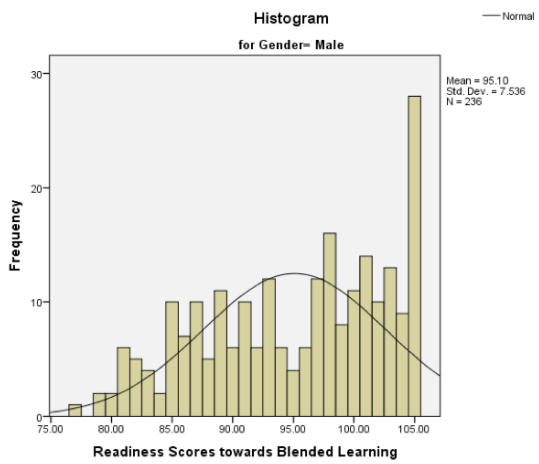
Assumption#2- The scores of dependent variables must be at least on ordinal scale

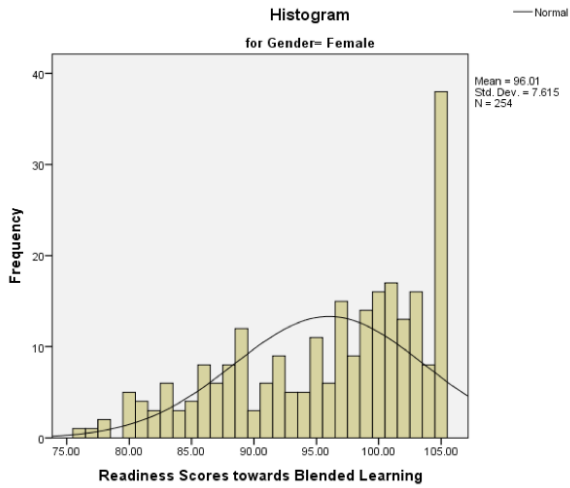
According to this assumption the dependent variable should be measured at least on an ordinal scale. On the basis of observation of the scores of dependent variables, it is clear that these scores are on interval scale.

Assumption#3- Uniformity of distribution of dependent variable at both levels of independent variable

This assumption holds whether the distribution of scores of dependent variables for both the groups of independent variables (Male and Female) has the same shape or a different shape. For testing it, graphical representations (Fig-1) were used.

Figure-1: Readiness Scores of Male and Female Participants towards using blended learning approach for teachers' preparation





Further, from the observation of Histograms of readiness scores of male and female participants it is clear that the density of distribution is located more at the right side of both the graphs along with the tail skewed negatively. Therefore, it is clear that scores of dependent variables at both the groups of dependent variables are negatively skewed in the same manner.

Assumption#4- Equality of variances (Non parametric)

For testing this assumption, Non parametric levene's test for equal variance was used. In non-parametric levene's test, absolute deviation of rank of each score from average rank of group is calculated and then f value is obtained applying ANOVA on distribution of these deviations. If this F value is not significant at the decided level of significance, it is assumed that assumption of equality of variances is satisfied.

Table-4: ANOVA to check the assumption of equality of variances (Non-parametric) on the basis of Gender

Criterion Variable: Readiness towards Blended Learning Approach					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	189.179	1	189.179	.038	.845
Within Groups	2428492.766	488	4976.420		
Total	2428681.945	489	100		

Table-4 shows that the F- value of ANOVA test is 0.038 whose probability of significance (df=1, 488) is 0.845 which is greater than 0.05, hence not significant at 0.05 level of significance. The null hypothesis "the readiness scores of male and female participants towards a blended learning approach

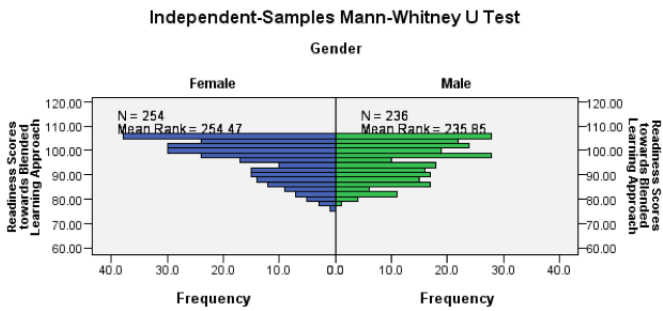
do not significantly deviate from non-parametric variance" is not rejected. Therefore, it can be concluded that the assumption of equality of variance (Non-Parametric) is satisfied.

Assumption#5- Assumption of Sample size

This assumption holds that sample size should not be less than four in both the groups of IV. In the present study sample size is more than 4 in each group of IV, Hence the fifth assumption of Mann Whitney U test is also fulfilled.

After testing and fulfilling all the statistical assumptions, the data related to the second objective was analysed with the help of Mann Whitney U test. The results are presented below through the figure-2.

Figure-1: Readiness Scores of Male and Female Participants towards using blended learning approach for teachers' preparation



Total N	490
Mann-Whitney U	32,250.000
Wilcoxon W	64,635.000
Test Statistic	32,250.000
Standard Error	1,562.974
Standardized Test Statistic	1.457
Asymptotic Sig. (2-sided test)	.145

It is evident from the above columnar that both the groups (Male and Female) can be considered uniform because of excess similarity in the distribution of dependent variables in both the groups. Therefore, it can be undoubtedly said that p- value obtained from the Mann Whitney U Test is reliable, further it is evident from the above table that the test statistics of the readiness scores of male and female participants towards blended learning approach is U= 32250.00 whose probability of significance is 0.145 which is more than 0.05, hence not significant at 0.05 level of significance, therefore the null hypothesis "there is no significant difference in mean rank of readiness scores of male and female participants towards blended learning approach" is not rejected.

Table-5: Summary of Mann Whitney U – Test for Mean rank Readiness Scores of Male and Female participants towards Blended Learning Approach

Ranks						
	Gender	N	Mean Rank	Sum of Ranks	Sig.	Remark
Between Groups	Male	236	235.85	55660.00	0.145	Not Significant
Within Groups	Female	254	254.47	64635.00		
Total	Total	490				

Further, it is clear from the mean ranks shown in the above figure that mean rank of readiness scores of male participants towards blended learning approach is 235.85 which is similar to that of female participants where mean rank of readiness scores is 254.47. Hence, it can be said that male participants have similar readiness towards using a blended learning approach than that of female participants.

Readiness of Rural, Urban and Semi Urban participants towards using blended learning approach for Teachers' Preparation

The third objective of the present research was to compare readiness of rural, urban and semi urban participants. For this researcher selected 490 participants (224 Rural, 213 Urban and 53 Semi Urban) associated with teacher education using convenient sampling techniques Since, in this objective three groups of participants are compared therefore ANOVA was used for analysis of data. But before using ANOVA, the first assumption of normality of the score of dependent variables for each level of IV was tested using Kolmogorov-Smirnov test. Table 6 shows statistical tests of Normality at different levels.

Table-6: Tests of Normality for Readiness Scores of rural, urban and semi urban participants towards blended learning approach

Criterion Variable: Readiness towards blended learning approach							
	Locale	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Readiness Scores towards Blended Learning Approach	Rural	.127	224	.000	.929	224	.000
	Urban	.123	213	.000	.926	213	.000
	Semi urban	.125	53	.037	.920	53	.002
a. Lilliefors Significance Correction							

From table-6 it is evident that the statistical value of Kolmogorov-Smirnov test of the Readiness Scores of rural participants and urban participants towards blended learning approach are 0.127, 0.123 respectively, whose probability of significance at df (224) , df (213) is 0.000 which is less than 0.01, hence significant at 0.01 level of significance. In this perspective the null hypothesis "The given distribution of the readiness scores of rural and urban participants towards a blended learning approach do not differ significantly from the normal distribution" is rejected. Therefore, it can be concluded that the assumption of normality of readiness scores of rural and urban participants towards a blended learning approach is not satisfied or it is violated.

Further, the above description indicates that the readiness scores of rural and urban participants are not normally distributed and readiness scores of semi urban participants are normally distributed. Because the first assumption of the normality of data of one-way ANOVA is not satisfied at all the levels of dependent variables, hence we use Kruskal Wallis H Test for further analysis which is an alternative non parametric statistics technique of one- way ANOVA. Further, before applying Kruskal Wallis H Test, all the assumptions related to Kruskal Wallis H Test were also tested which are given below:

Assumption#1- Independence of the Groups

According to this assumption all the three samples (Rural, Urban and Semi Urban) should be independent of each other i.e. selection of subjects of one sample should not be affected by the selection of subjects of another sample. It is clear from the observation of independent variable, there is independence of the observation in collecting rural, urban and semi urban groups.

Assumption#2 The scores of dependent variables must be at least on ordinal scale

On the basis of observation of the scores of dependent variables, it is clear that these scores are on interval scale. Therefore, the second assumption of Kruskal Wallis H Test that the scores of dependent variables must be at least on ordinal scale, is also fulfilled.

Assumption#3 Uniformity of distribution of dependent variable at both levels of independent variable

This assumption holds whether the distribution of scores of dependent variables for all the groups of independent variables (Rural, Urban and Semi Urban) has the same shape or a different shape. For testing it, graphical representation was used and uniformity found.

Assumption#4 Equality of variances (Non parametric)

For testing this assumption non parametric levene's test for equal variance is used. The results of ANOVA related to this assumption are presented in the following table -7.

Table-7: ANOVA to check the assumption of equality of variances (non-parametric) on the basis of Locale

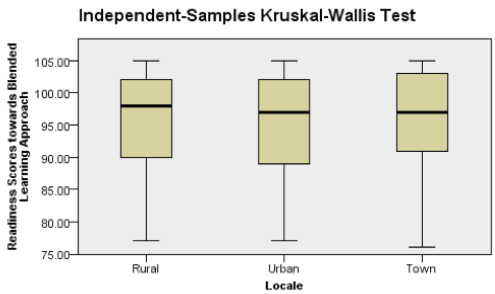
Criterion Variable: Readiness towards blended learning approach					
	Sum of Squares	df	Mean Square	Sig.	Remark
Between Groups	2147.204	2	1073.602	.217	.805
Within Groups	2410459.850	487	4949.610		
Total	2412607.053	489			

Table-7 shows that the F- value of ANOVA test is 0.217 whose probability of significance (df=2, 487) is 0.805 which is greater than 0.05, hence not significant at 0.05 level of significance. Hence, the null hypothesis "the readiness scores of rural, urban and semi urban participants do not significantly deviate from non-parametric variance, is not rejected. Therefore, it can be concluded that the assumption of equality of variance (Non-Parametric) is satisfied.

Assumption#5 Assumption of sample size

This assumption holds that sample size should not be less than four in all the three groups of IV. In the present study sample size is more than 4 in each group of IV, hence the fifth assumption of Kruskal Wallis H Test is also fulfilled. After testing and fulfilling all the statistical assumptions related to Kruskal Wallis H Test, the collected data were analysed with the help of Kruskal Wallis H Test. The results have been presented through figure-3.

Figure-1: Readiness Scores of Male and Female Participants towards using blended learning approach for teachers' preparation



Total N	490
Test Statistic	.536
Degrees of Freedom	2
Asymptotic Sig. (2-sided test)	.765

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Table-8: Summary of Kruskal Wallis H Test for Mean Rank Readiness Scores of rural, urban and semi urban participants towards Blended Learning Approach

Ranks					
	Locale	N	Mean Rank	Sig.	Remark
Readiness Scores towards blended learning approach	Rural	224	248.66	0.765	Not Significant
	Urban	213	240.36		
	Semi urban	53	252.82		
	Total	490			

It is evident from the above columnar that both the three groups can be considered uniform because of excess similarity in the distribution of dependent variable in both the three groups. Therefore, it can be undoubtedly said that p- value obtained from the Kruskal Wallis H Test is reliable, further it is evident from the table that the test statistics of the readiness scores of rural, urban and semi urban participants is K= 0.536 whose probability of significance is 0.765 which is more than 0.05, hence not significant at 0.05 level of significance, therefore the null hypothesis "There is no significant difference in mean rank of readiness scores of rural, urban and semi urban participants" is not rejected, It is clear from the above figure that the mean rank of readiness scores of rural participants is 248.66 which is similar to that of urban and semi urban participants whose mean rank of readiness scores is 240.36 and 252.82. Hence, it can be said that rural, urban and semi urban participants have similar readiness towards using a blended learning approach for teachers' preparation.

Readiness of Teacher Educators, Research Scholars and Pupil Teachers towards using blended learning approach for teachers' preparation

The fourth objective of the present research was to compare readiness of Teacher Educators, Research Scholars and Pupil Teachers towards using a blended learning approach. For this, 490 participants (106 Teacher Educators, 105 Research Scholars and 279 Pupil Teachers) associated with teacher education were selected using convenient sampling techniques. Since, in this objective we were comparing three groups so it was suggested to use ANOVA for the analysis of data. But before using ANOVA, the first assumption of normality of scores of dependent variables for each level of independent variable was tested.

Table-9: Tests of Normality for Readiness Scores of teacher educators, research scholars and pupil teachers towards blended learning approach

Criterion Variable: Readiness towards blended learning approach							
Category	Designation	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Readiness Scores towards blended learning approach	Teacher Educators	.126	106	.000	.919	106	.000
	Research Scholars	.135	105	.000	.923	105	.000
	Trainee	.117	279	.000	.929	279	.000
a. Lilliefors Significance Correction							

From table-9, it is evident that the statistical value of Kolmogorov-Smirnov test of the Readiness Scores of Teacher Educators, Research Scholars and Pupil Teachers is 0.126, 0.135 and 0.117 respectively, whose probability of significance at df (106), df (105) and df (279) is 0.000 which is less than 0.01, hence significant at 0.01 level of significance. In this perspective the null hypothesis "The given distribution of the readiness scores of teacher educators, research scholars and pupil teachers towards a blended learning approach differ significantly from the normal distribution" is rejected. Therefore, it can be concluded that the assumption of normality of readiness scores of Teacher Educators, Research Scholars and Pupil Teachers is not satisfied or it is violated.

The above description indicates that the readiness scores are not normally distributed. Because the first assumption of the normality of data of one-way ANOVA is not satisfied at all the levels of dependent variables, hence we use Kruskal Wallis H Test (alternative non parametric statistics technique). Further before applying Kruskal Wallis H Test, all the assumptions related to Kruskal Wallis H Test were also tested, which are given below:

Assumption#1- Independence of the Groups

It is clear from the observation of independent variable that there is independence of the observation in collecting rural, urban and semi urban groups. Therefore, the first assumption of Kruskal Wallis H Test of Independence of the Groups is fulfilled.

Assumption#2 The scores of dependent variables must be at least on ordinal scale

It is clear that these scores are on an interval scale. Therefore, the second assumption of Kruskal Wallis H Test that the scores of dependent variables must be at least on ordinal scale is fulfilled.

Assumption#3 Uniformity of distribution of dependent variable at both levels of independent variable

This assumption holds whether the distribution of scores of dependent variables for all the groups of independent variables (Teacher Educators, Research Scholars and Pupil Teachers) have the same shape. For testing it, graphical representation was used and Uniformity found.

Assumption#4 Equality of variances (Non parametric)

For testing this assumption non parametric levene's test for equal variance was used. The results of ANOVA related to this assumption are presented in the following table-10.

Table-9: Tests of Normality for Readiness Scores of teacher educators, research scholars and pupil teachers towards blended learning approach

Criterion Variable: Readiness towards blended learning approach					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1927.727	2	963.863	.194	.823
Within Groups	2416070.186	487	4961.130		
Total	2417997.913	489			

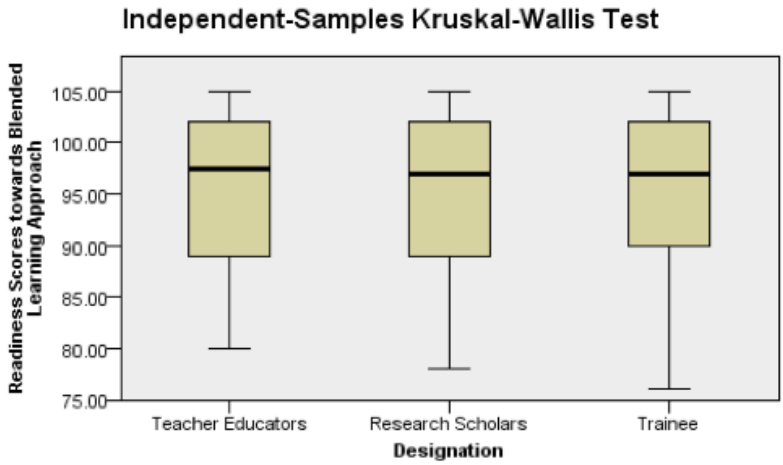
Table-10 shows that the F- value of ANOVA test is 0.194 whose probability of significance (df=2, 487) is 0.823 which is greater than 0.05, hence not significant at 0.05 level of significance. Hence, the null hypothesis "The readiness scores of teacher educators, research scholars and pupil teachers' participants towards blended learning approach do not differ significantly from non-parametric variance. is not rejected. Therefore, it can be concluded that the assumption of equality of variances (Non-Parametric), is satisfied.

Assumption#5 Assumption of sample size

This assumption holds that sample size should not be less than four in all the three groups of IV. In the present study, sample size is more than 4 in each group of IV. Hence, the fifth assumption of Kruskal Wallis H Test is also fulfilled.

After testing and fulfilling all the statistical assumptions related to Kruskal Wallis H Test, the data related to the second objective were analysed with the help of Kruskal Wallis H Test. The results are presented below through fig-4.

Figure-4: Summary of Kruskal Wallis H Test for Mean Rank Readiness Scores of teacher educators, research scholars and pupil teacher



Total N	490
Test Statistic	.009
Degrees of Freedom	2
Asymptotic Sig. (2-sided test)	.996

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

It is evident from the columnar that both the three groups can be considered uniform because of excess similarity in the distribution of dependent variable in both the three groups. Therefore, it can be undoubtedly said that p- value obtained from the Kruskal Wallis H Test is reliable, further it is evident from the table that the test statistics of the readiness scores of teacher educators, research scholars and pupil teachers towards blended learning approach is K= 0.009 whose probability of significance is 0.996 which is more than 0.05, hence not significant at 0.05 level of significance, therefore the null hypothesis "There is no significant difference in mean rank of readiness scores of Teacher Educators, Research Scholars and Pupil Teachers towards blended learning approach" is not rejected,

Table-12: Summary of Kruskal Wallis H Test for Mean Rank Readiness Scores

Ranks					
	Designation	N	Mean Rank	Sig.	Remark
Readiness Scores towards blended learning approach	Teacher Educators	106	246.09	0.996	Not Significant
	Research Scholars	105	246.26		
	Pupil Teachers	279	244.99		
	Total	490			

It is also clear from table-12 that the mean ranks shown in the figure of readiness scores of teacher educators towards blended learning approach is 246.09 which is similar to that of research scholars and pupil teachers where mean rank of readiness scores is 246.26 and 244.99. Hence, it can be said that Teacher Educators, Research Scholars and Pupil Teachers have similar readiness towards a blended learning approach.

Findings of the research

The following are the findings of the present research:

1. The mean readiness scores of all the participants towards using a blended learning approach for teacher's preparation found to be favorable. Further, the standard deviation shown relatively small variations and coefficient of variance is quite low, hence it reflects that teacher, research scholars and pupil teachers have high readiness towards using blended learning approach for teachers' preparation. The results also indicate that, as a group the readiness towards using a blended learning approach was almost irrevocable and favorable. It may, therefore be concluded that all the participants of teacher education have high readiness towards using a blended learning approach for teachers' preparation.
2. The mean readiness scores of participants towards using blended learning approach in teachers' preparation do not differ significantly when compared on the basis of gender, hence the null hypothesis "there is no significant difference in mean readiness scores of male and female participants towards using blended learning approach for teacher's preparation" is not rejected. It may therefore be concluded that readiness of male and female participants was found to be equally positive.
3. The mean readiness scores of participants towards using blended learning approach in teachers' preparation do not differ significantly when compared on the basis of locale, hence the null hypothesis "there is no significant differences in mean readiness scores of rural,

urban and semi urban participants towards using blended learning approach for teachers preparation" is not rejected. It may therefore be concluded that readiness of rural, urban and semi urban participants found to be equally positive.

4. The mean readiness scores of participants towards using blended learning approach in teachers' preparation do not differ significantly when compared on the basis of level, hence the null hypothesis "There is no significant difference in mean readiness scores of teacher educators, research scholars and pupil teachers towards using blended learning approach for teachers preparation" is not rejected. It may therefore be concluded that readiness of teacher educators, research scholars and pupil teachers were found to be equally positive.

Discussion on findings

The objective wise findings of the present study have been discussed.

To study the readiness of teacher educators, research scholars and students towards using blended learning approach for teachers' preparation.

It is clear from the above results that the mean readiness scores of participants towards using blended learning approach for teachers' preparation found to be favourable. The results also indicate that, as a group, the readiness towards using a blended learning approach were almost irrevocable and favourable. This is a positive finding. These findings were supported by Korkmaz & Karakus (2009); Adas & Shmais (2011); Alseweed (2013); Nordin & Alias (2013); Aldalalah & Gasaymeh (2014); Gyamfi & Gyaase (2015); Ja'ashanl (2015); Angadi (2016); Khan (2016); Qiang (2016); Bakeer (2018); Birbal, Ramdass & Harripaul (2018); Sari (2019). Thus, the above description reflects that using a blended learning approach may prove beneficial for teachers' preparation.

To compare the mean readiness score of male and female participants towards using a blended learning approach for teachers' preparation.

The mean readiness scores of participants towards using blended learning approach in teachers' preparation did not differ significantly when compared on the basis of gender, It may therefore be concluded that readiness of male and female participants found to be equally positive and both are ready to incorporate blended learning for internship activities. This finding has been supported by Korkmaz & Karakus (2009); Adas & Shmais (2011); Alseweed (2013); Angadi (2016); Khan (2016); Qiang (2016); Bakeer (2018); Birbal, Ramdass & Harripaul (2018). Thus, the above description reflects that using a blended learning approach may prove beneficial for teachers' preparation and gender have no effect on its effectiveness.

To compare the mean readiness score of rural, urban and semi-urban participants towards using a blended

learning approach for teachers' preparation.

The mean readiness scores of participants towards using a blended learning approach in teachers' preparation did not differ significantly when compared on the basis of locale. It may therefore be concluded that readiness of rural, urban and semi-urban participants found to be equally positive and all are ready to incorporate blended learning for internship activities. This finding has been supported by Adas & Shmais (2011); Alseweed (2013); Nordin & Alias (2013). Thus, the above description reflects that using a blended learning approach may prove beneficial for teachers' preparation and locality has no effect on its effectiveness.

To compare mean readiness scores of teacher educators, research scholars and pupil teachers towards using blended learning approach for teachers' preparation

The mean readiness scores of stakeholders (teacher educators, research scholars and pupil teachers), towards using a blended learning approach in teachers' preparation do not differ significantly and found to be equally positive. They are ready to incorporate blended learning for internship activities. This finding is supported by Adas & Shmais (2011); Alseweed (2013); Nordin & Alias (2013). Thus, the above description reflects that using a blended learning approach may prove beneficial for teachers' preparation and experience have no effect on its effectiveness.

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