

Teacher Educators' Attitudes towards Personalized Learning: A Comparative Study

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Abstract

This study was designed to assess and compare teacher educators' attitude towards personalized learning at higher level in Pakistan. It was a descriptive study done in the Pakistani context. Sample included teacher educators serving in two public and two private sector universities situated in Islamabad. Results obtained from a 26 item 5 point Likert scale questionnaire revealed that teacher educators of both the sectors were using five aspects of personalized learning namely access to technology, student involvement, teacher as a facilitator, two way collaboration and manageable class size as per Basye Model. But it was concluded that effective implementation of personalized learning environment was possible only if the teacher educators of both the sectors co- designed curricula with cooperation of the learners and incorporate technology as well. Manageable class size of 15-20 students was suggested in order to give personalized attention to each student. The management of higher education institutions has to support and facilitate teachers to attain the goals of personalized learning in effective and efficient manner.

Keywords: Higher level, personalized learning, teacher educators' attitude, comparative study

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Introduction

University education is a critical component of education because human capital is formed at this stage. It not only provides necessary high level skills for the labour market but also gives a chance to teachers to develop their attitudes towards new trends in teaching learning process. It has been proved through various researches that university graduates have better access to jobs, greater work motivation and improved work place relations. Higher education in Pakistan is the responsibility of universities. In Pakistan, universities are functioning in two sectors, namely public and private sector. Public sector universities are funded by government whereas private sector universities are run through private funding agencies. Higher Education Commission (HEC) in the governing body of universities functioning in both the sectors. HEC provides all the criteria related to curricula and full facilitation for the usage of ICT but as teaching is considered to be an art, so faculty handles the curricula in their own teaching learning style. Due to globalization and excessive impact of information and communication technology (ICT), it becomes vital for teachers of both the sectors to catch up with shifting paradigm of education (Keeley, 2007).

It is an admitted fact that we are now living in an era of fundamental economic and social shift from mass production towards customized and personalized products. The field of education has also to survive in this changing era by adopting newer philosophies of personalization in teaching learning domains. Contemporary educational institutions including HEIs (Higher Education Institutions) still adopt the philosophy of '*one size fits all*'. This approach had been working effectively and efficiently since long but now a days, single model approach is handicapped in achieving best student learning outcomes. This situation can be addressed by providing flexibility and greater choices to students in the curricula so that each student gives out his/ her best result. This argument leads towards personalization of higher education. The idea is simple; to enable the university faculty to correlate what is taught and how it is taught to the individual needs of every student sitting in the class room.

Personalized learning is based upon the concept that it is a highly structured and responsive approach towards learning of every individual. Personalized learning is about creating an ethos in which learners are able to participate, progress and achieve the learning outcomes at their own pace (DfES, 2006).

Personalized learning model is about fostering a collaborative learning partnership between teacher and the learners in which choice, flexibility and recognition of individual learning needs are fostered. Key components of personalized learning includes student involvement, smaller class size, more student- teacher interaction on one-on-one basis, easy access to technology and flexibility in curricula for catering to individual needs of students. One – to – one personalization is not a simple patch between traditional education system and modern trends in education but it is a newer path of enhancing and expanding learning of students regardless of their circumstances. To label personalized learning as conversion of traditional learning as its digitization is a wrong concept. Actually it starts from differentiated learning, moves towards individualized learning and ends up at personalized learning (Lambert and Lowry 2004; Keenoy, Levene and de Freitas 2007).

Differentiated learning is that type of learning in which instruction goes through the process of tailoring it to the learners' needs, goals and preferences. Differentiation is actually the awareness and response to students' varying learning styles. It involves variation in assessment methods, flexibility in instruction to give best learning experiences to the learners. This process can be exemplified as connecting the dots, i.e.; linkage between academic goals and students' diverse capabilities. Individualized learning is that teaching learning situation which is designed to meet individual needs and pace of every student. If differentiated learning takes into account "how" then individualized learning focuses upon "when" of the learning situation. The curriculum goals in individualized learning remain same for all students but they progress through their own pace. Such type of learning helps students cover material at their own pace, thus those students who have already covered some concepts do not wait for other to attain those objectives but move further in learning. The third concept, personalized learning; the independent variable of this study means that whole learning situation is tailored to the needs of learners. Personalized learning involves students in the creation of knowledge and this is the main objective of university level teaching. Instead of education being something that is happening for the student, it becomes a resultant of what a student does. Since it is considered that in personalized learning, one- to- one tutoring is the basic step so the teachers have started taking help of technology. Technology cannot be considered as the replacement of a teacher in the classroom but it serves as an aid to teaching in 21st century class rooms (O'Connor, T.O. 1999 and Basye 2014).

Basye, 2014 state that successful personalized learning is characterized by following factors:

- Access to technology is easy for both, teachers as well as the students. The technology is integrated as integral part of the whole curricula. Technology is also used in formative assessments thus enriching the assessment system.
- The concept of “teacher” expands as a “facilitator” who facilitates students rather than dispensing knowledge.
- Student involvement is manifested through engagement in real world activities, thus connecting theory with the practice.
- Two way collaboration, interaction and spontaneous feedback on part of teacher and students are the major structural factors on which personalized classroom are built.
- Class size is manageable for the teacher ranging from 15-20 students at higher level.

Personalized learning environment can be easily build up with the usage of technology tools through which students can collaborate, conduct research, communicate with other concerned people outside their institutions. In addition to this, technology also provides an ample opportunity for students to involve and get engaged with the curricula in newer and efficient ways. Internet makes it easier for the students to use various tools according to their research needs and interests. Similarly, educational websites offer a wide array of choice for students. It becomes the responsibility of the teacher who has to facilitate the students in making right choice and selection of technology tools (Meoller and Reitzes, 2011). It can be admitted that proper and guided usage of technology equips the students to organize their learning independently at their own pace. So, instead of being passive learners, they can become active users of knowledge with the added use of technology under the supervision of teacher.

Rationale

Transformation of Higher Education Sector has been a continuous focus in the history of education policies in Pakistan. National Education Policy (2009) emphasizes on transformed graduates who become well educated human resource in the form of flexible, articulate and competent potential employees. Policy provision also includes integration of technology in teaching learning process though this has been a slow

process at all levels of education in Pakistan. Technology serves as the strongest aid to personalized learning but certain barriers exist for its integration into curricula at all levels. Some of the most considerable barriers are organizational support, teacher educators' attitudes towards use of technology, and the technology itself. HEC has helped in overcoming these barriers through provision of on campus and off campus internet access and faculty development trainings frequently. But the most important point of consideration is integration of technology in curricula at university level in order to achieve the objectives of personalized learning.

Statement of the Problem

Personalized learning helps in achieving individual learning milestones of students at higher level. This study was designed to explore and compare teacher educators' attitudes towards personalized learning at higher level in public and private sector.

Objectives of the Study

1. To investigate teacher educators' attitudes towards five aspects of personalized learning at higher level in public sector as per Basye Model.
2. To assess teacher educators' attitudes towards five aspects of personalized learning at higher level in private sector as per Basye Model.
3. To compare teacher educators' attitudes towards personalized learning at higher level in public and private sector as per Basye Model.

Hypotheses

1. There is no significant difference between various aspects of personalized learning being practiced in classrooms at higher level in public and private sectors.
2. There is no significant difference between teacher educators' attitudes towards personalized learning at higher level in public and private sector universities.

Conceptual Framework

Personalized learning is taken as the outcome variable of this research study. Personalized learning can be defined as such an instruction that offer varied learning experiences tailored to meet individual learning needs

of students. Personalized learning is dependent on various factors that combine together to create a conducive environment for it. Basye, 2014 stated five aspects of personalized learning. These five aspects namely access to technology, teacher as a facilitator, student involvement, two way collaboration and feedback and manageable class size have been taken as determinant variables of the study.

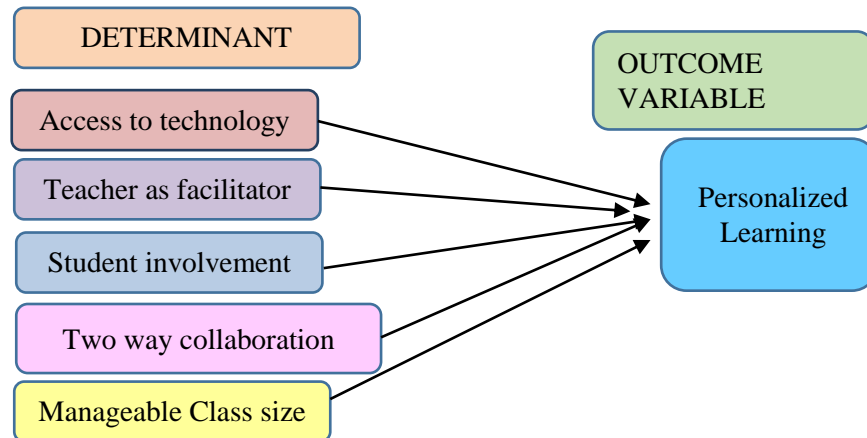


Fig 1: Conceptual Framework of the study

Research Design

Descriptive survey research methodology was used to assess and compare teachers' attitudes towards personalized learning in higher education institutions functioning in public and private sector.

Population and Sample

All teacher educators working in 7 public sector universities and 3 private sector universities of Islamabad region were taken as population of the study. Since the researcher had less time and resources so 2 universities from each sector were conveniently selected. Random sampling technique was used to select 100 teacher educators from both sectors as the research sample.

Instrument

A questionnaire having 26 items on 5 point Likert scale was constructed after exhaustive literature review in order to collect the required data. Its psychometric properties were developed by determining the validity and reliability. Face validity was taken from three experts of the field. Reliability analysis was taken through pilot testing (n=50) Cronbach's Alpha and split half reliability were used as statistical techniques Results of both are given below:

Table 1
Alpha Reliability Coefficient of Questionnaire

Subscales	Items	Alpha Coefficient
Access to technology	06	.90*
Teacher as facilitator	05	.86*
Student involvement	05	.89*
Two way collaboration & feedback	05	.85*
Manageable class size	05	.88*
Overall Reliability (Cronbach's Alpha)		.92*

* $p < 0.05$, ** $p < 0.01$

Table 1 indicates that overall reliability of the research instrument is .92, thus making it a highly reliable tool for data collection. Whereas highest internal consistency among the items of subscale "Access to technology" was .90 at $p < .05$ level.

Table 2
Split Half Reliability Analysis

Cronbach's Alpha	Part 1	Value	.881*
		N of Items	13
	Part 2	Value	.898*
		N of Items	13
		Total N of Items	26

* $p < 0.05$, ** $p < 0.01$

Table 2 shows the split half reliability of research questionnaire. First part constituted of 13 items and its reliability was .881 whereas second part had a reliability of .898 on 26 item statements. Result shows that two parts of the instrument are highly consistent with each other, thus making it highly reliable for collection of the required research data.

Analysis and Results

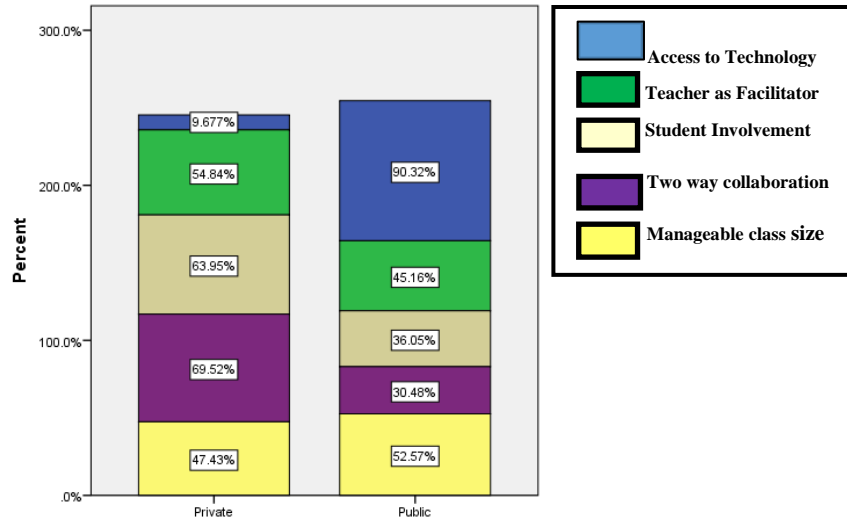


Fig 2: Teachers' Attitudes towards Personalized Learning in Public & Private Sector Universities

Figure 2 indicates that the five aspects of Personalized Learning being practiced in the classrooms of public and private sector universities show a contrasting difference. The graphs indicate that 90.32% teacher educators of public sector universities agreed to it that students have free internet access and also enjoy free on- campus and off- campus digital facility whereas 9.67% private sector university teachers agreed that their students have such facility on-campus and off- campus. 54.84% public sector teacher educators agreed that they served as facilitators and were empathetic listeners and active guides for their students. Whereas 45.16% private sector teacher educators agreed to this aspect of Personalized Learning. Perceived Student Involvement was manifested at 63.95% by private sector university teacher educators and at 36.05 among public sector university teacher educators. Two way collaboration, interaction and feedback was the fourth aspect of Personalized Learning explored among teachers of public and private sector universities. The results show that 69.52% private sector university teachers and 30.48% public sector teacher educators focused on collaboration, interaction and student feedback. Teachers of both sectors differed in their opinions about manageable class size. 47.43%

private sector university teachers agreed that manageable class size was an important aspect contributing towards Personalized Learning whereas 52.57% public sector teachers agreed that manageable class size has effective contribution towards Personalized Learning.

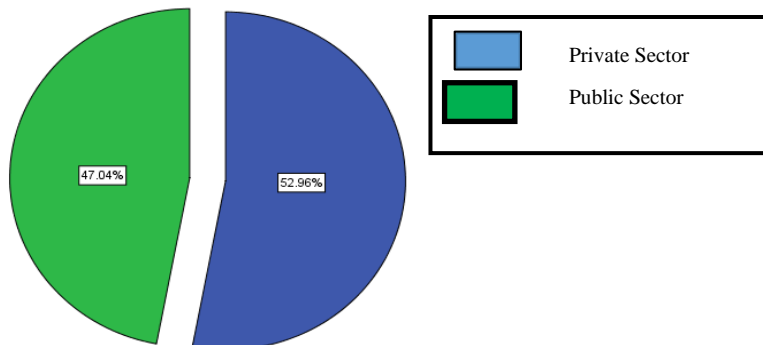


Fig 3: Manageable Class Size

Figure 3 illustrates that public sector university teacher educators were agreeing more (52.96%) towards the contribution of manageable class size in effective implementation of Personalized Learning as compared to private sector university teacher educators (47.04%). Teacher educators serving in public sector universities indicated that average class size was 15-25 students whereas private sector teacher educators responded that they have 10-15 students on average in a class. In this respect, a public sector teacher educator spends about 5-8 minutes per student in a class period whereas a private sector teacher educator spends 10-12 minutes per student in a class period. Teacher educators working in public sector universities were of a stronger view that manageable class size has a positive effect on student academic achievement as compared to private sector teacher educators.

Table 3
Comparison of Five Aspects of Personalized Learning being practiced by teacher educators in Public and Private Sector Universities (n= 100)

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2- <i>tailed</i>)	Mean Diff	Std. E. Diff	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	102.98	.000	13.204	198	.000	30.43	2.151	34.90	26.196
Equal variances not assumed			15.047	132	.000	30.43	2.146	34.98	26.121

Table 3 indicates that an Independent Samples t- test was conducted to test the null hypothesis that there is no significant difference between the five aspects of Personalized Learning being practiced by teacher educators of public and private sector universities. Results indicate that a difference is present between five aspects of Personalized Learning being practiced by teacher educators of both sectors. So the null hypothesis is not accepted as the t value is highly significant at .000. It is concluded that a significant difference prevails between the five aspects namely access to technology, teacher as a facilitator, student involvement, two way collaboration and manageable class size being practiced by teacher educators at higher level in public and private sector.

Table 4
Comparison of Teacher educators' Attitudes towards Personalized Learning in Public and Private Sector Universities

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	Mean Diff	Std. Error Diff	95% Confidence Interval of the	
								Lower	Upper
Equal variances assumed	113.18	.000	14.621	198	.000	28.542	3.253	26.873	26.149
Equal variances not assumed			16.031	132	.000	29.371	3.044	26.873	26.122

Table 4 indicates the result of Independent Samples t-test for testing the null hypothesis that there is no significant difference between teacher educators' attitudes towards Personalized Learning at higher level in public and private sector. The results indicate that this null hypothesis is not accepted as there is a significant difference between the mean values and t value is highly significant at .000. So it is concluded that a significant difference is present between teacher educators' awareness about personalized learning in both the sectors.

Discussion and Conclusions

The present study aimed at investigating and comparing teacher educators' attitude towards personalized learning at higher level. Following interesting conclusions were made on the basis of the findings of this research study:

1. It was concluded that the five aspects of Personalized Learning were being practised in both the sectors and teacher educators realized the importance of these aspects but effective implementation was missing, especially in public sector. Technology serves a basic and inevitable tool to pursue personalized learning in class rooms. Its access to public sector is efficient but the teachers do not fully incorporate it in the teaching learning process. On the other hand, private sector higher education institutions have less access to latest technology. Private sector teachers have less job security so they get the students involved in the classroom activities so that a better feedback about their efficiency reaches the higher ups. The process of student involvement leads to collaboration, interaction and feedback. As the public sector teachers have job security and job

satisfaction, so they do not bother much about student involvement and collaboration.

2. On the basis of findings of this research study, it was concluded that public sector university teacher educators have a strong view that if classes have a manageable size i.e.; lesser enrolment in each class then the teachers would be more capable in attaining the goals of personalized learning. Private sector university teachers do not realize this as strongly as their counterparts because they already have lesser enrolments in each class.
3. Finally, it was concluded that public sector teacher educators of HEIs had a stronger perception as compared to their counterparts that all five aspects of personalized learning experiences could be implemented successfully if class size is manageable between 15-20 students so that each student gets a personalized time from his/her facilitator.

First objective of the study was to investigate teacher educators' attitude towards five aspects of Personalized Learning as per Basye Model in public sector universities. Teacher educators working at higher level in public sector are aware of the importance of personalized learning as it is the demand of 21st century learners. The learners need to be taught on their own pace and interests. Public sector HEI teachers agree that student involvement in class room instruction supports personalized learning but teacher- student ratio has to be maintained in this regard. Similarly teachers serving in public sector universities have to realize that trust, collaboration and immediate feedback motivate students towards meaningful learning. In addition to this, digital technology needs to be incorporated properly in order to personalize learning and it has to be done with immediate effect as this sector has easy and excessive approach to latest technology because Higher Education Commission has played a very supportive role in this aspect.

Second objective of this study was to assess private sector teacher educators' attitude towards personalized learning at higher level according to Basye Model. Private sector teachers were aware that this learning aspect is present day demand of teaching learning situation. But the teacher educators serving in this sector have lesser access to technology so they take an excuse of not incorporating it in effective learning. Technology has to be incorporated properly in order to assist the transitions required for 21st century students. Students already use some technological devices for enjoyment purposes. If these devices are used in class room, it can aid in personalized learning (Rubenstein, 2010).

Third objective of this research compared teacher educators' attitudes towards personalized learning at higher level in public and private sector universities. Teacher educators of both sectors are using the aspects of personalized learning to some extent. But public sector teacher educators still need to act as a facilitator and guide and give spontaneous feedback to students in order to incorporate personalized learning successfully. If teachers of public sector start adopting collaborative techniques, the class rooms will become more interactive and conducive. Private sector teacher educators have to realize that technology serves as an effective tool for implementing personalized learning, so they may involve the management in providing them and their students this facility.

Bray, 2016 has emphasized that the formula of "one size fits all" is failing now due to increased learning demands of 21st century learners. Learners of today need guidance to become owners of their personal learning. The paradigm shift from teacher centred curricula towards student centred curricula indicates that students are co- designers of their curriculum and teachers are co- learners in this process.

Teacher educators serving in higher education institutions in Pakistan need to accept this shift in paradigm. Teacher educators need to design learners' profiles and strategies in such a way that encourages learners to drive and own their learning experiences. Management of higher education institutes also has to play a vital role in implementing strategies linked with personalized learning. Some easy steps to adopt by the management are:

- i. Provide assistance to teacher educators to co-design curriculum with their students.
- ii. Break down classes into manageable size so that learning is individualized. This individualization may lead towards personalization.
- iii. Coach teachers to incorporate technology as a helpful aid and facilitate accordingly.
- iv. Design post assessments to measure the success of personalized learning on experimental basis before finalized implementation of this strategy in order to avoid wastage of resources.

Some additional tips for the teacher educators serving in higher education institutions of both sectors are:

- i. Encourage students to bring out new ideas for co- designing the curricula.
- ii. Brain storm questions and explore possibilities through student involvement.
- iii. Motivate students to reflect upon their own learning.
- iv. Engage students in conferences and seminars. Let them plan and coordinate such activities by incorporating technology.

Recommendations

Based on findings and conclusions of this study, following recommendations are being made:

1. Teacher educators of both sectors are aware of various aspects of personalized learning, but proper implementation of these aspects is missing from the class rooms. Teacher – student ratio has to be maintained between 15-20 students per one teacher in the class room so that goals of personalized learning are achieved.
2. Teacher educators need to be trained in devising student learning outcomes based on personalized learning using technology and collaborative projects.
3. Public and private sector teacher educators serving in HEIs may be provided frequent training sessions to develop a personalized curricula having well defined objectives.

References

- Basye, D. (2014). Personalized learning. Retrieved from <http://www.iste.org/handlers/ProductAttachment.ashx?ProductID=3122&Type=Download>
- Bray, B (2016). Rethinking learning. Retrieved from <http://barbarabray.net/personalized-learning>
- Department of Education and Skills. (2006). 2020 Vision: report of the Teaching and Learning in 2020 Review Group. Nottingham, DfES Publications.
- Keeley, B. (2007). *Human Capital: How & What You Know to Shape your Life?* Paris: OECD.
- Keenoy, K., Levene, M., and de Freitas, S. (2007). *Personalized Trails: How machines can learn to adapt their behaviour to suit individual learners.* Sense Publishers
- Lambert, M.B., and Lowry, L.K (2004). *Knowing and being known: Personalization as a foundation for student learning.* Seattle: Small Schools Project
- Meoller, B., and Reitzes, T. (2011). *Integrating technology with student centred learning.* Quincy, MA: Nellie Mae Education Foundation. Retrieved from <https://www.nmefoundation.org>
- Government of Pakistan (2009). *National Education Policy.* Retrieved from <http://unesco.org.pk/education/teachereducation/files/National%20Education%20Policy>
- O'Connor, T.O. (1999). Using learning styles to adopt technology for higher education. Retrieved from www.isu.indstate.edu/ctl/styles

Rubenstein, G. (2010). Ten tips for personalized learning via technology.
Retrieved from
<http://www.edutopia.org/stw-differentiated-instruction-ten-key-lessons>