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RESEARCH PAPER

Effect of Self Directed Professional Development on Instructional Practices of Secondary School Teachers

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ABSTRACT

The core purpose of present study was to evaluate the effect of self-directed professional development of teachers on their instructional practices. Objectives of the current study were; to explore the components of self -directed teacher professional development, to identify the instructional practices of the secondary school teachers, and to find out the effect of self-directed professional development on instructional practices. The study was descriptive in nature. Stratified random sampling technique was used to select 400 participants. Five point likert scale questionnaire was used to collect the data. Descriptive Statistics were used to explore the components of self-directed professional development and instructional practices, whereas Regression analysis was used to find out the effect of self-directed teacher professional development on instructional practices of teachers. It was found that self-directed professional development has strong effect on instructional practices. It was recommended that teachers may adopt modern self-directed professional development practices to enhance the instructional standards.

Keywords: Instructional Practices, Professional Development, Self-Directed

Introduction

Teacher-learning habits in the classroom can be improved by increasing their knowledge and skills in school-based skills development. Therefore, teachers must constantly enhance their knowledge and skills to succeed in all their endeavors. Professional development of teachers is necessary to constantly consider the changes taking place in the society. Another way for teachers to hone their skills is through self-directed self-discipline.

The development of self-directional methods in the learning process utilizes the principles of adult learning incorporated into the educational goals of the characters. Teachers can be developed through activities that are useful to them. Through the development of self-directed techniques, school teachers are able to plan, operate, evaluate and implement tasks that enrich themselves: knowledge, skills and attitudes. School teachers should inform their school administrators about accreditation for their professional development works. Here, the role of the teacher is considered in informing the success of their practice through the development of self-directed technology. The evidence-based neuroscience framework, known as the Universal Designing for Learning (CAST), supports teachers by applying a curriculum to contribute to the development of a targeted approach to training and a learning approach. A comprehensive approach was used to assess the effectiveness of the interventions. Positive results have been noted and a series focusing on technological development concludes that self-regulation supports teacher self-esteem and leads to improvements (Louws, Meirink, & van Driel, 2017).

Literature Review

The fact is that most people do not invest in their careers. One-third said teachers do nothing to improve their skills or equip them. These teachers do not worry much about their future careers. Many people may even be good at their jobs, but they are satisfied that they are worried or anxious about their professional future. This means taking advantage of technological advances, developing your education and planning your career, you already have the feet of your third partner when you take it and own your work; you will succeed (Lopes & Cunha, 2017).

Professional Development

Professional development means acquiring or maintaining professional qualifications such as professional formal studies, conferences and informal study opportunities, described as comprehensive and interactive, including testing phases. It includes various technological advances; Counseling, training, practice community, case study, mentoring, demonstration guidance and technical support. Teachers can be developed through activities that are useful to them. Through the development of self-directed techniques, school teachers are able to plan, operate, evaluate and implement tasks that enrich themselves: knowledge, skills and attitudes. Teachers use teaching methods to help students become more independent and creative, maintaining and improving professional skills, improving career advancement, adapting to new technologies and practices, or adapting to legal regulatory requirements can contribute to the development of professional skills. Many U.S. School teachers in countries need professional development. For instance, Arkansas instructors are needed to finish 60 hours of composed specialized advancement exercises every year. Credits for proficient improvement are given various names on a state premise (Koukis & Jimoyiannis, 2019).

Teachers Professional Development

Through the development of self-directed techniques, school teachers are able to plan, operate, evaluate and implement tasks that enrich themselves: knowledge, skills and attitudes. School teachers should inform their school administrators about accreditation for their professional development works. The strength of constructive assessment lies in the important information about the understanding of students during the learning process and the opportunity to give students timely and actionable feedback and change their own behavior so that every student has the opportunity to learn. Teachers who practice teaching methods have the ability to make meaningful relationships between learned concepts in the classroom and in real life situations that can suitable for level of the development (Avalos, 2016).

Professional development should start with the training of the role of teachers and continue to engage in the teaching profession. Professional development is a continuous educational process involving teaching and support activities. Technological progress can strike a balance between school needs, personal needs and national needs, and promote the development of knowledge, skills and values. Repeated definitions of professional development concepts indicate vague ambiguities around you, which can lead to interpretations and abnormal interpretations of the facts and figures (Cosgun & Savaş, 2019).

Educational reform and teachers' professional development

Teachers who practice teaching methods have the ability to make meaningful relationships between learned concepts in the classroom and in real life situations. Students are given the opportunity to demonstrate their knowledge and positive lessons when needed. When a teacher starts a new learning or project unit with students, it clarifies the purpose and goals of the learning and provides a clear process of how students succeed (Lieberman & Mace, 2018).

With the exception of the designators involved in the process, a comprehensive approach to system improvement has been guided by policy makers. Therefore, all the designations involved in this process and the key factors influencing the successful implementation of changes in the education system will be discussed among the participating parties. The inclusion of transition actors as transition actors is essential to successfully and effectively transform the establishment, implementation, and implementation of change goals. This is especially true in the context of change affecting teachers and their professional development (Kennedy, 2016).

Models of Professional Development of Teachers

Dale's extent of mechanical improvement is altogether different from standard specialized instructional meetings. TPD Types can be arranged into three general classifications with their own qualities and shortcomings. These sorts of TPDs can be utilized in exceptionally restricted assets. ICT can uphold everything - utilizing radio or TV to communicate those exercises, giving video accounts to instructors and study halls, or growing the neighborhood local area through email and the Internet

Standardized Teacher professional development Model

Standardized TPD is an integrated approach, which includes workshops, training sessions and in many cases the cascade model for limited delivery. There are various ways of teaching that can be used effectively in all levels and disciplines with teaching styles. Teachers who practice teaching methods have the ability to make meaningful relationships between learned concepts in the classroom and in real life situations. Students are given the opportunity to demonstrate their knowledge and positive lessons when needed. When recruited according to the best practices discussed in this guide, proven methods are effective;

- Ideas open up new ideas, new ways of working and new collaborators of teachers
- Disseminate information and teaching methods to teachers across the country or region
- Action clearly demonstrates national or vendor or project commitment to a specific action (Darling-Hammond, Hyler & Gardner, 2017).

Site-Based Teacher Professional Development

Instructor Development (TPD) improvement frequently happens in schools, asset focuses or educator trade schools. Instructors work with nearby facilitators or expert educators to take part in lethargic mastering programs and create showing abilities, gadgets and specialized abilities. Site-based TPD Often focuses on specific issues in which teachers try to apply new methods. Site based TPD Successful examples of are Guinea's FQL project, which includes short recorded versions or "TP by step", broadcasting educational radio with local TPD face field observers. District inspectors work in schools with pass teachers (Gupta & Lee, 2020).

Self-Directed Teacher Professional Development

In Self-directed TPD instructors are approached to define their own objectives for innovative headway and select exercises that will help accomplish these objectives. Your self-coordinated TPD Video instances of classes may incorporate watching classes, perusing books about training or spaces of study, understanding magazines, contextual analyses, courses online courses or classes instructed by accomplices. Teachers can be developed through activities that are useful to them. Through the development of self-directed techniques, school teachers are able to plan, operate, evaluate and implement tasks that enrich themselves: knowledge, skills and attitudes. School teachers should inform their

school administrators about accreditation for their professional development works. Teacher-learning habits can be improved by increasing their knowledge and skills to make school-based development a success. Teachers use teaching methods to help students become more independent and creative (Schrum, Kortecamp, & Steeves, 2016).

Self-directed activities work best for self-motivated teachers who are just getting started and are already developing teaching and management skills. Teachers who practice teaching methods have the ability to make meaningful relationships between learned concepts in the classroom and in real life situations. This is the best opportunity for teachers to make an assessment formal (visual) assessment of how students can effectively discover new topics and new ideas. Discussions in open classrooms indicate the level of encouragement schools receive in their classrooms, general topics, structure, and ideas about those discussions (Baron, Sklarwitz & Blanco, 2020).

Instructional Practices

Teaching habits are the way students achieve learning outcomes. When designing a course or lesson you start by determining the outcomes of teaching. There are various ways of teaching that can be used effectively in all levels and disciplines with teaching styles. Teachers who practice teaching methods have the ability to make meaningful relationships between learned concepts in the classroom and in real life situations. Students are given the opportunity to demonstrate their knowledge and positive lessons when needed. Professors also benefit from the use of teaching strategies as it is good to monitor and evaluate student performance through various assessment methods (Siedentop, Hastie & Van, 2019).

The following are some of the teaching methods that are secondary teaching methods;

Teacher Clarity

Teacher clarity is a powerful tool for reducing learning and focusing on tasks, cutting out elements that do not help in teaching. Also, teacher clarity reinforces the gradual release of teacher teaching responsibilities to students so that students feel ownership of their work. When a teacher starts a new learning or project unit with students, it clarifies the purpose and goals of the learning and provides a clear process of how students succeed. It is also a good idea to present the model or models to the readers so that they can see what the final product will look like (Donavant, 2015).

Classroom Discussion

Teachers often need to step off the stage and facilitate a full class discussion. It allows students to learn from each other. This is the best opportunity for teachers to make an assessment formal (visual) assessment of how students can effectively discover new topics and new ideas. The objectives of the open class discussion are to capture the theme of the learning environment that is supposed to contribute to the formation of democratic principles. Discussions in open classrooms indicate the level of encouragement schools receive in their classrooms, general topics, structure, ideas about those discussions, and whether students receive teacher guidance on controversial topics. Therefore, it measures how well students can discuss political and social issues in their school (Hu, 2014).

Feedback

Follow effective feedback instructions. When a student does not show at least a partial understanding of the concept or process at work, feedback is rarely effective and problems with subsequent suggestions are best resolved. Hattie &Timperley said;

- Choose and follow the learning order (practice) and combine opportunities to gather information about the practice (assessment).

- Deliberate timed tests in observation areas (i.e., key points during the study, in which teachers and students determine who is studying and whether additional instructions are needed for further study).
- Provide opportunities for feedback from teachers, co-workers and yourself (by self-assessment)
- Learning encourages peaks to use feedback to create more learning and improvement phases (Paris & Winograd, 2017).

Formative Assessments

In order for students to respond effectively and accurately, teachers need to assess frequently and regularly where students are in relation to the learning objectives of the study or the unit of final product (summary evaluation). Hattie recommends that teachers spend as much time on the same constructive assessment as they do on positive evaluation. The strength of constructive assessment lies in the important information about the understanding of students during the learning process and the opportunity to give students timely and actionable feedback and change their own behavior so that every student has the opportunity to learn and re-learning may be a key practice for the students (Guiffrida, 2015).

Material and Methods

This study was descriptive in nature and cross-sectional survey method was used to collect the data. Following route was adopted to carry out the present research.

Population

All 991 (513 male and 478 female) secondary school teachers of district kotli were the population of the study

Table 1
Population of the study

No	Male	Female	Total
01	513	478	991

(DEO OFFICE KOTLI, 2021)

Sample

Stratified disproportionate random sampling technique was used to select the sample. The researcher selected 400 (200 male and 200 female) Secondary schools teachers as a sample of the study

Table 2
Sample of the study

No	Male	Female	Total
01	200	200	400

Research Instrumentation

A researcher constructed five point Likert scale questionnaire was used to collect the data

Validity of the instrument

The instrument was validated by three experts of the Department of Education university of Kotli Azad Jammu and Kashmir

Pilot testing

For pilot testing the questionnaire was distributed among 30 SSTs which were not the pert of the part of final survey.

Reliability of the instrument

The reliability of the instrument was checked by using Cronbach's Alpha statistical technique. The reliability of the instrument was 0.81, which was acceptable for the further procedure of the research.

Data Collection

Data was collected through e-mail and Whatsapp; first researcher got consent from the respondents and then sent the questionnaires.

Data Analysis

The data was analyzed using the 20th version of the Statistical Package for Social Sciences (SPSS). Descriptive statistics were used to explore the perception of secondary school teachers regarding self-directed professional development and instructional practices, whereas regression analysis was used to find out the effect of self-directed teacher professional development on instructional practices of the secondary school teachers.

Analysis and Interpretations of the Data

This section deals the analysis and interpretation of the collected data. Data is represented in 14 tables given below.

Table 3
Components of self-directed teacher professional Development

Component	N	Minimum	Maximum	Mean	Std. Deviation
Teaching skills	400	7	24	17.46	2.939
Pedagogical Skills	400	5	24	15.39	3.280
Professional skills	400	6	24	14.26	2.960

Descriptive statistics were used to explore the components of self-directed teacher professional development. Table 3 shows that the scores of the teaching skills were; N= 400, M= 17.46, SD= 2.939, the scores of the pedagogical skills were; N= 400, M= 15.39, SD= 3.280, the scores of the professional skills were; N= 400, M= 14.26, SD= 2.960

Table 4
Instructional practices of professional teachers

Instructional practices	N	M	SD
Exploration of topic	400	3.94	1.233
Classroom Discussion	400	3.89	1.150
Formative Assessment	400	2.78	1.406
Feedback	400	2.52	1.295
Home work	400	2.40	1.164

Descriptive statistics were used to explore the instructional practices of professionally developed teachers. Table 4 shows that the scores of "Exploration of Topic" were; N= 400, M= 3.94, SD= 1.233, the scores of "Classroom discussion" were; N= 400, M= 3.89, SD= 1.150 the scores of "Formative Assessment " were; N= 400, M= 2.78, SD= 1.406 the scores of "Feedback " were; N= 400, M= 2.52, SD= 1.295 the scores of "Home work " were; N= 400, M= 2.40, SD= 1.164.

Table 5

Model summary of teaching skills and instructional practices

Model	R	R Square	Adjusted R Square	Std. Error
1	.931	.866	.866	1.064

a. Predictors: (Constant), Teaching skills

Table 5 shows the model summary of regression analysis of teaching skills and instructional practices. According to model summary the correlation R is.931 and R- Square is .866.This table revealed that there was a positive relationship between teaching skills and instructional practices

Table 6
ANOVA summary of teaching skills and instructional practices

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2921.245	1	2921.245	2.5783	.000
	Residual	450.915	398	1.133		
	Total	3372.160	399			

a. Predictors: (Constant), Teaching skills
b. Dependent Variable: Instructional Practices

Table 6 shows the ANOVA Summary teaching skills and instructional practices. This table revealed that the regression equation is significant F (1,398) =2.5783, p=.000< .05 Hence, teaching skills has positive effect on instructional practices.

Table 7
Coefficient Summary of teaching skills and instructional practices

Model		Un- Stand. Coefficients		Stand. Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.070	.321	.931	3.333	.000
	Teaching skills	.921	.018		50.778	.000

a. Dependent Variable: Instructional Practices

Table 7 shows the coefficient summary of teaching skills and instructional practices. This table showed the values of coefficients of teaching skills and instructional practices was .931, its t value is 50.778 which was significant at the .05 level as p=.000.It means that teaching skills effects significantly on instructional practices

Table 8
Model summary of Pedagogical skills and instructional practices

Model	R	R Square	Adjusted R Square	Std. Error
1	.815	.664	.663	1.687

a. Predictors: (Constant), Pedagogical skills

Table 8 shows the model summary of regression analysis of pedagogical skills and instructional practices. According to model summary the correlation R is.9815 and R-Square is .664.This table revealed that there was a positive relationship between pedagogical skills and instructional practices.

Table 9
ANOVA summary of Pedagogical skills and instructional practices

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2240.120	1	2240.120	787.576	.000
	Residual	1132.040	398	2.844		
	Total	3372.160	399			

a. Predictors: (Constant), Pedagogical skills
b. Dependent Variable: Instructional Practices

Table 9 shows the ANOVA Summary pedagogical skills and instructional practices. This table revealed that the regression equation is significant F (1,398) =787.576, p=.000< .05 Hence, pedagogical skills has positive effect on instructional practices

Table 10
Coefficient Summary of pedagogical skills and instructional practices

	Model	Un- Stand. Coefficients		Stand. Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.578	.455	.815	10.052	.000
	Pedagogical skills	.722	.026		28.064	.000

a. Dependent Variable: Instructional Practices

Table 10 shows the coefficient summary of pedagogical skills and instructional practices. This table showed the values of coefficients of pedagogical skills and instructional practices was .931, its t value is 28.064 which was significant at the .05 level as p=.000.It means that pedagogical skills effects significantly on instructional practices

Table 11
Model summary of professional skills and instructional practices

Model	R	R Square	Adjusted R Square	Std. Error
1	.900	.810	.809	1.270

a. Predictors: (Constant), professional skills

Table 11 shows the model summary of regression analysis of professional skills and instructional practices. According to model summary the correlation R is.900 and R- Square is .810.This table revealed that there was a positive relationship between professional skills and instructional practices

Table 12
ANOVA summary of professional skills and instructional practices

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2730.352	1	2730.252	6.6933	.000
	Residual	641.808	398	1.613		
	Total	3372.160	399			

a. Predictors: (Constant), Professional skills
b. Dependent Variable: Instructional Practices

Table 12 shows the ANOVA Summary professional skills and instructional practices. This table revealed that the regression equation is significant F (1,398) =6.3933, p=.000< .05 Hence, professional skills has positive effect on instructional practices

Table 13
Coefficient Summary of professional skills and instructional practices

Model		Un- Stand. Coefficients		Stand. Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.883	.376	.900	5.006	.000
	Professional skills	.884	.021		41.148	.000

a. Dependent Variable: Instructional Practices

Table 13 shows the coefficient summary of professional skills and instructional practices. This table showed the values of coefficients of professional skills and instructional practices was .900, its t value is 41.148 which was significant at the .05 level as p=.000.It means that professional skills effects significantly on instructional practices.

Table 14
Model summary of professional skills and instructional practices

Model	R	R Square	Adjusted R Square	Std. Error
1	.925	.855	.797	1.128

a. Predictors: (Constant), Self-Directed Teacher PD

Table 14 shows the model summary of regression analysis of self-directed teacher professional development and instructional practices. According to model summary the correlation R is.925 and R- Square is .855.This table revealed that there was a positive relationship between self-directed teacher professional development and instructional practices

Table 15
ANOVA summary of self-directed teacher professional development and instructional practices

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2925.215	1	973.824	855.659	.000
	Residual	450.687	398	1.136		
	Total	3372.160	399			

a. Predictors: (Constant), Self-Directed Teacher Professional Development
b. Dependent Variable: Instructional Practices

Table 15 shows the ANOVA Summary of self-directed teacher professional development and instructional practices. This table revealed that the regression equation is significant F (1,398) =855.659, p=.000< .05 Hence, self-directed teacher professional development has positive effect on instructional practices

Table 16
Coefficient Summary of self-directed teacher professional development and instructional practices

Model		Un- Stand. Coefficients		Stand. Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.076	.322	.932	3.340	.000
	SDTPD	.947	.080		11.872	.000

a. Dependent Variable: Instructional Practices

Table 16 shows the coefficient summary of self-directed teacher professional development and instructional practices. This table showed the values of self-directed teacher professional development and instructional practices was.932, its t value is 11.8572

which was significant at the .05 level as p=.000.It means that self-directed teacher professional development effects significantly on instructional practices.

Findings

It was found that;

1. The scores of the teaching skills were; N= 400, M= 17.46, SD= 2.939, the scores of the pedagogical skills were; N= 400, M= 15.39, SD= 3.280, the scores of the professional skills were; N= 400, M= 14.26, SD= 2.960 (Table 3).

2. The scores of "Exploration of Topic" were; N= 400, M= 3.94, SD= 1.233, the scores of "Classroom discussion" were; N= 400, M= 3.89, SD= 1.150 the scores of "Formative Assessment " were; N= 400, M= 2.78, SD= 1.406 the scores of "Feedback " were; N= 400, M= 2.52, SD= 1.295 the scores of "Home work " were; N= 400, M= 2.40, SD= 1.164 (Table 4).

3. There was a positive relationship between teaching skills and instructional practices. The scores of R is.931 and R- Square is .866 (Table 5)

4. Teaching skills has positive effect on instructional practices. The scores were; F (1,398) =2.5783, p=.000< .05 (Table 6).

5. Teaching skills effects significantly on instructional practices. The scores were; 931, its t value is 50.778 which was significant at the .05 level as p=.000 (Table 7).

6. There was a positive relationship between pedagogical skills and instructional practices. The scores were; R is.9815 and R- Square is .664 (Table 8)

7. Pedagogical skills have positive effect on instructional practices. The scores were; F (1,398) =787.576, p=.000< .05 (Table 9)

8. Pedagogical skills effects significantly on instructional practices. The scores were; .931, its t value is 28.064 which was significant at the .05 level as p=.000 (Table 10)

9. There was a positive relationship between professional skills and instructional practices; the scores were; R is.900 and R- Square is .810 (Table 11).

10. Professional skills have positive effect on instructional practices. The scores were; F (1,398) =6.3933, p=.000< .05 (Table 12).

11. Professional skills effects significantly on instructional practices. The scores were; .900, its t value is 41.148 which was significant at the .05 level as p=.000 (table 13)

12. Self-directed teacher professional development and instructional practices. The scores were; R is.925 and R- Square is .855 (Table 14).

13. Self-directed teacher professional development has positive effect on instructional practices. The scores were; F (1,398) =855.659, p=.000< .05 (Table 15).

14. Self-directed teacher professional development effects significantly on instructional practices. The scores were; 932, its t value is 11.8572 which was significant at the .05 level as p=.000 (Table 14).

In Azad Kashmir various models of professional development of teachers are in use. The main purpose of the current study was to evaluate the effect of self-directed teacher professional development on instructional practices of the teachers at secondary level. The results of the study showed that the self-directed teacher professional development has significant effect on instructional practices of the teachers at secondary level. The results of

the study were very much similar with the results of the study conducted by Heather L. Brennan Smith under the supervision of Johns Hopkins University in July 2016.

A research conducted by Tswakae sebotsa and Jeanne kriek in December 2019 in university of South Africa. The result of the study showed that the professional development of the teachers enables them to work handsomely in their schools.

Conclusions

1. It is concluded that teaching skills, pedagogical skills and professional skills are the key components of the self-directed teacher professional development.

2. It is concluded that exploration of the topic, classroom discussion, formative assessment, feedback and homework are the instructional practices being practiced in the secondary schools of the Azad Jammu and Kashmir

3. It is concluded that self-directed teacher professional development has significant effect on instructional practices of the secondary school teachers.

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