

Promotion of Learning Skills through Interactive Group Activities among Pre-Service Teachers: An Action Research

Key words :

Learning Skills, Interactive Group Activities.

Learning skills are a set of skills used in the process of acquiring new knowledge and support the learning process. The 21st-century learning skills are core competencies such as creativity, critical thinking, communication, collaboration, and Information Media & Technology Skills whose acquisition enhances the learners' gaining, processing and assimilation of new knowledge as well as its application in real world. Paradigm shift in pedagogical processes is required to inculcate these learning skills among learners.

The present action research was conducted to enhance the learning skills among Pre-service teachers. Thirty-three Pre-service teachers enrolled in B.Ed. programme of Regional Institute of Education, Bhopal participated in the action research. The interactive group activities were used as intervention. An observation rubric was used to assess the level of learning skills. The result reflected overall level of learning skills among Pre-service Teachers at exemplary level and proficient level were 26.92% and 52.37% respectively during the interactive group activity which reveals that the interactive group activities has promoted the learning skills among Pre-Service teachers. The problems encountered by the researchers were also resolved by using the activities.

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Contemporary teaching strategies are directed towards adapting teaching to the spirit, needs and trends of the modern time. Traditional approaches emphasizing memorization or the application of simple procedures will not advance learners' critical thinking skills or autonomy. To develop the higher-order skills the individuals must engage in meaningful enquiry-based learning that has genuine value and relevance for them personally and their communities. Real-world experiences merged with sustained engagement and collaboration offer opportunities for learners to construct and organize knowledge; engage in detailed research, enquiry, writing and analysis; and communicate effectively to audiences (Barron and Darling-Hammond, 2008).

Within a constructivist framework, the learning of skills and concepts occur within meaningful and integrated contexts not in an isolated and hierarchical manner. Learning is built over time as initial knowledge is revised when new questions arise and old knowledge is challenged. "Deep understanding, not imitative behavior, is the goal....We look not for what students can repeat, but for what they can generate, demonstrate, and exhibit" (Brooks & Brooks, 1993). The social constructivist theory is based on the belief that individuals actively construct knowledge and understanding and that constructing understandings of one's world is an active, mind-engaging process. In other words, information must be mentally acted upon in order to have meaning for the learner (Piaget, 1979; Sigel & Cocking, 1977).

National Curriculum framework for Teacher Education, 2009 emphasizes transacting a process-based curriculum to develop reflective teachers. Teacher education programmes are concerned with adult learners. They need to be based on an adequate understanding of how adults learn. Adult learners are autonomous and self-

directed, have a vast amount of life experiences and knowledge, are pragmatic and goal-directed and respond better to problem solving and task-oriented learning. The emphasis, therefore, has to be on developing professional knowledge and capacities through a variety of self-directed tasks including case studies, projects, seminars and research activity (NCFTE, 2009).

These frameworks show a paradigm shift in the pedagogical processes of the classroom. However in the current scenario the traditional approach of teaching-learning is still practiced due to which there is obstruction in the path of learning. There are multiple pedagogical strategies educators can employ to infuse the learning skills as critical thinking, problem solving, communication, collaboration, creativity and innovation into their curriculum and instruction; in essence, utilizing technology to create a richer learning environment. As such, there is a call for teacher education programs to facilitate Pre-service teachers' personal development of these skills as well as their application to educational settings (Michaels et al., 2017).

The 21st-century skills of creativity, critical thinking, communication, collaboration, and Information Media and Technology Skills (IMTS) are need for today's educational competencies. The 21st-century skills for Pre-service teachers can be defined as (Michaels et al., 2017):

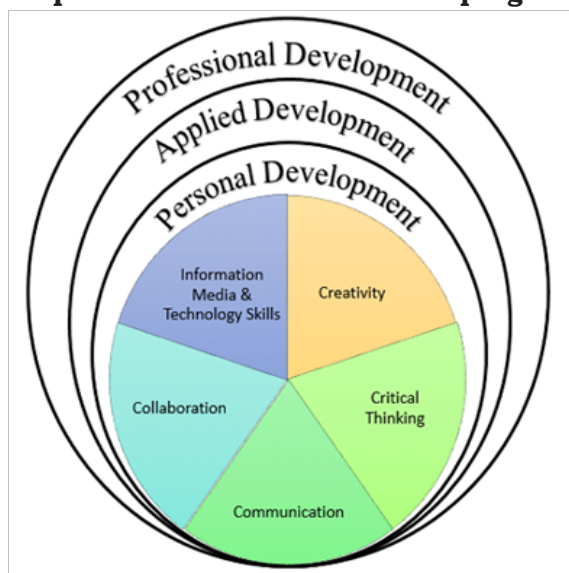
- 1. Creativity:** Creativity is the ability to develop, choose, and integrate novel, unconventional, and innovative approaches to teaching and learning.
- 2. Critical thinking:** Critical thinking is the ability to effectively use higher order thinking skills to plan, teach, and reflect on instructional practice while integrating and applying theories of teaching, learning, and development.
- 3. Communication:** Communication is the ability to successfully use interpersonal skills and components of literacy (reading, writing, speaking, and listening) to contribute to teaching,

learning, and development.

4. Collaboration: Collaboration is the ability to work productively and equitably while valuing others in diverse educational settings.

5. Information Media and Technology Skills (IMTS): IMTS is the ability to access, manage, apply, analyze, and evaluate digital information and instructional technological tools.

Figure 1 Model of 21st-century skill development for teacher education programs



(Michaels et al., 2017).

It is essential to consistently develop, model, and assess these skills in Pre-service teachers throughout all aspects of their program. Preparing Pre-service teachers consistently throughout their preparation programs ensures a more seamless transition to in-service teaching, creating a cadre of confident and effective educators in our 21st-century society.

Particulars about the problem:

The researchers observed that there are several problems associated in transacting the curriculum. This arises the need to identify the causes behind them and to work on alternatives so that learning can be made more effective as well as to promote the learning skills.

(i) Problems identified- The researchers have observed that the students of B.Ed. in Language and Social Science take less interest during classroom interactions. Students neither participate well nor are actively involved in the classroom processes. They are unable to initiate discussions in the class. Whenever teacher asks any question they hesitate in answering and giving their views. They seldom ask questions, are unable to critically analyze and reflect on various issues. There is psychological fear of expressing views individually due to disapproval from others. These problems indicate lack of understanding and motivation among students.

(ii) Probable causes- The students of B.Ed. in Language and Social Science reflected passive attitude may be because there is lack of participatory exposure and opportunities in the classroom. Traditional teaching methods are being used which are monologue in nature. These teaching methods and procedures lack a greater freedom and openness required for the students. Practical activities were not used in the previous courses which provide a good platform for exploration. The Pre-service Teachers are also lacking study habits, another important factor behind learning.

(iii) Method for intervention- Interactive group activities

Considering the problems and causes associated with the teaching and learning processes, on the basis of constructivist framework, researchers have selected the Interactive group activities for the action research. Interactive group activity involves formation of small group in the classroom to perform group task. An interactive approach promotes critical and creative thinking by using active, student-centered teaching strategies such as active, experiential, independent, investigative, cooperative and problem-solving learning. Group work is a teaching strategy that promotes academic achievement and socialization (Johnson and Johnson, 2004). By interacting with others,

students learn to inquire, share ideas, clarify differences, and construct new understandings. In this way, the students learn to use language to explain issues which, in turn, help them to construct new ways of thinking (Webb and Mastergeorge, 2003).

Two fundamental processes that help teachers improve their skills are reflection and collaboration. Pre-service and in-service courses should focus on developing teachers who have a deeper understanding of themselves as educators and of the students they educate. These authors state that effective professional development must “be collaborative, involving a sharing of knowledge among educators and a focus on teachers’ communities of practice rather than on individual teachers” (Darling-Hammond and McLaughlin, 1995).

This Action Research was to explore Interactive Group Learning activities in place of traditional lecture centered approach to overcome the problems of Pre-service Teachers. This research was also to examine the learning skills during Interactive Group activities.

Objective of the study:

To study the influence of interactive group activities on learning skills among Pre-service Teachers.

Research question:

- How do Interactive Group Activities influences the learning skills among Pre-service Teachers?

Methodology:

The study followed the line of Action Research which is more of a holistic approach to problem-solving, rather than a single method for collecting and analysing data. Thirty- three Pre-service teachers enrolled in B.Ed. programme of Regional Institute of Education, Bhopal participated in the study. The interactive group activities were used as intervention, to study its influence on the learning skills.

Tool used:

Observation rubric: Following observation rubric was constructed by researchers to observe the various learning skills during the intervention among the B.Ed. students. The rubric consists of components of learning skills (21st century skills) -

Intervention:

The intervention was carried out in four phases:

- 1. Preparation:** The first phase includes the heterogeneous grouping of 5-6 students in the classroom. The teacher then describes the purpose of the strategy and provides guidelines for discussions and poster preparations. The

Components of learning skills	Exemplary	Proficient	Developing	Beginning	Unsatisfactory
1. Participation	Student participated enthusiastically in the group task.	Student participated actively in the group task.	Student participation is limited in the group task. Become involved only when they are asked to do so by other group members.	Student participation is marginal in the group task.	Student participation is minimal in the group task. The teacher's support is required to make him/her engage in the task.
2. Shared responsibility	Student takes initiative to bear and distribute responsibility for completion of the group tasks within the group.	Student takes responsibility, follows on assigned task and does not depend on others to do the work.	Student takes responsibility but follows on some of the assigned tasks.	Student reluctantly takes responsibility. Needs follow-up from other members to complete their tasks.	Student rarely takes responsibility, even if taken, not makes efforts to do work.

3. Interpersonal relationship	Student consistently shows respect for the ideas, opinions, values and feeling of other group members.	Student usually treated others ideas, opinions, values and feeling respectfully.	Student often considers the other's views and ideas.	Student seldom show respect to the other's view.	Student rarely concerned with ideas, opinion, values and feelings of other group members.
4. Leadership	Take responsibility as a leader in an appropriate way by rotating the roles, sharing the tasks.	S o m e t i m e s a s s u m e s leadership in an appropriate way.	Usually allows others to assume leadership or often dominates the group.	Do not assume leadership or assumed it in a non-productive way.	Do not assume leadership.
5. Brainstorming	C o n s i s t e n t l y brainstorms. Explains accurately multiple solution, perspective and strategies. A p p r o p r i a t e l y identifies solutions from own experience and sophisticated thoughts.	Often brainstorms but describe two or more solution, perspective and strategies. Solution includes some original thinking which may be clear or gaps may exist.	S o m e t i m e s b r a i n s t o r m s . Identifies simple solutions, strategies and perspective includes some original thinking though inconsistently.	S e l d o m brainstorms. Names a single solution, or perspective with little consideration.	Rarely brainstorm to present a solution. Solutions may be unclear or simplistic.
6. Analyzing	Thoroughly analyze the solutions and perspectives by considering data, evidences, context, theories, analogies, assumptions.	Accurately analyze the solution by considering data, evidences, context, theories, and analogies.	Analyze the solution or perspective using theories, assumptions, some evidences with minor accuracies.	Inappropriately analyzes the solution and perspective.	Omitted the Analysis of solutions, if any.
7. Curiosity	Demonstrates a high degree of curiosity. Seek additional information for evaluation of ideas until they are thoroughly explored	Demonstrates c u r i o s i t y about issues and pursues a d d i t i o n a l information.	Demonstrates little curiosity and desires to know more about issues.	D e m o n s t r a t e limited curiosity and tries little to know more.	Demonstrate less curiosity but not put effort to know more.
8. Work creatively with other	Synthesize ideas from others and consideration of ideas of individuals from group to develop a cohesive performance.	Make connections between and builds upon other's idea, e n c o u r a g e collaboration to share ideas.	Integrates ideas from other with own ideas.	Summarizes or restates others ideas, articulates own ideas to others	Works on others ideas.
9. Use of media	Effectively and consistently applies the use and understanding of technology as a tool for learning and communicating the learning	When collecting, o r g a n i z i n g , evaluating and communicating r e s e a r c h , technology is effectively utilized	Uses technology to collect, organize, evaluate and/ or communicate information, but does not do so on a consistent basis	Uses technology to collect, organize, evaluate and/ or communicate information but little effectively and inconsistently	Does not use technology effectively to collect, organize, evaluate and/ or communicate information
10. Presentation	Presentation is structured and sequenced so that all members of the group participate equally.	Presentation is structured and sequenced, all are participating but unequally	Presentation is sequenced few members are required to ask for participation.	Presentation is haphazard and only few members are participating	Presentation is unstructured. Only few members are participating

teacher allotted topics in the group on which the students worked upon.

2. Exploration: Think- pair & share strategy was used in the initial stage. The students come across to several learning materials and paired up in the group to discuss and share their views.

3. Elaboration: During discussion the students in the group were asked to explore the key concept and also to relate the concept in the contemporary scenario of classroom. They were instructed to relate different aspect of the topic in various situations applicable. These explored thoughts were summarized by the group members in the

during the Interactive group activities. The rubric consisted of learning skills components as participation, shared responsibility, interpersonal relationship, brainstorming, analyzing, curiosity, work creatively with others, use of media, presentation. Learning skills were analyzed based on rubric and the percentages were calculated to assess the level of learning skill.

From the table, it showed that the participation of students was exemplary up to 27.2% as they were participated enthusiastically in the group task. Rests of 54.5% were at proficient level as their participation was also active. Very

Table 1: Levels in Learning Skills of B.Ed. Students based on Percentage Obtained during interactive group activities (in percentage)

Components of learning skills	Exemplary	Proficient	Developing	Beginning	Unsatisfactory
Participation	27.2	54.4	9	6	3
Shared responsibility	18.1	60.6	21.2	-	-
I n t e r p e r s o n a l relationship	21.2	48.4	18.1	12.1	-
Leadership	27.2	51.5	15.1	6	-
Brainstorming	18.1	60.6	15.1	6	-
Analyzing	24.2	63.6	9	3	-
Curiosity	30.3	45.4	12.1	6	6
Work creatively with other	24.2	54.5	12.1	6	3
Use of media	42.4	36.3	15.1	6	-
Presentation	36.3	48.4	15.1	-	6
Average	26.92	52.37	14.19	5.11	1.8

form of posters. Teacher monitored and support students as they work.

4. Presentation: The posters prepared were presented by the Pre-service teachers. The students were assessed throughout the process by administering the rubric prepared by the researcher.

Results and interpretation:

The present action research objective was analyzed by the researchers with the help of observation rubric which was administered

few of them were at unsatisfactory level.

Only 18.1% of the students were having exemplary level of learning skills as they initiated to bear and distribute responsibility. Most of them, around 60.6% were proficient as they shared responsibility but do not depend on others to do work. 21.2% of students were at developing stage as they followed only some of the assigned task in the group.

In interpersonal relationship 21.2% students maintained it at exemplary level as they

consistently shows respect for the ideas, opinions, values and feeling of other group members whereas 48.4% were at proficient level as they did it usually but not consistently. Some of them around 18% were in the developing level as they did the same often but 12.1% of students were at beginning level as they seldom show respect to the other's view.

The students around 27.2% were democratic leaders as they were rotating the roles, sharing the tasks. 51.5% students were in proficient level as they assumed leadership in an appropriate way during the activity. None of them were at unsatisfactory level. In brainstorming and analyzing around 60% were at proficient level.

and pursues additional information. Most of the students were using media at exemplary level and the presentations were made at proficient level by 48.4% of the students after the activity.

From the table, it is clear that most of the students were at exemplary and proficient level of learning skills during the interactive group activity which showed the promotion of these skills were due to the conduct of activity. As the skills observed through the rubric are the components of creativity, critical thinking, communication, collaboration, and Information Media and Technology Skills (IMTS), which directly indicates the promotion of these essential skills.

The graph shows that the overall level

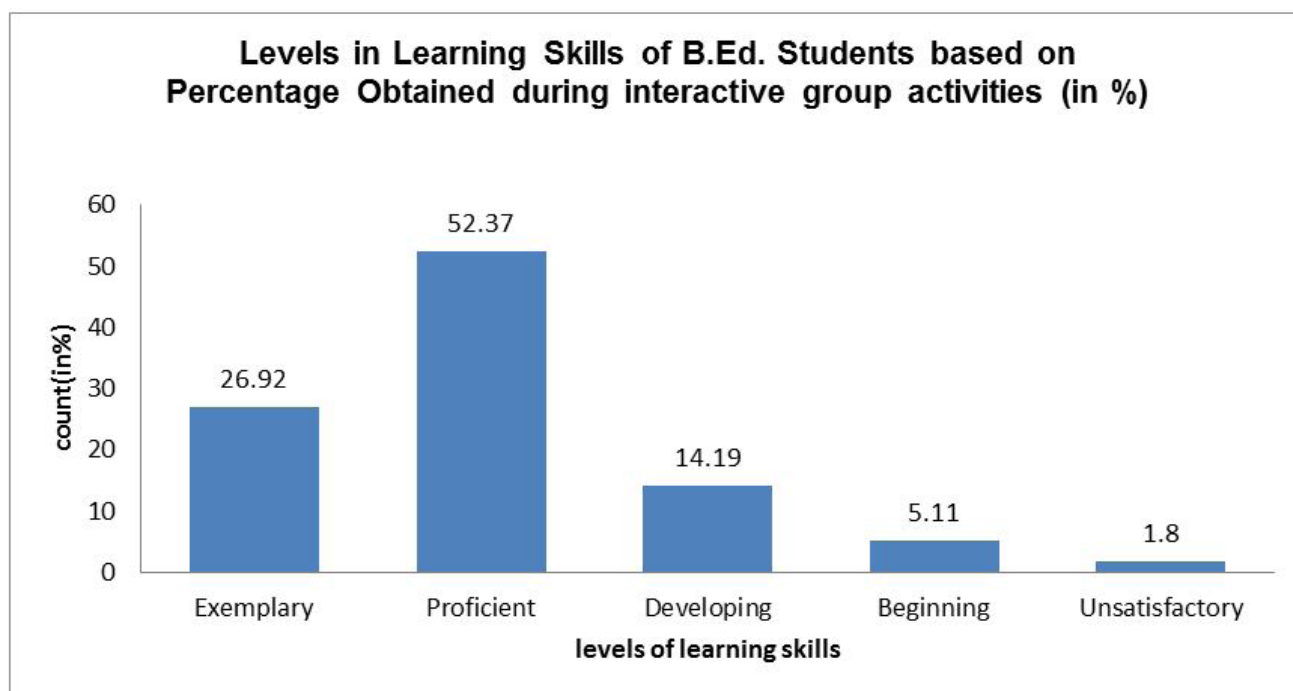


Figure 1: Distribution of B. Ed. students at different levels of learning skills during the Interactive group activities

The 45.4% were curious at proficient level but 30.3% were at exemplary level but it was found 6% at beginning and unsatisfactory level. More than half of the students i.e. 54.5% students were at proficient level while working creatively with others as they demonstrated curiosity about issues

of learning skills among B.Ed. students at the proficient level is 52.37% during the interactive group activity. The students at exemplary level were 26.92%. The 14.19% students were in developing level. Very few students were at unsatisfactory and beginning level which reveals

that the interactive group activities has promoted the learning skills among B.Ed. Students.

The results showed that the Interactive group activity was helpful in promoting learning skills among B.Ed. students. Probable reason may be that the learner does not simply 'take in' information handed to them, instead in these activities they are actively engaged and provided with opportunities to think about real world problem, critically questioning on the various aspects of the topic allotted to the students. It was also enmeshed them in creativity. The entire activity was infused with collaboration and communication. Over all, the activities conducted were fruitful in creating learning environment facilitating the promotion of learning skills.

Conclusion:

The action research reflects the promotion of learning skills influenced by the Interactive group activities among the B.Ed. students. The activities inculcated the 21st Century skills as creativity, critical thinking, communication, collaboration, and Information Media and Technology Skills (IMTS) which were observed by

analyzing their components. Promotion of learning skills is due to the opportunities provided during the activities. The problems encountered by the researchers were resolved by using the activities. It emphasizes a need to focus on teaching methods including modeling, coaching, scaffolding, articulation, reflection, and exploration which can help the learners to construct knowledge in a better learning environment.

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पृष्ठ 16 का शेष प्राचीन संस्कृत साहित्य में

अपने अभिलेख में उल्लेख किया है कि मैंने प्रत्येक एक कोस की दूरी पर कुएँ तथा प्याऊ की व्यवस्था करवाई। इस तरह खाखेल शासक ने भी अपने राज्य को समृद्धि प्रदान करने के लिए कलिंग तक नहर का विस्तार करवाया। रुद्रदामन ने भी जल संसाधन पर विशेष ध्यान देते हुए अपने अभिलेख में वर्णित किया है कि प्राचीन बाँध में दरार पड़ जाने के कारण मैंने उसे बिना बेगार एवं कोई विशेष कर लगाए बिना राज्य कोष से संचित धन व्यय कर बाँध का निर्माण करवाया। यही नहीं साहित्यिक स्रोतों में भी पतंजलि एवं मनु ने भी जल संसाधन को सुरक्षित रखने एवं उसे हानि पहुँचाने वाले को दण्डित करने का उल्लेख किया है। अर्थात्

पृथ्वी, जल का आश्रय है। जल का सूक्ष्म रूप ही प्राण है। मन, जलीय तत्वों अर्थात् विचारों का समुद्र है। वाणी की सरसता और जीवों में आर्द्रता का कारण भी जल ही है। आँखों की देखने की ताकत और उसकी सरसता का कारण भी जल है। जल, कानों का सहवासी है। जल का निवास धरती पर है। अंतरिक्ष में जल व्याप्त है। समुद्र जल का आधार है तथा समुद्र से ही, जल वाष्प बनकर वर्षा के रूप में धरती पर आता है। अतः समाज प्रकृति के इस अनमोल उपहार के महत्त्व को समझे और जल के संचित भण्डार का सदुपयोग करें।

