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Impact of Reflective Teaching Practices of University Teachers on Academic Achievement of Students

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Abstract: *This study aimed to examine the impact of reflective teaching practices of university teachers on the academic achievement of students. The research question was, do reflective teaching practices affect the academic achievement of students? The research study is quantitative, predictive non-experimental in nature, and data was collected by survey method. The sample of the study consisted of 330 students by using a simple random sampling technique. One questionnaire was used to collect data from students. A tool made validated and made reliable through pilot testing. The data was collected from the respondents. Afterwards, the data was analyzed by using SPSS (Statistical Package for Social Sciences) version 16. It can be concluded that the use of reflective teaching practices affects the academic achievement of students. Therefore, it can be recommended that university authorities may initiate such programs that involve the teaching faculty to learn more about reflective teaching practices.*

Key Words: Impact, Reflective Teaching Practices, Academic Achievement

Introduction

Reflection is the conscientious thinking, or trust, that one has after acknowledging a dilemma and plans to act on for the desired result (Schön, 1987). Reflection is a vital part of the development and growth of teachers to make them professionally motivated to make them to use new approaches to produce a conducive environment for the learning of student (Darling-Hammond et al., 2017; York-Barr et al., 2006). Reflection can be achieved in steps, but it is a cyclical process that requires you to revisit and revise your work. Though reflective thinking is a cyclical mechanism, it has a purpose and is prompted by a desire to learn more about something. Perhaps by effectively integrating reflection into one's practices and within the working environment, one can progress professionally. To have a common language for discussing and responding to reflective events.

In the world of teacher education, there are several factors to consider. Reflective teaching experience is one of the crucial methods. It helps teachers and students to improve decision-making, metacognition, and analytical thinking skills (Goodley, 2018).

Dewey (2001), one of the founders of reflective practices, described reflection as a complete systemic process of decision making for solving a given problem in 1916, while Cruickshank et al. (1995), and Jay and Johnson

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(2002), reflective teaching practices (RTP) often provide impending teachers with the power to address their academic problems, teaching methodologies, and subject material that was provided in the classroom (Rarieya, 2005). In the examination of pedagogy in Australia, Lingard et al. (2001) discovered that variations in pedagogy between teachers are greater than differences between schools, showing that the key point of intervention is in the classroom with the teacher. Several teacher-related causes boosted academic success. Fong-Yee and Normore (2013) mention cognitive abilities, content understanding, how to teach and learn knowledge, and prowess. And teaching behaviours of teachers in the classroom. Hanushek et al. (1998) opposed others concerns of teaching like the size of class and nature of subjects and content, students' social status, and home environment of students, teacher competence creates the most important difference in student academic performance. Newman (2000) has mentioned that teachers' ability, experience, and dispositions should be prioritized because teachers are human beings, so they are effective human resources to cultivate students' educational performance. It is very important that teachers should make efforts on their learning to enhance their competencies in teaching and eventually, it would make betterment for learning of the student.

Mathew et al. (2012) argue that the main purpose of RTP is the main cause of the creation of learning environments that are favourable and profound for the learning of students. In this way, reflective teaching provides opportunities for professional development and sophisticated practices of teachers.

McAlpine et al. (2004) mention that the primary goal of reflective teaching is to establish favourable and constructive conditions for the learning of students. In this regard, reflective teaching allows for professional development and new teaching practices among teachers. Yoon and Shapley (2007) discussed how reflective teaching helps teachers learn and how it impacts students' academic achievement. They explain that the success of professional learning is heavily influenced by how teachers apply their experience and expertise in the classroom. According to the findings of this study, it is how teachers apply their "content expertise and pedagogical skills" acquired during training programs results in students' achievement.

all emphasized the importance of RTP in improving student academic performance (Blazar, 2015; Akiba & Liang, 2016). Furtado and Anderson (2012), Saylor (2014) and Wright (2019) emphasized that these practices directly influence student academic achievement (Furtado & Anderson, 2012; Saylor, 2014; Wright, 2019). Though there are teachers who are stern and dramatic, good teachers wheedle and inspire. Reflective experience is becoming an integral part of teacher education systems worldwide and has been broadly developed as a key element of teacher professional development, among other factors influencing teacher development.

Research Questions

The research question of the study was:

Do reflective teaching practices affect the academic achievement of students?

Research Hypotheses

The research hypothesis of the study was:

$H_{0:}$ There is no impact of reflective teaching practices on students' academic achievement.

Research Methodology

Research Design

The research study is quantitative, predictive non-experimental in nature, and data were collected by survey method.

Population and Sample

The population of the study comprised students of the BS program selected for the current research. The sample of the study consisted of 330 students; five students were selected using criteria one high, three average, and one low

academic achiever. A total of 330 students were selected through this technique.

Research Tool

A questionnaire was used to collect data from students. The questionnaire was developed on a 4-point Likert scale, having options of Strongly Agree, Agree, Disagree, and Strongly Disagree.). A questionnaire having 22 statements was used to measure academic achievement. The demographic information was also obtained from students.

Validity of Instruments

The validity of the questionnaire was checked from the panel of experts from the Department of Education, The University of Haripur. The expert committee highlighted the errors from the questionnaire and gave valuable suggestions that were incorporated accordingly.

Reliability of Instruments

The reliability of the questionnaire was checked through pilot testing. The pilot testing allowed the researcher to make the tools reliable before administering the actual sample of the study to produce better results. The questionnaire was piloted on a non-sample of the study and 40 students. Afterward, the data were analyzed using SPSS. The Cronbach Alpha Reliability Coefficient (r) was used to check the reliability of tools. The reliability of the ' questionnaire and students' questionnaire were 0.845 and 0.799, respectively.

Data Collection

The questionnaires were used to collect the data from the respondents. The researcher visited different departments of the university to collect the data. The departmental approval was obtained before administering the tools. The data were collected from different departments of the university and then entered into Excel for further process. Ethical considerations will be adapted during data collection, storage, and ownership of data.

Data Analysis

The data were analyzed by using SPSS (Statistical Package for Social Sciences) version 16 by applying a percentage, mean, and standard deviation to describe the data, whereas regression was used to find the impact of the independent variable (use of reflective teaching practices) on dependent variables (student's academic engagement and student's academic achievement) for the analysis of data.

Statistical Tools used for Data Analysis

i. The frequency distribution analysis was used to measure the perception of students about the engagement in different tasks of the reflective practices of teachers during teaching to university students.

ii. The Linear regression analysis was used to measure the impact of the independent variable on the dependent variable of the study.

Table 1. Perception of Students Regarding the Behavioural Engagement in Different Tasks

		SDA	DA	A	SA	Total
S1	N	31	60	149	90	330
	%	9.40%	18.20%	45.20%	27.30%	100%
S2	N	8	59	174	89	330
	%	2.40%	17.90%	52.70%	27.00%	100%
S3	N	30	83	143	74	330
	%	9.10%	25.20%	43.30%	22.40%	100%
S4	N	44	42	148	96	330
	%	13.30%	12.70%	44.80%	29.10%	100%
S16	N	18	50	145	117	330
	%	4.50%	12.50%	43.93%	29.30%	100%

		SDA	DA	A	SA	Total
S17	N	0	0	123	207	330
	%	0.00%	0.00%	37.50%	62.50%	100%

Table 1 demonstrated the perception of students regarding their engagement in different tasks. The statement 1 (agrees, 52.40% and strongly agrees 32.40%) most of the students always follow the teachers' instructions and do all the assignments. The statement 2 (agree, 45.20% and strongly agree, 27.30%) most of the students always give my full attention to get the job done. The statement 3 (agree, 52.70% and strongly agree 27%), most of the students always practice in class activities. The statement 4 (agree, 43.30% and strongly agree, 22.40%) most of the students are able to learn and complete the work assigned. The statement 16 (agree, 37.50% and strongly agree 62.50%), most of the students always completed the task within the stipulated time by the teacher. The statement 17 (agree, 43.93% and strongly agree 29.30%), most of the students completed my work with the intention of obtaining good results. The agreement of students varies between (65.7% to 100%) regarding the engagement in different tasks of the reflective practices of teachers during teaching to university students.

Table 2. Perception of Students Regarding the Cognitive Engagement in different Tasks

		SDA	DA	A	SA	Total
S5	N	37	80	140	73	330
	%	11.20%	24.20%	42.40%	22.10%	100%
S6	N	29	72	170	59	330
	%	8.80%	21.80%	51.50%	17.90%	100%
S7	N	41	67	148	74	330
	%	12.40%	20.30%	44.80%	22.40%	100%
S8	N	10	18	107	195	330
	%	2.50%	4.50%	32.42%	48.80%	100%
S12	N	0	0	123	207	330
	%	0.00%	0.00%	37.50%	62.50%	100%
S21	N	41	67	148	74	330
	%	12.40%	20.30%	44.80%	22.40%	100%
S22	N	31	60	149	90	330
	%	9.40%	18.20%	45.20%	27.30%	100%

The statement 5 (agree, 44.80% and strongly agree 29.10%), most of the students if do not understand something in class the keep working until they find the answers. The statement 6 (agree, 42.40% and strongly agree, 22.10%) most of the students always cooperate with other students to complete the task assigned by the teachers. The statement 7 (agree, 51.50% and strongly agree 17.90%), most of the students, along with the other students, done their homework after university hours. The statement 8 (agree, 44.80% and strongly agree 22.40%) most of the students take immediate action when the task is assigned. The statement 12 (agree, 43.93% and strongly agree, 29.30%), most of the students like to ask questions in the class to gain the knowledge. The statement 21 (agree, 51.50% and strongly agree 17.90%) most of the student's study hard if their ability is recognized by teachers. The statement 22 (agree, 44.80% and strongly agree 22.40%) most of the students love to ask a question if I do not understand the teacher. The agreement of students varies between (66.5% to 100%) regarding the cognitive engagement in different tasks of the reflective practices of teachers during teaching to university students.

Table 3. Perception of Students Regarding the Emotional Engagement in different Tasks

		SDA	DA	A	SA	Total
S9	N	18	50	145	117	330
	%	4.50%	12.50%	43.93%	29.30%	100%
S10	N	0	0	123	207	330
	%	0.00%	0.00%	37.50%	62.50%	100%
S11	N	18	50	145	117	330
	%	4.50%	12.50%	43.93%	29.30%	100%
S18	N	44	42	148	96	330
	%	13.30%	12.70%	44.80%	29.10%	100%
S19	N	8	59	174	89	330
	%	2.40%	17.90%	52.70%	27.00%	100%
S20	N	29	72	170	59	330
	%	8.80%	21.80%	51.50%	17.90%	100%

The statement 9 (agree, 32.42% and strongly agree 48.80%), most of the students are not easily felt disappointed when difficulties occur in the early phase of their assignments. The statement 10 (agree, 43.93% and strongly agree 29.30%) most of the students are committed to completing tasks even no points are awarded. The statement 11 (agree, 37.50% and strongly agree 62.50%), most of the students work with high concentration. The statement 18 majority students 37.50% agree and strongly agree 62.50% that student studied with the aim to have more knowledge in all subjects. The statement 19 (agree, 44.80% and strongly agree 29.10%), most of the students can improve their performance in a course due to reflective teaching practices. The statement 20 (agree, 52.70% and strongly agree 27%) most of the students would be happy if I can finish the challenging task. The agreement of students varies between (69.4% to 100%) regarding the emotional engagement in different tasks of the reflective practices of teachers during teaching to university students.

Table 4. Perception of Students Regarding the Behavioural Disengagement in Different Tasks

		SDA	DA	A	SA	Total
S13	N	10	18	107	195	330
	%	2.50%	4.50%	32.42%	48.80%	100%
S14	N	18	50	145	117	330
	%	4.50%	12.50%	43.93%	29.30%	100%
S15	N	0	0	123	207	330
	%	0.00%	0.00%	37.50%	62.50%	100%

The statement 13 (agree, 37.50% and strongly agree 62.50%) most of the students like to do task where even students are not allowed to choose the topic. The statement 14 (agree, 32.42% and strongly agree 48.80%) most of the students like to learn new things and involve in meaningful learning even without the teacher. The statement 15 (agree, 43.93% and strongly agree 29.30%) most of the students usually try to avoid the difficult work. The agreement of students varies between (73.23% to 100%) regarding the behavioural disengagement in different tasks of the reflective practices of teachers during teaching to university students.

Table 5. Model Summary of Regression Analysis of Strength of Relationship between Model and Dependent Variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.964[a]	0.929	0.928	0.09999

a. Predictors:(Constant),RTP

In the model summary table, the factor reflective teaching practices that influence the dependent variable indicated as predictors, which was students' academic achievement in terms of their respective CGPA. The reflective teaching practices as predictors evaluated between model and dependent variable CGPA. The R equation was 0.964(96.4%) value indicating a strong relationship between the observed model and predicted values of the dependent variable. Therefore, this model summary of regression was successful in explaining approximately 92.9% variance with adjusted R^2 92.8% of independent variables.

Table 6. Reflective teaching practices ANOVA Summary Table (Regression Model)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.364	1	8.364	836.588	0.000[b]
	Residual	0.640	64	0.010		
	Total	9.004	65			

a. Dependent Variable: Academic Achievement of the BS University Students
b. Predictors: (Constant), Reflective Teaching Practices (RTP)

The independent variable of the ANOVA table reflective teaching practices was regressed on (8.364) the dependent variable; academic achievement of the students using Linear Regression Model for the acceptability of the model from a statistical perspective. An F (836.588) test was used to determine the significance of the overall model. The table presented the analysis of variance summary table. The F for this model based on the dependent variable academic achievement of the students was calculated and to be found statistically significant as shown by the p-value (0.000) which is less than significant level (0.05) ($p = 0.000 < (0.05)$).

Table 7. Coefficient Multiple Regression Results of Reflective Teaching Practices on Academic Achievement

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std Error	Beta		
1	(Constant)	-3.789	0.233		-16.230	0.000
	RTP	0.099	0.003	0.964	28.924	0.000

a. Dependent Variable: Academic Achievement of the BS University Students

The linear regressions reported in Table 3, the predictors Reflective Teaching Practices as independent variables found to be significant. According to standardized estimates (beta weight), one unit increased of Reflective teaching practices ($\beta = 0.964$) which made a positive impact on the dependent variable Academic Achievement of the BS University Students, as indicated by t-value (28.924) with the p-value (0.000) which is less than significant level (0.05) ($p = 0.000 < (0.05)$ and found statistically significant.

Discussion

The perceptions of students regarding the engagement in different tasks were also measured. The results depicted that most of the

students were found engaged in different tasks given by their respective teachers. The results were found consistent with Zeichner and Liston (2015) and Goodley (2018) who also stated that most of the male as well as female students were engaged in academic activities given by the teachers. The different kinds of academic activities were reflected during the research.

The present study explored reflective teaching practices used by the teachers in university. The study found that reflected teachers use different strategies during lectures to improve students' academic achievement. The current research found consistent with research conducted by Mathew et al. (2017) and Goodley (2018) found the same results about teachers' usage of reflective teaching practices during the teaching and learning process. The student's academic achievement was also measured in this research. The RTP has positively affected students' engagement and academic achievement. Hayam-Jonas (2016) and Akbari et al. (2008) reported the same results in their studies. Butke (2006), Erkens (2008), Nilsson et al. (2017), Van Manen (1977), and Zeichner Liston (1996) found that reflective teaching practices have positively impacted students' academic achievement however these results are not consisted of with research.

Conclusion

Based on the findings of the study, the following conclusions made that are given below:

It may be concluded that most of the instructors use reflective teaching practices for improvement in their teaching practices as well as in the grades of students. Moreover, teachers have attended conferences frequently for professionalism and teaching practices due to the availability of different opportunities.

It may be concluded that reflective teaching practice has a positive impact on a students' academic achievement. This practice involves the students completing the given tasks. Teaching strategies like reflective teaching practices used by the teachers has a positive impact on student's academic achievement

Recommendations

On the basis of the conclusion, succeeding recommendations made to the stakeholders.

It has been recommended that the teaching practice like reflective teaching practices should be more used by the teachers that can positively impact in completing different tasks and on academic achievement. More research-based practices should be dug out that improve students' performance

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