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DEVELOPMENT OF TEACHING LEARNING MATERIALS DURING TEACHER EDUCATION PROGRAMMEBY PRE SERVICE TEACHERS IN CONTEXT TO NEP 2020

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ABSTRACT :

The study investigated the Development of Teaching Learning Materials by Pre Service Teachers during Teacher Education Programme. The study adopted survey research design. The sample consisted of 100 teacher trainees drawn from teacher education institutions. Data used for the study was collected through a questionnaire consisting of 20 numbers of items. Findings drawn from the study revealed that as per the guidance of the teacher educators accordingly the teacher trainees designing the instructional material. Also, finding shows the extent of effort put on for developing different type of Instructional Materials for pedagogical purpose. It is found that majority of the teacher trainees engage themselves skillfully for preparation of Instructional Materials. As recommended by NEP 2020 School Education the teachertrainees acquire different types of skills for effective use in school teaching-learning situation.

Keywords:*Teaching Learning materials, Development, Skill.*

I. Introduction:

Educational resources are used to improve students' knowledge, abilities, and skills, to assess their amount of information acquired, in order to help for their overall development. Such resources need to be selected as per the requirement for use in teaching learning process. After selection of resources it needs to be designed for instructional purpose. Instructional design aims for systematic planning. The process of designing begins with selection of essential inputs for quality output paving the way for further development. The inputs refer to raw materials: type, quality, quantity; Processing stage involves application of designed instructional material in different ways and classrooms conditions. Finally the output results in qualities of teaching and learning.

Following benefits are ensured such as focused learning programmes; increase inlearners' participation; measurable training objectives; and consistent approach to learning experiences and training content.

In this context, David Merrill's Principles of Instruction needs mentioning which is a problem-centred strategy for instructional design. For effective learning experiences five principles of learningare integrated:

1. **Task-centred principle** refers to how learning starts with real-world tasks or problems that learners can relate.
2. **Activation principle** implies activating the learner's existing knowledgethereby help them to connect new information to existing skills.
3. **Demonstration principle** includes training courses that will deliver information in various formats so that they leverage different regions of the brain. In doing so, .retention of knowledge gets increased.
4. **Application principle** indicates that learners must apply new knowledge on their own and learn from their mistakes to ensure effective knowledge retention.
5. **Integration principle** highlights how discussion, reflection and presentation of new knowledge helps to integrate it into the real world.

Fadeiye (2005) saw instructional materials as visual and audio-visual aids, concrete or non-concrete, used by teachers to improve the quality of teaching and learning activities. Agina-Obu (2005) submitted that instructional materials of all kinds appeal to the sense organs during teaching and learning. Isola (2010) also described instructional materials as objects or devices that assist the teachers to present their lessons logically and sequentially to the learners.

II. Significance of the Study:

Instructional materials are resources that organize and support instruction, such as textbooks, tasks, and supplementary resources (adapted from Remillard& Heck, 2014). Instructional facilities are used to ease, encourage,

improve and promote teaching and learning activities. Instructional materials **are subject-specific and contain information within itself out of**resource books, worksheets, graphs, etc. Fuller (1986) suggested that the quality of instructional processes experienced by a learner determines quality of education. Effective implementation of instructional materials definitely promotes development in teaching as well as learning process. Under NEP-2020, class-wise TLM is to be created in each school with the aim of project and concept based, joyful learning and critical thinking for making the classroom environment enjoyable. NEP 2020 emphasises the continuous professional development of teachers to meet the needs of enriched teaching-learning processes for quality education. National Digital Education Architecture (NDEAR) is to facilitate achieving the goals laid down by NEP 2020, through a digital infrastructure for innovations in the education. The present study attempts to explore the involvement of pre service teachers in designing and developing different types of instructional materials during the Teacher Education Programme.

III. Objective of the Study:

The main objective has been

1. To explore the ability to develop instructional materials among the pre-service teachers.
2. To ascertain the extent of development capacity of instructional materials by the pre-service teachers.

IV. Methodology:

The study is a survey type and approach is qualitative in nature.Purposive sampling was used by the researchers to gather data. The study is based on data collected from two numbers of Teacher Education Institutions from drawn from Alipurduar district of West Bengal.

Sample:

The sample consisted of 100 pre service teachers from these two Teacher Education Institutions.

Tools:

Data for the present study collected through a questionnaire consisting of 20 items of multiple choice type. Design and development are the two areas chosen for construction of item shown in table 1.

Table 1 Distribution of items in Questionnaire.

Areas	Item No.	No. of Items
Designing	3, 4, 5, 6, 7, 8,9, 15, 16	9
Development	1,2, 10, 11, 12, 13, 14, 17, 18, 19, 20	11
Total		20

IV. Discussion:

General Information

From the field survey it has found that,49% of the respondents were male and rest 51% female. The respondents are found to be distributed in 11 numbers of method subjects.

Table 1 Information about pre service teachers

Particulars	Option	No. of Responses	%
Sex	Male	49	49.0
	Female	51	51.0
Method Subject opted	Bengali	14	14.0
	Bio Science	3	3.0

	Education	14	14.0
	English	9	9.0
	Geography	11	11.0
	History	22	22.0
	Mathematics	6	6.0
	Philosophy	5	5.0
	Physics	3	3.0
	Political	7	7.0
	Sanskrit	6	6.0

Developing ability of instructional materials among the pre-service teachers

All the pre-service teachers opined that Teacher Education Programme teaches them to design IM. 84% of the teachers commented that they learnt theoretically and the rest 16% could learn only after practical demonstration. According to the pre-service teachers majority 65% of them stated that preparation of IMto be enjoyable. All the pre-service teachers opined that they are taught to design their own IM.

Table 2 Designing of instructional materials learnt by pre service teachers

Particulars	Option	No. of Responses	%
Teacher Education Programme teaches	Yes	100	100.0
	No	0	0
If Yes	Theoretically	84	84.0
	Practical demonstration	16	16.0
Opinion about	Time taking	1	1.0

preparation of IM	Difficult to get materials	20	20.0
	Money factor	14	14.0
	Enjoyable	65	65.0
Teacher trainees are taught to design ownIM	Yes	100	100.0
	No		

All the respondent pre-service teachers know to design instructional material keeping in mind the diversity of students in mind. *90% of the respondents p*repare IM for a lesson before going to teach.*With regard to the m*ode of preparing the IM *it is found that 19% of them design* from self idea; 45*% of them* design is thought from text book; 23% *of them* design is thought from internet; and the remaining 23%design is thought from Youtube. *T*ime taken to prepare IM, found that *74% of the respondents require one day and for 26% it is two days.* The nature of IM prepared for a lesson by 46% *of the respondents is from waste material and 54% does it using new material. 72% of the respondents always* prepare IM keeping in mind the learning goals/outcome; 24% does it sometimes; and 4% do it rarely. *70% of the respondents always* prepare IM so that it helps students build understanding of a fundamental concept; 24% does it sometimes; and 6% do it rarely.

Table 3 Ability to design instructional materials by pre service teachers

Particulars	Option	No. of	%
Know to design instructional material keeping in mind the diversity of students in mind	Yes	100	100.0
	No		
Prepare IM for a lesson before going to teach	Yes	90	90.0
	No	10	10.0
Mode of preparing the IM	design is thought from self	19	19.0

	design is based from text	45	45.0
	design is thought from	23	23.0
	design is thought from	13	13.0
Time taken to prepare IM	One day	74	74.0
	Two Days	26	26.0
Nature of IM prepared for a lesson	Waste material	46	46.0
	New material	54	54.0
	Virtual one		
Prepare IM keeping in mind the learning goals/outcome	Always	72	72.0
	Sometimes	24	24.0
	Rarely	4	4.0
Prepare IM so that it helps students build understanding of a fundamental concept	Always	70	70.0
	Sometimes	24	24.0
	Rarely	6	6.0

Pre-service teachers development capacity of instructional materials

All the respondent pre-service teachers expressed IM is valuable in preparation for teaching. *55% of the respondents stated that* IM included in the teacher education curriculum to be sufficient but for 45% it is somewhat sufficient. *73% of the respondents strongly agrees that t*eachers should learn their lessons based on skills children need to learn rather than on facts to be memorized *but 27% of them somewhat agree.* All the respondents stated IM available in College for use are Textbooks, Reference books, Library facilities, Stationery, Maps, Charts, Pictures, Overhead projector, Desktop/Laptop, Interactive board, Video recording and Globe. All the respondents agreed that for Digital technology devices available at college are Interactive Digital Whiteboard, TV, Smart Board, Digital Projector, Computer. *71% of the respondents strongly agreed that* Teacher Education Programme equipped them with necessary teaching skills whereas 29% of them somewhat agree.70% *of the respondents respondents strongly agreed that* Teacher Education Programme deepened their interest for teaching but *30%* of them somewhat agree.

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Table- 4: Development of instructional materials by pre service teachers.

Particulars	Option	No. of Responses	%
IM is valuable in preparation for teaching	Yes	100	100.0
	No		
IM included in the teacher education curriculum is	Sufficient	55	55.0
	Somewhat sufficient	45	45.0
	Insufficient		
Teachers should learn their lessons based on skills children need to learn rather than on facts to be memorized	Strongly Agree	73	73.0
	Somewhat Agree	27	27.0
	Somewhat Disagree		
	Strongly Disagree		
IM available in College for use	Textbooks	100	100.0
Digital technology devices available at	Interactive Digital Whiteboard	100	100.0
Teacher Education Programme equipped me with necessary teaching skills	Strongly Agree	71	71.0
	Somewhat Agree	29	29.0
	Somewhat Disagree		
	Strongly Disagree		
Teacher Education Programme deepened my interest for teaching	Strongly Agree	70	70.0
	Somewhat Agree	30	30.0
	Somewhat Disagree		

All the respondent pre-service teachers expressed that they came to know to handle and adapt teaching materials to respond to the needs of each of their students. Also, they expressed that technology laboratory is made available in the college to practice their skills and work on coursework. *All the respondent*s stated that they perform activities in computer such as E-mail, Databases, Social

Networks, YouTube and Creating Course Materials. 96% of *the respondent*s disagreed that there is a lack of instructional material in College.

Table 3 Designing ability of instructional materials by pre service teachers

Particulars	Option	No. of Responses	%
Know to handle and adapt teaching materials to respond to the needs of each of my students.	Yes	100	100.0
	No		
College make a technology lab available to students in which to practice their skills and work on coursework	Yes	100	100.0
	No		
Computer is used for Activities	E-mail Databases Social Networks YouTube Creating Course Materials	100	100.0
There is a lack of instructional material in College	Yes	4	4.0
	No	96	96.0

Findings:

1. Teacher Education Programme teaches the pre-service teachers to design IM. 84% of the teachers learn theoretically and rest 16% only after

practical demonstration. 65% of them stated that preparation of IM is enjoyable.

2. All the pre-service teachers opined that they are taught to design their own IM. A*ll the* pre-service teachers know to design instructional material. *90% of them p*repare IM for a lesson before going to teach.

3. Different *m*ode is used for preparing the IM like self idea, text book, internet or Youtube. *T*ime taken to prepare IM, found that *for 74% of the* pre-service teachers *happened to be one day.* The nature of IM prepared for a lesson by 46% *of them is from waste material and 54% does it using new material.*

4. *96% of them* prepare IM keeping in mind the learning goals/outcome. *94% of them* prepare IM so that it helps students build understanding of a fundamental concept. A*ll the* pre-service teachers expressed IM is valuable in preparation for teaching and IM is included in the teacher education curriculum. *73% of them strongly agrees that t*eachers should learn their lessons based on skills children need to learn rather than on facts to be memorized.

5. All of them stated various types of IM available in College. All the teachers agreed that for Digital technology, essential devices available at college. All the teachers *agreed that* Teacher Education Programme equipped them with necessary teaching skills and deepened their interest for teaching.

6. All the teachers expressed that they came to know to handle and adapt teaching materials to respond to the needs of each of their students.

7. Technology laboratory is made available in the college to practice their skills and work on coursework; and they perform activities in computer. 96% of *them* disagreed to lack of instructional material in College.

V. Conclusion:

Findings drawn from the study revealed that Teacher Education Programmeequips the pre-service teachers to design IMas per the guidance of the teacher educators. The teacher trainees learn to design different types of IM along with necessary teaching skills and deepen their interest for teaching. Also, finding shows the extent of effort put on for developing different type of IMs for pedagogical purpose allows them to handle and adapt teaching materials to respond to the needs of each of their students. It is found that majority of the teacher trainees engage themselves skillfully for preparation of IMs. Pre-service teachers are offered requisite extent of training so as to face the challenges and demands put forward by NEP 2020 so as toeffectively use their skills in school teaching-learning situation.

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