

Mastering Classroom Management- A Problem Based Learning Approach

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Abstract: *The teacher education programme – B. Ed. is a major teacher preparation course in the country. It prepares the teachers to teach at secondary and higher secondary schools. Even though the programme offers courses in Methodology of Teaching and Pedagogy of Subjects, an analysis of the syllabi of the various universities across the nation reveals that there is no adequate theory or practical to master the skill of classroom management incorporated into any of the courses associated with B. Ed. Programme. The theory about classroom management is limited to certain thumb rules dictated by the teacher educators before the beginning of practice-teaching internships. In the real context teacher face many difficulties. These may be related to problems in the routine of class management, problems in securing pupils cooperation, problems in directing pupils learning, problems in the presentation of subject matter, problems arising from pupils' personal traits, problems arising from teachers' personal traits etc. Experienced teachers often can deal these difficulties more effectively, but often it is experienced that novice teachers could not handle these problems effectively. Therefore teacher training programme should provide a learning environment related with case problems besides the pedagogical theories and guidelines. Problem Based Learning environment in which real context problems are treated as case problems helps novices to construct mental representation of a problem by analyzing the different kind of elements of a problem. The novice teacher can be a part of the whole procedure and it gives several types of experience to mould the carrier. In the present paper, investigators have designed a Problem Based learning approach in the field of teacher education.*

Key words: *Problem Based Learning, Case Problems, Scenario Based Learning, Teacher Education*

I. Introduction

“All life is problem solving” a quote by Karl Popper holds absolutely true for teachers who struggle to establish a productive work environment in their classrooms. It is important for the teacher to maintain a creative and positive environment in the classroom to engage the students in learning. “Classroom management is all of the things that a teacher does to organize students, space, time and materials so that student learning can take place” (Wong & Wong, 2014). Even a competent teacher with an excellent lesson plan cannot achieve his instructional objectives without proper classroom management. Hence training in the skill of classroom management is crucial in any teacher preparation course.

The teacher education programme – B. Ed. is the major teacher preparation course in our country. It prepares teachers to teach at secondary and higher secondary schools. Even though the programme offers courses in Methodology of Teaching and Pedagogy of Subjects, an analysis of the syllabi of the various universities across the nation reveals that there is no adequate theory or practical to master the skill of classroom management incorporated into any of the courses associated with B. Ed. Programme. The theory about classroom management is limited to certain thumb rules dictated by the teacher educators before the beginning of practice-teaching internships. Thus Present teacher training programme demands a learning environment related with scenario based problems besides the pedagogical theories and guidelines. The Scenario Based Learning Environment in which real context problems are used for learning, helps novices to construct mental representation of a problem by analyzing the different kind of elements of a problem scenario. It will give several types of experience to mold the carrier

Problem Based Learning

Problem Based Learning (PBL) is an instructional method in which students learn through solving problems and reflecting on their experiences (Barrows & Tamblyn, 1980). Savery (2015) asserts that it is an instructional learner-centered approach that empowers learners to integrate theory and practice and apply knowledge and skills to develop a viable solution to a defined problem. “The kinds of problems pre-service teachers face during their professional experience are mostly ill-structured problems that they encounter in their everyday work and are thus highly emergent, complex and interdisciplinary in nature” (Jonassen, 2011). Dealing with such problems requires cognitive skills that may be relatively different from those that are required to solve well-structured problems (e.g. solving a mathematics problem versus solving a disciplinary problem). To

provide pre-service teachers with authentic experience, real-world problems that resemble those that they will likely have to solve in schools could be presented in case format and integrated seamlessly across the teacher education curriculum (Lee, 2013).

Scenarios which give life-related live challenges

Case studies (as in PBL) represent an instructional methodology where a written description of a real world practice situation is provided to students to analyse, discuss and learn from. Although the use of case studies in teaching began in professional schools, such as Law and medicine, they have been adopted widely in many disciplines including Teacher Education (Jonassen, 2011). Cases represent real life problems in detail with lot of structural and basic data interwoven into it. Cases are mostly factual narrations which give premises to decide upon and analyse the situation. Scenarios present real world problems but put the stake holder in the centre stage compelling to take a view point as to solve the problem at hand. Scenario Based Learning usually works best when applied to tasks requiring decision-making and critical thinking in complex situations. It can be used to simulate real-world practice, providing opportunities which may be difficult for students to experience within the confines of a course. Apart from this, scenario based learning tap into the affective domain of learning making the learning more binding.

Problem Scenario based learning as an excellent option

“Scenario Based Learning (SBI) is an instructional environment in which participants solve carefully constructed, authentic problems”(Clark,2009). Interactive scenarios play key role to support active learning in SBI. Scenario-based learning (SBL) environment normally involves ill-structured or complex problems,in the form of story line, video, or simulation, which learners are required to solve. “Scenario-based learning can be used to assist learners, in a huge variety of teaching areas. It’s strength and success as a teaching tool is highly effective when used to simulate real world practice”(Hazlehurst, 2015). In a safe, real-world context, the students must apply their subject knowledge, and critical thinking and problem solving skills. In this process, students work their way through a plot, usually based around a complex or an ill-structured problem, which they are required to solve. By actively indulging in the problem solving process, and identifying oneself with the character of the problem-scenario, student teachers are required to solve the problem situations presented in the form of scenarios. Scenarios can be prepared from sketches and cases as experienced by experienced teachers. As required in this instructional strategy, the learners (student teachers) are aware of the premises and principles, which would help them to framework the scenario and apply the instructive and psychological principles to solve the problem. Strategies can be developed to solve similar or different versions of the problem-scenario at hand with the help of this. Classroom management always poses problems in myriad forms and to learning to solve them could only be by experiencing them at least in its mild form. SBL integrates theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem(Savery, 2006).Hence this instructional strategy, Problem–Scenario based Learning, which helps to provide exposure to problems in a less challenging situation in a scaffolding environment could be the best possible option to master skill of classroom management for a student teacher.

Problem Based Learning in Teacher Education

Patrick and McPhee (2014) evaluated the use of problem-based learning in a teacher education degree and found that the construction of the PBL scenarios is important in the success of the programme. The learners responded that PBL was effective in fostering specific abilities such as: a flexible approach to problem-solving and the ‘ability to explore alternative routes and solutions’ ; group working and collaborative learning skills; communicative abilities; developing a professional vocabulary; creative and independent thinking; organizational abilities; and reflective skills. The study concludes that the majority of the students who took part in the research perceive that PBL enables them to make links between theory and practice. Murray-Harvey, Pourshafie, and Reyes (2013) studied about the stance of teacher education students about the effectiveness of PBL as an instructional strategy. After analyzing a PBL process, the teacher education students realised that the PBL process, creates opportunities to meaningfully develop knowledge, attitudes and skills pertinent to collaborative learning.Brush et al., (2013) discusses the PBL-TECH project, which seeks to design, disseminate, evaluate, and sustain an enhanced teacher preparation model that provides teacher educators across the United States with web-based tools and resources to teach future teachers to effectively implement innovative technology supported problem-based learning (PBL) instructional practices.So et al., (2001) studied the learner experiences after introducing Problem-Based Learning to Teacher Education Programmes and found that there were times when students were rather frustrated. But most groups found themselves back on track by their own self-assessment and problem- solving techniques.

Using scenarios in Problem Based Learning

Scenario-based instruction fits within the framework of case-based instruction, in which learners are presented with descriptions of authentic events or situations and asked to solve one or more problems embedded in the case. Sheridan and Kelly (2007) studied the experiences of learners and faculties on scenario-based course design in teacher education. The faculty members commented positively on the creativity of the design and the expected higher level learning outcomes. The learners were also happy saying that it was fun learning with the new design. Bawane, Takwale and Naidu (2010) analysed the experiences of an e-teacher education programme in Pune. This programme adopts the scenario-based learning approach to develop the desired roles and competencies among the teachers. The learners opined that less emphasis was laid on content and they found the assignments to be cumbersome. A few said that 'there was more practical and less theory'. The experiences suggest that the time period for completing the learning assignments have to be relooked and carefully planned to prevent overload and stress among the learners. The study concludes that scenario based learning approach has the potential to regenerate several pathways for teacher education programs in India, especially prepare teachers to articulate their capacities in accordance to the school realities.

Classroom management

Clearly students cannot learn amidst anarchy and chaos. Therefore there should be norms, etiquettes and mutually agreeable code of conduct among the students and with teacher. Even a competent teacher with an excellent lesson plan cannot achieve his instructional objectives without proper classroom management. Hence training in the skill of classroom management is indispensable in any teacher preparation course. Lai et al., (2005) designed an online course using Scenario based Strategy in teacher education for classroom management. Combined with the theories of classroom management, it uses multimedia to present the reality which allows learners to experience how teachers make decisions. It helps to remove the feel that theory and practice of traditional curriculum does not match each other.

What theory will be used to construct scenario?

Developing effective scenario-based instruction requires capitalizing on the structure of the problem without providing too much or too little information and instructional scaffolding for the learner. It also requires balance to help ensure that the scenario being presented is neither too contrived to seem plausible nor too complex to interfere with meeting the desired learning outcomes (Sheridan & Kelly, 2007).

In the view of Kahn (1965), a scenario is:

- **hypothetical**, representing a possible future;
- **selective**, representing one possible state of complex, interdependent, and dynamic affairs;
- **bounded**, consisting of number of states, events, actions, and consequences;
- **connected** by causally related elements and events;
- **assessable**, providing a judgment based on probability.

For purposes of designing problem-solving learning environments(PSLEs), scenario construction can be used to assess the ability to make meaningful decisions and predictions about their outcomes.

In order to construct a scenario, the following steps should be undertaken:

1. Identify the most important external factors and their level of uncertainty.
2. Using the most important yet uncertain factors, construct multiple stories of the events or outcomes that may results causally from those factors.
3. Identify possible interfering events and probabilities and impacts.
4. Determine how those different stories affect strategic planning and decision making of the organization. (Jonassen, 2012)

What theory will be used to underpin classroom management principles?

The major principles to structure the learning environment of problem scenarios will be inspired by the step-by-step teaching of 50 procedures that can be applied, changed, adapted, and incorporated into classroom management plan as suggested by Wong and Wong (2014) in their book – *The Classroom Management Book*. The problem scenarios will be structured in line with the CALM (consider, act, lessen, manage) model put forward by Lewin and Nolan (2013) in their book – *Principles of Classroom Management: A Professional Decision Making Model*. This model provides a series of steps (Levels I through IV) that should serve to help teachers make logical decisions and avoid responding to problem classroom behaviors entirely from an emotional point of view.

The Problem-Scenario based Learning Package (PSLP)

The Problem-Scenario based Learning Package comprises of Number of problem solving environments (PSLE). Each PSLE comprises of a built-up scenario with conversations, stories and exhibits. The structure of the scenario can be shaped with the help of scaffolds like expert opinions, relevant theories, supporting documents and decision making models like the CALM model. Each PSLE provides a worksheet with prompts to solve the problem in the form of decisive questions to analyze the structure of the problem. This will lead to collaborative efforts to frame hypothesis and problem solving. The PSLE will demand an end product in the form of a remedy, generalization and justification. The learning experience will end with reflection and readdressing of the problem to accomplish a close loop experience.

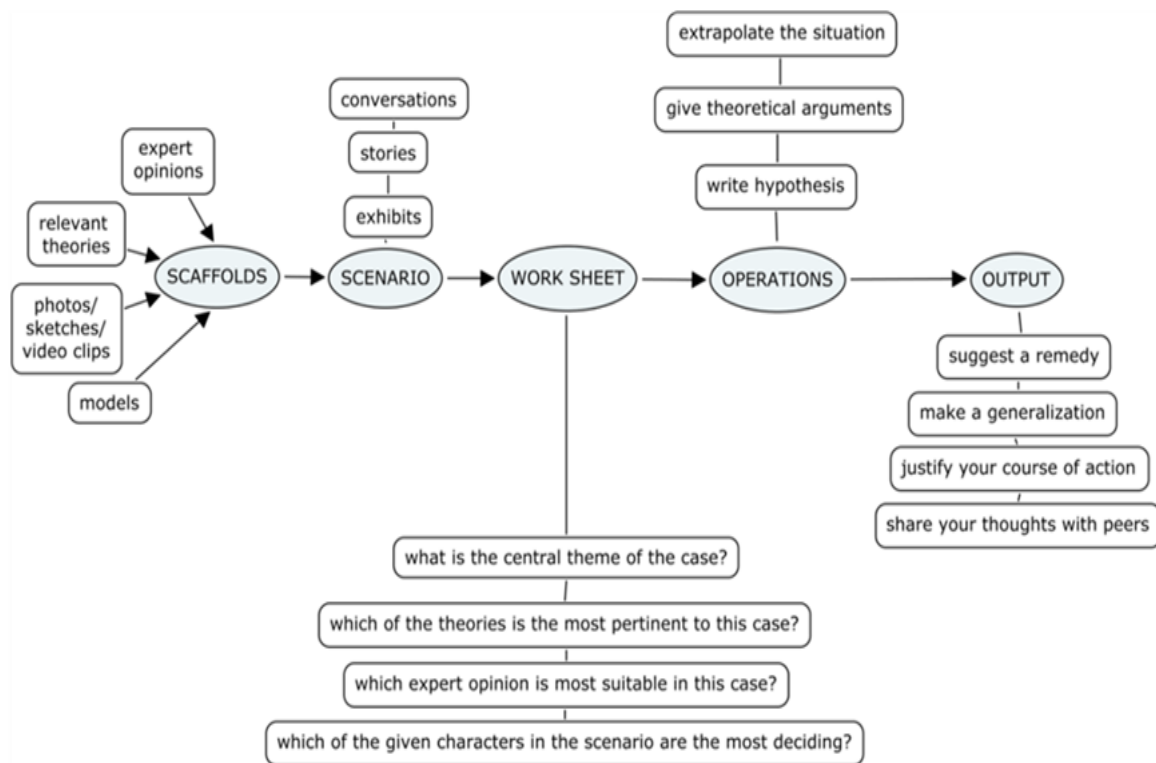


Figure 1. The format of a PSLE in the Problem-Scenario based Learning Package

How to implement PSLE in teacher education

The PSLE requires the preparation of a Problem-Scenario based learning Package (PSLP). This can serve as the source book for further interventions. The interventions can progress through three stages.

- To train teacher educators to use the PSLP.
- Teacher educators provide PSLE to student teachers in which they encounter with scenario based problems. It is better to design PSLE as a collaborative learning environment.
- The student teachers can practice the newly acquired skills during the practice teaching internship in different schools.

The data for building the PSLP can be collected from interviews, field visits and reference books on case studies.

How to practice Problem Scenario Based Learning in a Collaborative learning Environment

In designing the learning environment for PBL cases or scenarios can be used to anchor the learning process. Scenario based learning demands learners to be active participants. Goal Based Scenarios teach complex systems by identifying a goal to be achieved and a set of skills the student can learn and apply in the context of the system in question. Skills are developed through practice in an authentic environment, so the scenario must be fairly realistic, feedback continuously provided and the action-outcomes plausible (Jonassen 2011). The investigators have designed instructional phases to practice Problem scenario based learning. The phases are designed to foster collaborative learning environment. The design includes the following Phases

Phase 1: Preparation

The intention of this stage is to prepare the teacher trainee for addressing scenario based problems. This stage is beneficial in such a way that it prepares the learner to collect and integrate all the information needed and to develop a mental representation of class room difficulties. In this stage teacher educator describes the possible classification of class room difficulties (Problems). This classification must be based on the difficulties reported by expert teachers in service. The development of theoretical and pedagogical understanding of the classroom problems are part of this phase.

Phase 2 : Presentation of scenario based problems

Teacher Educator presents scenario based problems. A teacher can present scenarios in different way such as in the form of an interesting story, or written description, simulation, pictures or videos of difficulty felt in a real classroom. Scenario based problems must include the factors which may be the causes of problems, includes certain elements that are involved in any class room situation.

Phase 3: Problem scenario analysis

According to Wapples (1927) analysis of the total classroom situation is a necessary first step toward the solution of any teaching problem. Comprehension of case situation helps to identify problem type embedded in case context.

Solvers themselves ask the following questions and start inquiry process to collect information.

1. What are the key element/factors/symptoms of problem scenario?
2. What are the relevant information in the scenario
3. What factors may act as the causes of problem
4. What are our prerequisites about the problem and how to link this knowledge with existing situation?
5. What more information we need to classify the given problem? What information is lacking or missing?
6. What type information gathering questions we need to ask.?

(Solver Map out all relevant information gathered from problem context.)

Phase 4 : Problem Description

On the basis of problem scenario analysis, learner identifies key factors or symptoms, or causes of problem. On the light of that information learners ask themselves what they think about this problem. They try to describe the problem in different dimensions based on the sub issues embedded in problem scenario.

Phase 5: Problem Discussion

Brains storm all possible elements of the problem. Meaningful discussion helps to recognize the problem type. This stage can be used for filling the missing information and eliminating irrelevant data and misperceptions about the problem.

Phase 6: Problem Classification

This is the very crucial stage of case based problem solving approach. Identifying the core concept, theory or principles and major cause of effect of ill structured problems like case problems is difficult task. Problem classification should be done on the basis of information gathered from contextual analysis. Miss-categorization of 'Problem type' causes suggestion of unfavorable solutions. To foster problem classification, it is better to ask students themselves- "What is the critical problem to be solved in this context. This may lead to identify the Problem classification.

Phase 7: Presentation of Possible Solutions

In this stage solver generate solutions .We cannot suggest a single readymade solution to a Case problem. Solutions of ill structured problems are neither predictable nor convergent (Jonassen, 2004). In some case we can suggest approximate solutions on the basis of experiences of in service teachers. Therefore solver generates Multiple solutions as the product of problem discussion.

Phase 8: Argumentation for Solution

Suggested solutions deserve criticism. In this stage solvers make arguments for their solution. Solver must justify their solutions, through argumentation process. Through argumentation solvers decide whether Accept or reject a solution.

Phase 9: Reflection

In this stage solver think about what he have learnt by solving the problem. They get opportunity to add their information on to the concept map. Solver organizes key factors in the problem context, problem type, causes of problems, suggested solutions and accepted solutions on a concept map. This concept map will help the learner to make connections and to see interrelationship between the information added by them.

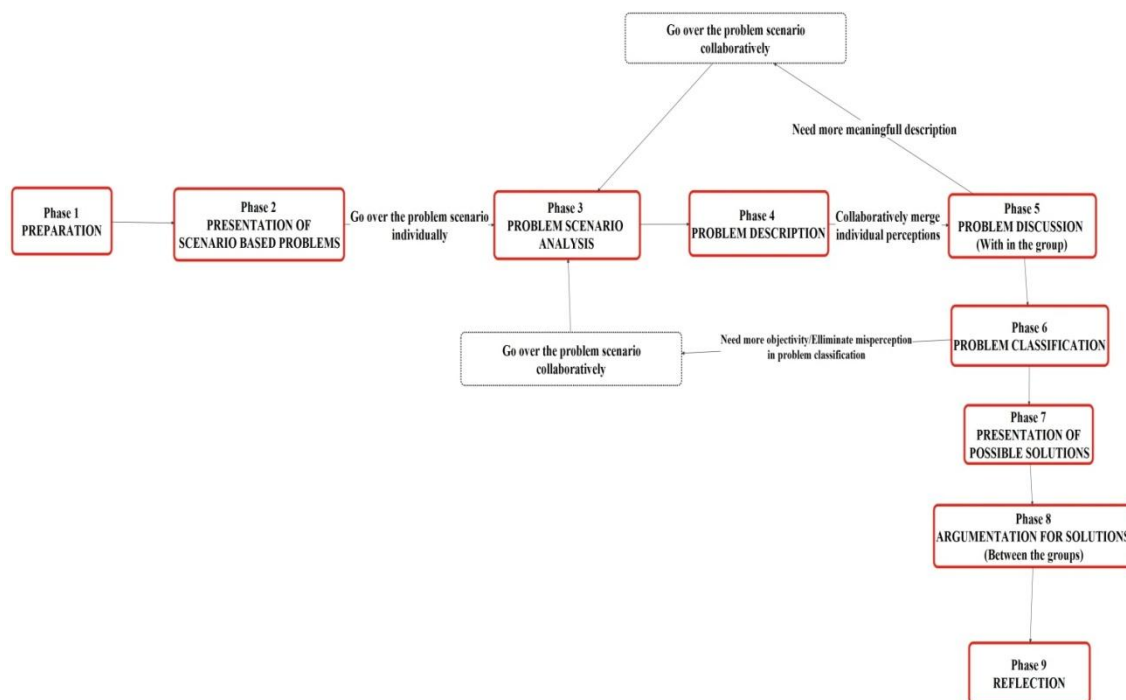


Figure 2. Problem Scenario Based Learning Environment

II. Conclusion

This study is the result of the earnest wish that the teacher education interventions should be more realistic, and result oriented. The National Curriculum Framework for Teacher Education (NCFTE) 2009 advocates a process oriented teacher education that will bring in consonance with the curriculum of the school. NCFTE 2009 laments that the weakest aspect, perhaps, of teacher education is the absence of professional preparation of teacher educators. Problem Scenario based Learning Environment, if provided effectively, shall vouch the success of a problem based learning intervention in teacher education that will link professional theories to practice. This will certainly be an appeal to National Council for Teacher Education (NCTE) to incorporate problem based learning grounded on problem scenarios to train student teachers not only in classroom management but also in other areas where theories need to be linked with practice.

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