AINVESTIGATING THE EFFECTIVENESS OF THE INTEGRATED APPROACHES OF DIFFERENTIATED INSTRUCTION AND UNDERSTANDING BY DESIGN: A QUANTITATIVE CASE STUDY OF BAHAUDDIN ZAKARIYA UNIVERSITY MULTAN

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ABSTRACT

In countries like Pakistan, English language is the major concern of the academic lay out, be it teaching, learning, assessments or simply means of communication. But the implementation of processes that involve the teaching and learning of the language in Pakistani classrooms is complex. The diversity, this study aims to focus at, is the academic diversity, which involves the variety of school-systems that run across the country with varied teaching methodologies and curriculums employed for the teaching of English language. This paper aims at quantitatively investigating the effects of Carol Ann Tomlinson's (2017) integrated approaches of Differentiated Instruction (DI) and Understanding by Design (UbD) in English Language university heterogeneous classrooms of Pakistan. This case study was designed to promote evidence-based classroom practice in Pakistan's Bahauddin Zakariya University, Multan by developing a module of the integrated approach to measure the effects on learners' English language proficiency. Weekly lesson plans were designed keeping in view the curriculum of the University for every Course and learning style preferences, for 14 weeks, for which a semester spans, on an average. English language proficiency of the students was evaluated via pre and post-tests. The participants of experimental group appeared to have performed well with significantly higher scores in post-test of two-tailed paired sample t-test, as compared to the students of control group. Results from paired sample t-test for experimental group revealed that the intervention was effective. These findings support previous researches in stating this approach as student- centered

approach of learning. The research endorses the Pakistani government's concept of "quality education for all by 2030" (Usman et al. 2019) suggesting that researches of similar perspective are to be carried out around the nation in order to generalize these reported findings.

INTRODUCTION

Over the last few decades, the inevitable differences among learners in the educational contexts call for a dynamic review of the structure of teaching and learning norms. In countries like Pakistan, English language is the major concern of the academic lay out, be it teaching, learning, assessments or simply means of communication. The university classrooms of Pakistan, where the undergraduate studies and higher take place, host students from all sorts of academic backgrounds, which ultimately results in a varied understanding of the language of each learner. This brings into question, the methodology and curriculums that are employed in such academically diverse English Language classrooms of Pakistan. Hence, the impetus of the study stems from the need to address this diversity with an aim to make such classrooms more inclusive, homogenous and the one that honors the reality of the English Language Learners (ELLs) we teach. The solution lies in their accommodation, through an approach which unifies the aims for all, brings equality in the classrooms and is inclusive by all means. Therefore, one classroom reality that taxes the capacity of teachers to teach as they want, is the variety of ELLs that come from a range of academic backgrounds. The present study investigates the effects of Carol Ann Tomlinson's (2017) integrated approaches of Differentiated Instruction (DI) and Understanding by Design (UbD) in English Language university classrooms of Pakistan. UbD is predominantly a model for curriculum design while DI- focuses on whom we teach, where we teach and how we teach. (Tomlinson & McTighe, 2006). The study was designed to promote evidence-based undergraduate classroom practice in Pakistan's Bahauddin Zakariya University, Multan by developing a module of the integrated approach to measure the effects on learners' English language proficiency. Accuracy and fluency are the two perimeters to define language proficiency. Lessons are planned on the basis of the need analysis of the students in terms of their language proficiency by LLSPQR. Reading and writing skills are taken into account in terms of language skills. Moreover, the inspiration for selecting language proficiency in reading and writing is the study scheme of English subject generated by the Higher Education Commission (HEC) for the Pakistani students.

In this article, the researcher intends to highlight quantitative approach which was employed through pre- and post-tests of the student-participants from both experimental group and control group in methodology section. However firstly the literature related to issues and practice is to be observed.

LITERATURE REVIEW

Current classrooms are portrayed by having various students whose requirements should be tended to. This requires curriculum to be flexible accordingly. However, Eysink and Schildkamp (2021), argued that the activities of differentiation along with that of formative assessment are difficult to carry out for the teachers. Therefore, they suggested that with some

modifications in activities of DI, they become more effective. In the DI classroom, teachers use small groups to teach different learning styles (Getha-Eby et al., 2015). For example, kinesthetic learners will work in a group which offers hands-on learning, while other groups may challenge students with discussions, texts, or academic projects. According to Connor et al. (2014), cooperative group learning allowed time for the teacher to work with students' individual needs.

Iqbal, Khan, and Nisar (2020) conducted a survey in which they examined the students' and teachers' perspectives about DI and identified its impact upon students' learning. The sample was collected from 5 departments of Karakoram International University. The findings disclosed that DI strategies are impactful for the improvement of learning skills of students. They suggested that teacher trainings should be done in universities that make the teachers aware of the DI strategies like compacting curricula and learning centers (Tomlinson, 2017). This would help the teachers learn where it is effective to use DI strategies and where it is not important to use it.

Similarly, another qualitative study conducted by Iqbal and Muhammad (2020) investigated the teachers' self-efficacy beliefs related to the use of DI in diverse school settings by using data collected through primarily audio-recorded and later transcribed semi-structured interviews from 16 voluntarily agreed prospective teachers, attending a prestigious private university in Lahore. The findings of the study, after data analysis through template analysis method, revealed that related to the students' learning profile, interest and readiness, most of the teachers believed in modifying five curriculum related elements i.e., content, process, product, affect, and learning environment, while some of them hesitated to apply it.

Tayyaba Tamin (2021) focused on inclusivity in education specifically focusing on COVID Times and maintained that inclusivity has become ever more important since learning gaps have widened and socioeconomic inequalities have exacerbated. She has quoted Mavroudi's (2016) study in Greek state revealed that even though EFL teachers realize the importance of DI classrooms, they stated that implementation of DI is difficult due to scarcity of appropriate resources, less teaching time, and requirement of large amount of time for preparation for DI classrooms. Furthermore she cited Baggett (2016) by stating that changes in L2 education have resulted in increased variation in exposure to the language, with minority populations specifically being underrepresented in upper-level FL courses. A core concept within the DI philosophy is the building of a classroom community in which a student can feel supported in their academic endeavors. To address this issue, Russell and Kuriscak (2015) both indicated that DI is necessary to meet the increasingly diverse student population. Differentiation is responsive teaching based on student differences in prior knowledge, readiness, and learning style, and is appropriate for mixed ability classrooms. Tomlinson (2001) characterized DI by the modification of content, process, product, and/or learning environment so that all students, regardless of ability level or individual preferences, may be successful. Content differentiation refers to the adaptation of what is taught. While all students may be taught similar

concepts, the level of complexity for students is changed depending on student ability.

A comparative exploration of DI and the traditional teaching methods at A Level classroom in Aitchison College, Lahore, was conducted by Kamran et al., (2019). Their study revealed the successful effects of DI in comparison to the traditional methods on the academic achievement of students. A sample of 70 students were chosen as a result of the random sampling and were tested through pre- and post-testing by using SPSS. The power of retention of students treated with DI showed a remarkable difference in their cognitive domain.

Hassan et al., (2019) explored the DI practices and student-teacher interactions and assessments in primary classrooms of Sargodha, whereby 300 teachers were selected from 4 tehsils. Their study revealed that albeit the use of DI in classrooms, teachers did not have adequate knowledge and training required to bring about a change which the approach claims to promise. This impacts their interaction and judgment of assessments in a negative way which hampers the quality of DI in primary classrooms.

Although DI is considered to be an effective teaching strategy in addressing the diverse ability of learners, it lacks empirical support (Subhan, 2006). Much of the studies related to DI and UbD are conducted at primary and secondary educational settings and higher educational context has given less attention in this regard (Santangelo & Tomlinson, 2009). Overall, the literature highlights the importance of DI and UbD in improving skills of the learners, still its thorough review reveals that there is lack of experimental research in implementation of DI and UbD in higher educational setting like universities especially in Pakistan. Although, DI and UbD are apparently based upon the same premise, the link has not been drawn explicitly by any of the researcher in earlier studies. Tertiary level studies of DI indicated that from a single study, there appeared positive as well as negative findings at the same time. As, Lightweis (2013), while discussing implications, theory and the use of DI at higher education level of K-12 in America, concluded that DI at tertiary level enhances the students' achievement level, social interaction, self-worth and motivation. He further claimed that despite the positive results in implementation of DI, its empirical evidence at higher level is still sparse. Thus, this research study is an attempt to create a link between both the strategies and make some contribution in the field of research on ELT.

RESEARCH METHODOLOGY

Research Design

The consideration of the research associated with learning and teaching is to respond to queries related to pedagogy (Dörnyei, 2007; Nunan, 1990) as it manifests in classroom research. An English as second language (ESL) classroom utilizing pre- and post-test techniques. The following section elucidates the motivation for studying ESL/EFL context and renders the rationale for its selection for research.

The Pre-Experimental Design

Dörnyei (2007) believed that the effective cause and effect relationship is the outcome of true experimental design due to its inflexible characteristics and initiates exceptional results and findings in an intervention study. Realist experimental design is highly beneficial for Pakistan. In true experimental design, the researcher usually divides a population into an experimental group that undergoes treatment and a control group that acts as a foundation for comparison to investigate the usefulness of the given module (ibid). Due to the quantitative nature of experimental design based on random sampling, it is inclined toward the generalization of findings from the sample of the research population.

However, in most of the educational settings, the randomness is found rare as the researcher has to take treatment and control groups from whole class and s/he has to keep them intact. Hence, this non-random characteristic of the participants leads to the emergence of quasi-experiment. Quasi-experimental design is "experimental situations in which the researcher assigns, but not randomly, participants to groups because the experimenter cannot artificially create groups for the experiment" (Cresswell, 2009, p.313). Broadcasting of the quasi-experiments that are related to the true experiment but in a non-random selection is the outcome of the systematic nature of the participants. Thyer (2012) put forward that quasi-experiments are not developed to the standard of realist experiments due to insufficient random participation.

The initial design of the study was comprised of a control group quasi-experimental design that received specific treatment, and six departments of Bahauddin Zakariya University acted as treatment groups during the research. Moreover, during the defense of the proposal at Bahauddin Zakariya University, project was presented to the English language teaching (ELT) experts, it was suggested to cut down the number of departments- where I have been teaching as a visiting lecturer for the past few years- from six to four that I had to teach, to make the study practical and complete the thesis write-up within the given period of time during the doctoral degree. The design of the study was updated to pre-and post-test of a four control groups and four experimental groups.

The test for assessing proficiency in reading and writing was adopted from the books of IELTS and TOEFL for university students. Permission was obtained from the gatekeepers of the relevant departments before conducting research at the specific research site. In University setup, the gatekeepers are Heads of Departments (HODs). The study deals with the dependent and independent variables; differentiated instruction is the independent variable. Utilizing the independent variable, the researcher aimed at assessing the dependent variable, that is, the scores of students' language proficiency in reading and writing as the implementation of differentiated instruction influences them.

In this research BZU Multan is the collective case study. In a collective case study (or multiple case study), the one issue or concern is again selected, but the inquirer selects multiple case studies to illustrate the issue. The researcher

might select for study several programs from several research sites or multiple programs within a single site. Often the inquirer purposefully selects multiple cases to show different perspectives on the issue. Yin (2009) suggests that the multiple case study design uses the logic of replication, in which the inquirer replicates the procedures for each case.

THE RESEARCH PROCEDURE

The five stages involved in the data collection of the study are given in following Table 3.1:

Table 3.1 Summary of research procedure

Stage	Description	Period
Pre-research	1. Applying and getting research ethics approval from Bahauddin Zakariya University (BZU). 2. Getting approval for access to research site from gatekeepers of the department. 3. Analysis of teacher`s teaching methods	January 2019
Needs analysis	1. Meeting with teachers to go into teaching plan for the whole semester. 2. Delivering consent forms to HODs. 3. Supervising language learning style preference questionnaire (LLSPQ) to participants to design a course of differentiated instruction formulated according to their choice.	February-March 2019
Needs analysis	4. Evaluating LLSP questionnaire. 5. Developing checklist for differentiated instruction. 6. Drafting a sample lesson plan. 7. Inculcating significant changes suggested by the supervisor.	
Intervention Implementation	3. Executing pre-tests for language proficiency in reading and writing. 4. Executing the initial lesson plan. 5. Implementation of the course to participants.	August 2019
Post-intervention	1. Executing post-tests for language proficiency in reading and writing. 2. Concluding site visits by expressing gratitude to administration and participants. 3. Presenting initial report discussing quantitative data.	November2019
	8. Validation of the checklist by the experts. 9. Constituting essential modification.	
Intervention Planning	1. Developing the lesson plans. 2. Having course checked against validated checklists from my supervisor and subject specialist of the department. 3. Presenting course to the supervisor to check compliance with HEC course outline. 4. Inculcating essential modifications. 5. Examining course along with teachers.	March-April 2019

Considering the academic calendar of the university, the intervention phase was planned to conduct 2019-2020 as it was the only period available for conducting the intervention phase interruptedly for average 14 weeks.

THE RESEARCH INSTRUMENTS

LLSPQ, a Likert's scale-based questionnaire, was the adaption of Reid's (1984) Perceptual Language-Learning Style Questionnaire, intending to develop activities of learners` interest. There are six learning style preferences in LLSPQ: visual, auditory, kinesthetic, tactile, group learning, and individual learning. Each category covers 5 items, so there are 30 items in the LLSPQ. Its purpose was to identify dominant learning style preferences among language learners and examine the relationship between learning style preference and academic performance in ESL classrooms.

The language proficiency test was the second research instrument sourced from "Test of English as a Foreign Language" (TOEFL) book, as these tests are specifically for foreign language learners, were designed. Moreover, the inspiration for selecting language proficiency in reading and writing is the study scheme of English subject generated by the Higher Education Commission (HEC) for the Pakistani students. In semester I, the national curriculum of Pakistan aims at effective communication and reading skills, enabling students to communicate their ideas and opinion inside and outside classroom premises. Communication skills empower learners to figure out central ideas, induce relevant information, and coherent use of vocabulary in a given context. In writing skills, the focus is on teaching grammar and on writing descriptive, narrative, and argumentative essays regardless of the stimulus. While in the semester II, the focus is on enabling students to apprehend different techniques used by the author in the text to bring out the useful information with supporting details; make the student proficient enough to use several ideas developing techniques such as comparison, contrast, listing, and cause and effect in their writing. The study scheme for semester 3 is to target oral presentations and interviews, formal application and letter writing, and brief report writing. The agent for semester IV is a critical reading of academic texts such as assignments and examination answers, summary and report writing, analysis of academic texts, and presenting arguments in the paper. Keeping in view Dörnyei`s (2007) argument that to conduct quantitative research in a classroom minimum of 15 participants are required; there are 183 participants involved in the study, 78 females and 105 males from 4 departments of Bahauddin Zakariya University. They were examined on the basis of academic diversification.

Academic Diversification

Academic background of the students is based upon their schooling. Schools in Pakistan have their own unique curriculum, examination systems, boards, affiliations, degrees and certificates (Malik & Hassan, 2015). Apart from the state-run schools, there are private schools, or chains of schools which are governed by or affiliated with international school systems and simultaneously are in affiliation with government or federal boards. The government schools are the most widespread. Rehman (2004) makes a broad division of schools in

Pakistan, dividing them into Urdu and English medium schools. However, he talks about an array of schools that come under these umbrella terms. These students from different schooling or academic background formulate the "mixed ability classrooms" at university level that increase the requirement of DI in such classrooms.

Table 4.2. Shows an overall composition of class and the courses taught in each semester

Gender				
Male		Female		
105		78		
Academic Background				
Government	Private (English)	Private (Urdu)	Madrassa	Cadet
46	84	36	11	16
Courses taught				
English comprehension & composition	**English-IV**	**Functional English 2**	**Writing Skills**	
38	41	55	49	

The participants were divided according to their gender, academic background and the course of English. 42.6% of participants are female, while 57.4% are male. 25.1% population got their education from Government institutes, 45.9% from private, 19.7% from madrassas, and 3.3% of participants were students of cadet colleges. Several English courses were taught to the participants of the project; 20.8% were taught English comprehension & composition, 22.4% were enrolled in English-IV, 30.1% were the students of Functional English 2, and 26.8% were taught writing skills.

This is the limitation of the research. However, the university students are mature, so they cooperated in the project and quantitative data collection. Statistical Package for the Social Sciences (SPSS) Version 23.0 was used to record and analyze the quantitative data of the research.

ANALYSIS: FINDINGS AND DISCUSSION

Empirical Data Analysis

The pre-test was conducted in August 2019 to ascertain the pre-existing levels of language proficiency of the student-participants before the implementation of the intervention, and the post-test was conducted in November 2019 at the conclusion of the intervention program in order to measure changes in it.

LLSPQR

The questionnaire's sub-scales' descriptive statistics are shown in Table 4.3. The "visual learning preferences" scale has a mean value of 24.90 and a standard deviation of 8.687 (M=20.09 SD=8.687). The minimum and maximum scores for those who prefer visual learning were 12 and 46, respectively. The average score for tactile learning preference is 20.97, with a standard deviation of 3.000 (M=20.97, SD=3.000). The minimum and maximum scores for those who prefer tactile learning were 12 and 25, respectively. The average score for auditory learning preferences is 21.13, and the standard deviation is 3.068 (M=21.13, SD=3.068). The minimum and maximum scores for auditory learning preferences were 10 and 25, respectively. The standard deviation for the group score is 4.936 and the mean is 19.23 (M=19.23, SD=4.936). The group score ranged from a minimum of 5 to a maximum of 25. The average score for kinesthetic learning preferences is 21.87, and the standard deviation is 2.787 (M=21.87, SD=2.787). The minimum and maximum scores for kinesthetic learning preferences were 13 and 25, respectively. The standard deviation for each individual score is 3.947 and the average score is 19.50 (M=19.50, SD=3.947). The minimum and maximum scores for auditory learning preferences were 9 and 25, respectively. In comparison to other factors, the Group Score is more unlikely.

Table 4.3: Descriptive Statistics for Scores of Visual Results, Tactile Preferences, Auditory Score, Group Score, Kinesthetic Score, and Individual Score.

Variables	N	Min	Max	Mean	SD
Visual Results	144	12	46	24.90	8.687
Tactile Preferences	144	12	25	20.97	3.000
Auditory Score	144	10	25	21.13	3.068
Group Score	144	5	25	19.23	4.936
Kinesthetic Score	144	13	25	21.87	2.787
Individual Score	144	9	25	19.50	3.947

According to the respondents, visual learning preferences are more agreeable, with a mean value (M) of 24.90, followed by kinesthetic learning preferences with M value of 21.87, followed by auditory learning preferences with a M value of 21.13, followed by tactile learning preferences with M value of 20.97, followed by Individual and Group Score with Mean values of 19.50 and 19.23 respectively. As a result of the discussion above, it can be concluded that among students, the visual learning preference is more appealing than the other learning preferences.

Language Proficiency Tests

In order to analyze the effectiveness of integrated approaches of UbD and DI in undergraduate English language proficiency in an academically

differentiated classrooms, paired sample t-test was organized. For that purpose, pre and post tests were arranged and analyzed along with mid and final term exams from the perspective of academic background of the students as well as their semester level. The empirical data from total 177 students out of 183 in Mid and Final Term exams are statistically described and analyzed as well as compared pretest and posttest results of 167 and 157 students respectively. The remaining students were not appeared in exams.

Paired sample t-test:

Paired sample or dependent sample t-test is used to check the impact of intervention, that is, either intervention improved the academic performance of students or not. The paired-samples t-test was conducted to determine the p-value with the guidance of other research with comparable methodological designs (e.g., Hong, Lin, & McCarthy Veach, 2008) and statisticians (e.g., Crowson, 2015). When comparing two population means in a study with two samples, this specific type of t-test is employed so that observations in one sample can be compared with observations in the second sample. A study that uses "before-and-after observations on the same subject" (Shier, 2004) is an illustration of this kind of research.

Table 4.4: paired sample t-test for pre and post test

Test	N	Mean	SD	df	z	t	95% CI for difference
Pre-test	151	37.95	5.584	150		-17.212*	[-3.957, -3.142]
Post-test	151	41.50	5.091				

*P<0.05

The results in table 4.4 are statistically significant, it means that intervention improved the performance of the student in final posttest. It can be seen that the average marks improve in final term and variation reduced compared to pre-test. It means that the intervention was effective in our case.

Table 4.5: paired sample t-test for mid and final exam

Test	N	Mean	SD	df	t	95% CI for Difference
Mid exam	177	20.562	3.562	176	- 27.747	[-16.823, -14.589]
Final exam	177	36.268	7.278			

*P<0.05

The analysis's findings indicated that the pre-test mean scores of 37.95 (SD=5.584) increased by 41.50 (SD=5.091) in terms of pre and post-test as mentioned in table 4.5. While in case of mid and final exams it changes from 20.562 (SD=3.562) to 36.268 (SD=7.278) as revealed through Table 5.81. These results are the part of assessment which Tomlinson (2014) states as product. These values were used to determine the p-value using a two-tailed approach, which produced a result of p<0.05. In SPSS, the p-value is labelled "Sig." According to Hooper (2013), the result of 0.05 is regarded as strong

evidence against the null hypothesis, and the value of p<0.05 indicates that the likelihood of the null hypothesis being incorrect is less than one in a million.

Since the participants' post-test scores were considerably higher than their pre-test scores according to the two-tailed paired-samples t-test, the null hypothesis that there was no difference is rejected (t= -17.212, p<0.05). Although a statistical difference was found, it would be premature to conclude that the difference is significant based solely on the raw mean difference, especially as the p-value simply indicates that the changes were not caused by random error. To ascertain the impact of the score differences, the following analyses were undertaken, including the computation of confidence intervals and calculation of effect size.

Results of Controlled and Experimental Groups

The results of experimental group data and control group data is compared in terms of mid and final term exams and pre and post-test.

Table 4.6: pre-test and posttest comparison using Paired sample t-test for Experimental Group (N=183)

Exam	M	SD	df	T	p-value	95% CI of Difference
Pre test	37.95	5.584	150	-17.212	0.000***	[-3.957, 3.142]
Post test	41.50	5.091				

***P<0.01

This table 4.6 provides the comparison between pre and post-test of experimental group by using pair sample research design. This comparison reveals that there is an increase in the marks of post-test (M=41.50) as compared to the pretest (M=37.95) of the students and p value is 0.000 this depicts the statistical significance of the results.

Table 4.7: pre-test and post-test comparison using Paired sample t-test for Control Group (N=151)

Exam	M	SD	df	t	p-value	95% CI of Difference
Pre test	20.39	7.279	192	5.026	0.000***	[1.209, 2.771]
Post test	18.40	7.395				

***P<0.01

This table 4.7 provides the comparison between pre and post-test of control group by using pair sample research design. This comparison reveals that there is no increase rather decrease in the marks of post-test (M=18.40) as compared to the pretest (M=20.39) of the students and p value is 0.000. This depicts the statistical significance of the results.

Table 4.8: Comparison of mid and final term exam among control and experimental group

Exam	Group	N	M	SD	df	t	p-value
Mid Term	Experimental	177	20.562	3.562	407	0.90	0.183
	Control	232	20.233	3.744			
Finals Term	Experimental	177	36.268	7.279	408	2.68	0.004***
	Control	233	34.264	7.639			

***P<0.01, P=N.S.

The results from independent sample t-test for mid-term exam, as indicated in Table 4.8, reveal that on average there is no difference statistically between experimental group (M=20.562, SD=3.562) and control group (M=20.233, SD=3.744) as p-value is greater than 0.01 level of significance. However, the results from independent sample t-test for final term exam indicates that on average there is statistical difference between experimental group (M=36.268, SD=7.279) and control group (M=34.264, SD=7.639) as p-value is less than 0.01 level of significance.

Table 4.9: Comparison of Pre-test and Post-test exam among control and experimental group

Exam	Group	N	M	SD	df	t	p-value
Pre Test	Experimental	167	37.64	6.341	391	24.47	0.000***
	Control	226	20.34	7.333			
Post Test	Experimental	157	41.45	5.062	361	33.62	0.000***
	Control	206	18.39	7.373			

***P<0.01

Results from paired sample t-test for experimental group shows that the intervention was affective as p-value is smaller than level of significance 0.01. It can also be seen that the performance of students in pre-test (M=37.95, SD=5.584) is lower compared to the performance in the post test (M=41.50, SD=5.091). For control group performance in post-test (M=18.40, SD=7.395) is lower compared to the pre-test (M=20.30, SD=7.279). This is revealed through Table 4.9.

95% CI of Difference

We are 95 percent certain, based on the calculations, that the population Mean of the intervention participants ranges from 37.95 to 41.50 for pre-and post-tests and from 20.562 to 36.268 for mid and final exams.

Conclusively, quantitative results of dependent variable i.e. English language proficiency is reported above. Results from paired sample t-test for experimental group shows that the intervention was effective as p-value is smaller than level of significance 0.05. It can also be seen that the performance of students in pre-test (M=37.95, SD=5.584) is lower compared to the performance in the post test (M=41.50, SD=5.091).

Limitations And Delimitations Of The Study

The experimental groups were confined to four classes as this is the maximum number of courses allowed for a visiting faculty member who the researcher was at the time it was conducted. Moreover, the length of intervention was based on the academic calendar of the university's schedule of the semesters under study. The selection of the departments and semester levels was entirely based upon the ease of access; from where the approval of the heads could be gained. The selection of Control groups was also based on the ease of access. In pre- and post- test as well as in their mid and final term exams, the number of student-participants varied. As presence of students is beyond the limits of the researcher therefore, the results-analysis of pre- and post-test of the present number of students was done.

Language proficiency, as the dependent variable, is taken as a holistic term and the effect of the approaches are determined on the students' overall ability in the language through pre- and post-tests. Students are thus, not tested for individual skills. The scores indicate an overall effect. Academic Diversity is not taken as a variable but a context in which the study is conducted.

CONCLUSION

The persistence of gross disparities in educational contexts in the recent decades has given rise to the need for equality in classrooms so as to ensure learning takes place homogenously. The gap among learners of English language is ever increasing just as the importance of the language itself. Academic diversity is one of the primary factors contributing to this phenomenon. English Language Learners (ELLs) in multilingual countries or places where English is not understood by a vast majority, some alternative perspectives on education need to be sighted. The main objective of the present study is to integrate elements into classrooms that can help minimize the disparity among ELLs both in terms of curriculum and instruction. The foregrounding of the academic diversity and its impact on the learning of English has paved way to promoting a different vision of teaching and learning the language, through this study. Homogeneity in terms of instruction and curriculum is the need of the hour in a heterogeneous classroom.

Tomlinson's (2017) framework of the integrated approaches rests on the concept of equality where no student is left behind. Although this concept of inclusivity presented by Tomlinson encapsulates and elucidates the needs of learners which may be far beyond the academic diversity, however, countries like Pakistan where the minimal volume of literature is available to foreground the need and voice for a change, the time to bring about change in this academic scenario is now inevitable.

This case study with an action research design (Cresswell, 2005), based its experiment on the case study, and surfaced the individual needs of diverse learners in university classroom teaching. In other words, it aims to surface the needs of all students studying at the undergraduate level in university classrooms. As mentioned above, the university under study hosts students from Multan and other smaller cities of South Punjab. Multan, being the

divisional head of the minor towns in vicinity, has the major diversity in the standards of academic institutions, whereby the standards may be measured in terms of fee and teaching methodologies (Tariq Rehman, 2010). Students from all over the Southern Punjab, make up the classrooms of Bahauddin Zakariya University and hence, these classrooms exhibit diversity to a massive level. Similar is the case in most universities which host students from all over the country.

Quantitative data analysis revealed that the intervention program in the study produced statistical is significant positive result along with the substantial effect size for English language proficiency of Undergrad ELLs as dependent variable. Moreover, the mean values of experimental and control group data as the interpretation of the results of their mid-term and final term exams as well as pre and post test results revealed that the students not only perform well in their pre and post-tests of intervention, rather the overall results in terms of their mid and final exams get affected by the intervention of DI. The English language proficiency of the students in terms of reading and writing skills specifically lead them to be comparatively better achievers of scores. By customizing the module according to the framework based upon DI and UbD provide the basis for positive findings in Pakistani differentiated classrooms at the undergraduate level in the universities.

Implications of the study

As an alumnus and a part of the faculty of Bahauddin Zakariya University, I have experienced the limited focus on the perspective of Academic diversity, which is a major challenge to teachers involved in the teaching of English Language. Being a compulsory subject at undergraduate level in all departments, teachers are not fully trained, aware and ready to face this challenge. Thus, I would like to propose that awareness seminars regarding the academic diversity, revision of relevant methodologies and bringing nuances to classroom instructional strategies in English Language Classrooms in universities must take place.

The study took into consideration the language learning style preference of individuals which enables the teacher-researcher to tailor the lesson plans and the syllabus provided according to the needs of the learners. Moreover, keeping in view that the academic diversity in university classrooms hails from schools, the current study also builds on the foundation of university-school partnership which can give teachers space for inquiry into diversity, working on equity and justice in classrooms. School classrooms need to focus and converge to pedagogical practices which in turn would lessen the effect of academically diverse classrooms in universities.

This study creates room for researchers to further their studies on other types of diversities which classrooms may be met with. This may be based on race, ethnicity, gender, cognitive variance etc. Theory and practice in general, until brought into practice, might tend to keep the academically advantaged a rank higher in classrooms leading to indifference in teachers and teaching and thus creating an environment of injustice to learning needs of all individuals.

Through my study, I take this opportunity to recommend that teachers and authorities must allow students to share the responsibility of bringing homogeneity to classrooms. In order to make them responsible academicians of the country, we need to get them involved in curriculum development and the democratic principles that govern the classroom practices in an effective way. Thus, if the classroom syllabus is modified according to the needs, learning preferences and interests of the learners, teachers and students can mutually learn and discover. Students as co-researchers with their teachers can voice for their own needs as well for the whole student community.

REFERENCES

Creswell, J. W. (2005). Educational research: Planning, conducting, and evaluating quantitative and qualitative research. Upper Saddle River, NJ: Pearson.

Creswell, J. W. (2009). Research designs: Qualitative, quantitative, and mixed methods approaches. California: Sage.

Crowson, M. (2015, November 9). Paired samples t test and alternatives using SPSS [Video file]. Retrieved from https://www.youtube.com/watch?v=0Wd25Q3CpsI

Dörnyei, Z. (2007). Research Methods in Applied Linguistics. China: Oxford University Press.

Eysink, T. H., & Schildkamp, K. (2021). A conceptual framework for Assessment-Informed Differentiation (AID) in the classroom. Educational research, 63(3), 261-278.

Getha-Eby, T. J., Beery, T., O'Brien, B., & Xu, Y. (2015). Student learning outcomes in response to concept-based teaching. Journal of Nursing Education, 54(4), 193-200.

Hassan, M. U., Kazim, B. & Parveen, I. (2019). Teachers' Practices of Differentiated Instructions, Fair Assessment and Fair Interactions in Sargodha. Journal of Educational Sciences and Research, 6(1), 47-64.

Hong, Z.R., Lin, H.S., & McCarthy Veach, P. (2008). Effects of an extracurricular science intervention on science performance, self-worth, social skills, and sexist attitudes of Taiwanese adolescents from single-parent families. Sex Roles, 59, 555- 567.

Iqbal, J., Khan, A. M., & Nisar, M. (2020). Impact of Differentiated Instruction on Student Learning: Perception of Students and Teachers. Global Regional Review, V(I), 364-375. doi:10.31703/grr.2020(V-I).40

Iqbal, T., & Muhammad, Y. (2020). Using differentiated instruction in inclusive schools: A qualitative analysis of prospective teachers' self-efficacy. Journal of Inclusive Education, 4(1), 229-257.

Kamran, M., Munir, N., & Wattoo, R. M. (2019). A Comparative Exploration of the Effect of Differentiated Teaching Method vs. Traditional Teaching Method on Students' Learning at 'A' level. Global Social Sciences Review, IV(I), 89-95. doi:10.31703/gssr.2019(IV-I).08

Lightweis, S. K. (2013). College Success: A Fresh Look at Differentiated Instruction and Other Student-Centred Strategies. College Quarterly, 16(3), 1-9.

Malik, M.A. & Hassan, R. (2015) An Analysis of Parallel Education System in Pakistan, and the Challenges They Pose in Education Research Advances in Social Sciences Research Journal 2(10).

Nunan, D. (1990). Second Language Classroom Research. ERIC Digest. Retrieved from https://eric.ed.gov/?id=ED321550

Rahman, T. (2004) Denizens of alien worlds: A survey of students and teachers at Pakistan's Urdu and English language-medium schools, and madrassas, Contemporary South Asia, 13:3, 307-326, DOI: 10.1080/095849304200027 2212

Rahman, T. (2010). Language Policy, Identity, and Religion: aspects of the civilization of the Muslims of Pakistan and North India. Chair on Quaid-i-Azam & Freedom Movement, National Institute of Pakistan Studies, Quaid-i-Azam University.

Russell, B. D., & Kuriscak, L. M. (2015). High school Spanish teachers' attitudes and practices toward Spanish heritage language learners. Foreign Language Annals, 48(3), 413-433.

Santangelo, T., & Tomlinson, C. A. (2009). The application of differentiated instruction in postsecondary environments: Benefits, challenges, and future directions. International Journal of Teaching and Learning in Higher Education, 20(3). 307-323.

Shier, R. (2004). Paired t-tests. Mathematics Learning Support Centre. Retrieved from www.statstutor.ac.uk/resources/uploaded/paired-t-test.pdf

Subban, P. (2006). Differentiated instruction: A research basis. International education journal, 7(7), 935-947.

Tayyaba, T. (2021) Language, Class, and Education: Deconstructing the Centre to Rethink Inclusivity in Education in Pakistan, Cogent Education, 8:1, 1897933, DOI: 10.1080/2331186X.2021.1897933

Thyer, B. A. (2012). The scientific value of qualitative research for social work. Qualitative Social Work, 11(2), 115-125.

Tomlinson, C. A. (2017). How to differentiate instruction in academically diverse classrooms. ASCD.

Tomlinson, C. A., & McTighe, J. (2006). Integrating differentiated instruction & understanding by design: Connecting content and kids. Alexandria, Va: Association for Supervision and Curriculum Development.

Tomlinson, C.A. (2001). How to differentiate instruction in mixed-ability classrooms. Alexandria, VA: Association for Supervision and Curriculum Development.

Usman, Y. D., & Madudili, C. G. (2019). Evaluation of the Effect of Learning Environment on Students' Academic Performance in Nigeria. Online Submission.

Yin, R. K. (2009). Case study research: Design and methods (Vol. 5). Sage Publications.