

## Implementation of CIPP Model for Quality Evaluation at School Level: A Case Study

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### Abstract

*Evaluation denotes the monitoring of progress towards desired goals and objectives. The purpose of this study was to evaluate educational quality at schools using Stufflebeam's CIPP evaluation model (1983). The population comprised the principal, heads of each wing and teachers of various branches of a Welfare School System in Rawalpindi. Data were collected through the CIPP evaluation checklist (2002), semi structured interviews, document analysis and observations. Data were analyzed via content and thematic analysis. Findings indicated that this group of welfare schools focused on quality education by using different means, such as advanced technology, effective communication, relevant courses as well as teaching and learning strategies; however, it was found that teachers focused more on theoretical work and rote learning, which put pressure on students and had a negative effect on their intellectual abilities. Moreover, there was lack of proper space, effective environment and the schools were situated in rented buildings.*

**Keywords:** CIPP model, formative evaluation, summative evaluation.

## Introduction

Evaluation is at the center of all improvements whether we talk about the quality of education or the effective working of a school. Everywhere policy makers and researchers emphasize the need for evaluation of schools that helps in the quality control, monitoring of quality, quality assurance and quality development. School evaluation is an important task that is based on different purposes including administrative, pedagogical and managerial improvements. In many countries evaluation is much more concerned with the students and the teachers rather than schools. Quality evaluation of schools' involves assessment of all the aspects of the school and its impact on students, so it is the first step towards quality improvement and quality development (De Grauwe & Naidoo, 2004).

Evaluation is the process of determining the extent to which objectives are attained. It is concerned not with the appraisal of achievement but also with the improvements. There are two ways of doing evaluation including formative and summative evaluation. Formative evaluation is information that will be used for improving the instruction, project and process and ensures that all aspects of a program or project are likely to produce success (Ebel & Frisbie, 1991). It is conducted to monitor instructional processes and learning progress to provide continuous feedback that identifies learning errors (Gronlund, 1985). Summative evaluation ensures whether necessary processes have been carried out and objectives are being met. Both summative and formative evaluations take place whenever an evaluation exercise is conducted.

Many evaluation designs and models have been used for evaluating the projects, programs or working of institutes. CIPP model is an evaluation model for curriculum evaluation given by Stufflebeam in 1983 which includes four elements: C- Context, I- Input, P- Process and P- Product. This model can be effectively used for evaluating the quality of education at school. Context includes the goals, objectives, history and background of the school, inputs refer to material, time, physical and human resources needed for effective working of the school. Process includes all the teaching and learning processes and product focuses on the quality of teaching learning and its usefulness and the potentials that benefit society (Stufflebeam, 2003). The recent Authors believe that CIPP model can be effectively applied for school evaluation. Context refers to the background, History, goals and objectives of the school. Inputs refer to material and human resources needed for effective functioning of the school. Process refers to implementation of different

school practices. Product refers to the quality of students learning and its usefulness for the individual and for society. Pstudy was aimed to implement CIPP model for quality evaluation of various branches of a welfare school system and for that purpose, the context, input, process and product of the schools was assessed and information was collected by using different instruments.

### **Statement of the problem**

Evaluation is a continuous and comprehensive process which involves judgments that cover all aspects of quality education. With the increase in educational institutions, there is a need to focus on evaluation of quality of education being imparted because education is responsible for shaping the future of individuals and society (Karmel and Karmel, 1978). This study aimed to implement the CIPP model for quality evaluation at Welfare School System in Rawalpindi.

### **Objective of the study**

The major objective of the study was to implement CIPP model for quality evaluation at school level.

### **Research question**

The following research question was designed to guide the study:

How does CIPP model work for quality evaluation at school level?

## **Literature Review**

### **Evaluation**

According to Gay (1985), evaluation is the collection and analysis of data in order to determine the extent to which objectives have been achieved in order to make effective decisions. Educational evaluation includes the worth and value of the education that schools are providing to the students and also involves product and process. Asadi, Raza, Akbari, and Ghafor (2016) explain that product evaluation deals with how well a student is learning in a specific context and how well the objectives are achieved; process on the other hand, includes the experiences and activities organized in the learning situation. Highlighting the significance of school evaluation, Gronlund (1990) states that school evaluation is necessary for maintaining the quality of education and is indispensable for the improvement and

effective working of the educational institute.

### **Formative evaluation**

Elaborating on formative evaluation, Sax (1980) explains that this can be done during the instructional phase, allowing the teachers to know if students are meeting the instructional objectives, if the work is done on time and if there are any ways of improvement. Formative evaluation deals with the implementation and process phase of the program. Formative evaluation is conducted to understand the processes, implementation and working of the school, analysis of instructional material, structure of the learning task and courses for future improvements.

### **Summative evaluation**

Summative evaluation is the judgment about the merits of a completed product or program. It basically provides evidence regarding satisfactory work or modifications required and whether the desired outcomes are attained (Wiersma & Gurs, 1990). While evaluating the quality of education at schools, summative evaluation can be done at the end of the instructional program to check quality and quantity of learning and to compare the processes with the products so as to understand if the objectives have been achieved or not (Gronlund, 1990).

### **CIPP evaluation model**

The model was proposed by Stufflebeam in 1983. The CIPP Model (Context, Input, Process, and Product) can be used for both type of evaluation, summative and formative. The most important thing about this model is that it provides the holistic view of every element by evaluating context, input, process and output from each and every angle. With the help of this model, evaluation can be done systematically, fulfilling the general needs of evaluation. The important element which makes this model different from other models is that it focuses on the context for the evaluation of teaching learning and development process (Stufflebeam & Shinkfield, 2007).

### **Context evaluation**

Context evaluation helps to assess the needs and opportunities within a defined context or environment (Stufflebeam & Shinkfield, 2007). The objectives of context evaluation are to define, identify and address the needs of the target

population, identify the problems and assess if the goals are responsive to the desired needs or not (Khuwaja, 2001; Stufflebeam, 2001). The different types of methods for the evaluation of context include surveys, document reviews, data analysis and interviews (Stufflebeam, 2003). Some questions that context deals with are the following:

1. Are the aims of the school suitable or not?
2. Do the objectives generate from aims?
3. Are the courses taught relevant to the aims?
4. Is the school fulfilling social needs?

### **Input evaluation**

The purpose of this type of evaluation is to provide information for determining the resources used to meet the goals of the program (Khawaja, 2001). The resources include time resources, human resources, physical resources, infrastructure, curriculum and content for evaluating the quality of education at school. Some questions that come under the context of input are:

1. What are the different learning skills that students will gain?
2. Is there any balance between the practical and theory work?
3. What type of resources should the school use for effective teaching and learning?
4. Are there science laboratories and library? Are they well maintained?
5. How are teachers using their teaching skills for effective teaching learning?
6. Do the teachers have appropriate knowledge, skills and attitude for teaching?

### **Process evaluation**

Process evaluation focuses on the running of the program and teaching learning processes. Implementation is a phase in which the inputs are used in effective manner to achieve the desired aims, objectives, goals of the product. The evaluator assesses the processes to understand how the school is working and

which processes are responsible for better working and maintaining the quality of education. In this phase, implementation decision are taken (Patil & Kalekar, 2014). Processes of the school include systematic approaches, teaching learning activities, parent teacher meetings, annual functions, co-curricular and extracurricular activities; it also includes student's board examinations based on both summative and formative assessment (Print,1993). Process deals with the following questions:

1. Has ICT been used in many school practices?
2. Are teachers and students of the school actively participating in different activities?
3. Is there effective two way communication between administration, teachers and other staff?
4. Can formative evaluation of teaching learning process be done?
5. Which types of activities are conducted in the school?

### **Product evaluation**

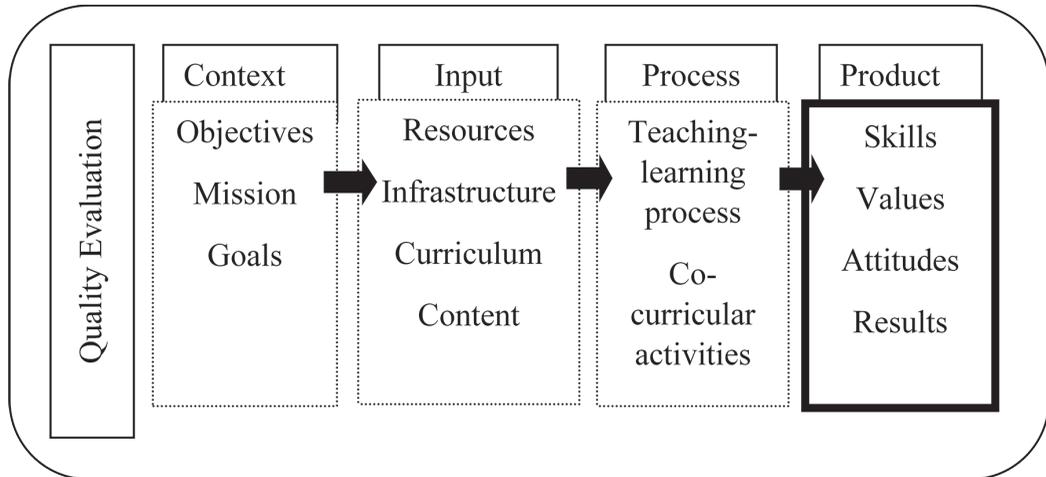
Product evaluation includes the outcomes of the school. The focus of the product is not on the student's achievement of grades but the skills, attitudes, knowledge, learning and abilities they attain which the student is going to use in life to benefit society. The aim of the school is to make the students productive so that they can stand on their feet in society. (Scriven, 1994). Some important questions with respect to Product for school evaluation are:

1. What are the achievements of the students of the school in co-curricular and extracurricular activities?
2. What are the different summative and formative assessment strategies used by the school?
3. How will students practically implement what they have learned?
4. Are there registers for recording of different activities of the students?
5. How could quality of teachers and school reputation be improved?

The CIPP model deals with products or outcomes not only at the end but also at different points during the beginning, implementation and designing of the

educational program. Outcomes are then mapped with objectives, weaknesses are noted and expected changes are made for the betterment of the quality of education (Sancer, Baturay & Fadde, 2013).

### Conceptual framework



*Figure 1.* Conceptual framework of implementation of CIPP model for quality evaluation

According to Figure 1, there are four dimensions studied for quality evaluation at school level which focus on the aspects of educational objectives, mission and goals, including the different dimensions of context, input, process and product. Context refers to the need and opportunities that defines the goals and objectives on the basis of which the outcomes are attained. Input involves the resources, infrastructure, curriculum and content needed to implement the teaching learning processes. Process includes the teaching learning processes, evaluation and activities; it includes all the processes that are necessary for the implementation of different activities and their formative evaluation. Product evaluation involves skills, values, attitudes and results that are needed to identify the outcomes and effectiveness of the educational program (Stufflebeam, 2003).

Based on Stufflebeam's (2003) evaluation model, this study was undertaken for quality evaluation by assessing the context, inputs, processes and product of schools (Stufflebeam, 2000). The researchers studied all the four dimensions and

focused on how context, inputs and processes affect the product or outcomes of the school. This dimension involved the background of the educational institute, its missions, goals and objectives, type of resources, content, curriculum and strategies used for implementing the teaching learning processes, including skills of instructors, equipment and evaluation techniques that are responsible for achieving outcomes or product.

### **Delimitations of the study**

The study was delimited to:

- The two main branches of a Welfare School System in Rawalpindi.
- The observation of different classes and co-curricular activities.

### **Methods and Procedure**

As the study was based on quality evaluation at school level using CIPP model, the design of the study was qualitative in nature and it was basically a case study of a school system. The population of the study included the principal, heads of wings and teachers from the two main branches of a Welfare School System in Rawalpindi. The principal, heads of each wing (8 wings) and 8 teachers were selected (4 from each branch of the school) for the study. The researchers, via document analysis, examined the context of the school system, including objectives, missions and goals of the school. For identifying the inputs, for example, resources, curriculum, and content, the researchers used checklist of 31 items, (Stufflebeam, 2002). Furthermore, for exploring the processes and inputs, the researchers did two class observations. In addition, to assess the product value and to compare it with the inputs and process, the researchers developed ten questions to conduct document analysis. Based on 8 questions, they (researchers) also conducted semi structured interviews of teachers, heads and principal. In accordance with research ethics, the researchers obtained permission from the heads of the institutions to conduct research. For maintaining authenticity of data, interviews were audio recorded for better interpretation and analysis.

### **Validation of research instruments**

The instruments used in this research were based on the literature of the

study, validated by experts and pilot tested. Data were triangulated by comparing data collected through different instruments, that is, checklist, (Stufflebeam, 2002a) semi structured interviews, audio recordings, observations and document analysis.

## **Results and Discussion**

The purpose of the study was to implement CIPP model for quality evaluation at school level. As the study was qualitative in nature, the researchers conducted thematic and content analysis. Data were collected through checklist, (Stufflebeam,2002a) observations, document analysis and semi structured interviews which were audio recordings. The researchers had collected literature on the basis of different indicators, according to the need of the study; this literature has been blended with the thematic analysis of data. Following are the themes discussed in detail:

### **Context evaluation**

According to Stufflebeam (2002b) context evaluation is defined as assessment of the needs, problems, opportunities and problems which can be addressed in a particular environment. Furthermore, Asadi et al., (2016) assert that context evaluation addresses important issues, owing to which many scholars emphasize using context evaluation for school curriculum and text book appraisal. For this research, context was evaluated through document analysis which revealed that the primary objective of the school system is providing high quality education by engaging students in adeptly designed learning processes. Another major objective is focusing on the development of character in accordance with Islamic values so as to enable them to meet the challenges of the ever-growing competitive world.

Interview data from teachers indicated that this Welfare School System aims to provide students with an environment that ensures creativity and provides a moral based structure which caters to the social needs of the students by polishing their behavior directly and indirectly. Teacher 1 explained that the hallmark of this school system is to provide quality education to middle class families. The teacher further highlighted that this particular welfare education system has a very economical fee structure, best available resources and devoted teachers. Elaborating further, the teacher participant explained that there are separate buildings for boys and girls from primary to secondary level.

Teacher 2 elucidated that it was because the school is clear about its mission that it had maintained its prestige. The participant also underscored that the aims of the school are specific, measureable, acceptable, relevant and time bound; the teacher specified further that the target population for these schools is the middle class and the focus is on students' social, mental, physical and moral development to make them beneficial for society. Different researches have highlighted that this type of evaluation is necessary for innovation and improvement in education system and educational institutions (Asadi et al., 2016). The basic purpose of evaluation is to ensure that planning is successful and is going in the right direction because it and focuses on the local situation (Nation & McInster, 2010).

### **Input evaluation**

According to Stufflebeam (2002) input evaluation includes available and existing resources for attaining objectives and fulfilling needs. The findings of the study indicated that this Welfare School System has a well-balanced curriculum which includes an Oxford based prospectus for junior level and Punjab Board syllabi for senior classes. There is a juxtaposition of theoretical and practical aspects of concepts. The concepts are taught in a logical and learner friendly manner under the guidance of expert and experienced teachers who are trained to practice and apply the knowledge. The study showed that different courses, including arts and science subjects are taught in school and that all courses are integrated with one another. The study also showed a balance between theory and practice because the course content is clearly defined and relevant to practical problems.

Additionally, the findings showed that the most conspicuous feature of this Welfare School System is the teacher-student ratio, which is observed here as 1:12. It is an ideal ratio for focusing on each student and imparting quality education very aptly. A teacher normally teaches 3 periods a day and uses the remainder of the time to check written work of the students diligently. Maintaining this ratio has been possible only because this Welfare School System is a non-profit organization. The findings reveal that the overall school environment is conducive for modern state of the art technology which is used for students' smart learning. Furthermore, well-equipped science labs play an important role in clarifying complex scientific concepts. All resources, for instance, teachers, staff, library, computer lab, playground, learning equipment, activity room and auditorium are available for students which contribute to quality of education. Though all these facilities are

not available for all branches, the students can share the laboratory, library and auditorium of the main branch when required. Books, syllabi and daily workload all are available for the students and teachers and relevant to the objectives and course content. The buildings of the schools are on rent but the authorities are working hard to maintain the quality of infrastructure.

Teacher 3 further elaborated that class and school environment both help the students in learning because the classrooms are wide and airy. No system is totally perfect and flawless but the effort to remove all the stumbling blocks hindering the learning process is important. Different researches show that the main purpose of input evaluation is to assess and identify different program strategies for attaining different objectives and to provide such information that assists in the usage of particular strategies. It is therefore necessary to focus on personnel, resources, procedures and decisions which specify new objectives. The next step is to inquire how objectives can be acquired effectively and efficiently (Stufflebeam, 1969).

### **Process evaluation**

The basic purpose of process evaluation is to provide description related to all the activities in the program (Stufflebeam, 1971). When it is related to school evaluation, process evaluation refers to the types of activities done in planning the instructional phase. This study also evaluated and provided a description related to different teaching learning processes. The findings of the study showed details of different processes that help in teaching and learning. According to the principal and teachers different type of methodologies and strategies are being used in the school which makes the process effective including student centered activities, active learning, reading skills (brainstorming, pre reading questions, spider web, picture pool, model reading on MP<sub>3</sub>), speaking skills (research projects, storytelling, pair and group work) and writing skills (inductive and deductive method).

Teacher 4 reported that they take examples from the daily lives of children to explain so that students can relate to these instances. Besides this, they also use audio visual aids to make the teaching learning process effective. In addition, the findings demonstrated that different methods of learning are used to teach, including lecture method, activity method, problem solving and demonstration method. In junior classes activities were arranged frequently for the sake of students mental and physical growth but in secondary classes and matric level, due to tough schedule,

activities are rare as it is difficult to do anything beyond the syllabus.

According to the teachers of this Welfare School System, students participate in games, speeches, quiz and singing competitions that provide them with a suitable platform to express themselves freely. The curricular and co-curricular activities develop students' physically and mentally and they are motivated to participate in activities at district and national level which helps in their social, moral, intellectual and physical development. The countless achievements of the students include kangaroo Maths test, ISMO, IST space exhibition, common wealth essay writing competition, spelling bee and debates in which they grabbed the top positions whenever they participated.

Moreover, findings revealed that there is an effective two-way communication between teacher and students, teacher and teacher, teacher and administration. Teacher 5 reported that two way communications exists on all levels. The administration and teachers are cooperative and always listen to students and parents' queries and issues. Teacher 6 elaborated on a flexible environment where everyone is given space to communicate freely.

Teacher 7 reported that student learning is measured thorough regular assessments both formal and informal that make the students ready for semester or final exams. In order to get a valid and reliable assessment of student' learning, this Welfare School System has worked out an innovative methodology for its appraisal that engages their higher order thinking and analytical skills for a true evaluation of targeted learning objectives. Periodic assessments are taken on weekly basis during each of the two semesters and on completion of each semester, a comprehensive exam is conducted. The answer scripts, marked with annotations, are returned to the students and this ongoing feedback helps them to identify their academic progress and improves the learning strategies accordingly. The weekly tests not only diagnose the student's academic shortcomings, but also help to make them studious and cultivate a habit of working regularly.

### **Product evaluation**

A product evaluation assesses outcomes and outputs, short and long term, intended and unintended, which not only keeps track but also focuses on the fulfillment (or not) of objectives (Stufflebeam, 2003). This study included

product evaluation of the school so as to assess whether objectives meet the targets or not. The findings of the study showed that effective environment, appropriate resources, relevant content, proper and effective teaching and learning, use of different teaching learning methodologies and strategies have great impact on the students' skills, attitudes, behavior, grades and result. The more student friendly the environment, the more effective is the learning. The findings underscored that there is a great impact of context, inputs and process on the product of the students. Documents analysis revealed that the students take part in activities and achieve high positions at national and international level. The students of this school are successfully making their places in society by excelling in different fields, including engineering, medicine, sciences etc. The school is working hard to maintain the quality of education by implementing different strategies with the help of hard working administration, heads, teachers and staff. According to the findings of the study, a few negative aspects were also revealed, for example, students are pressurized to some extent and focus on rote learning of the content. Due to this cramming system, there is huge pressure on students which effects their creativity and capabilities. Also, communication between teachers and students needs to be more friendly and comfortable so as to allow students to share their problems. It is imperative that teachers focus less on attainment of high marks and more on conceptual learning as marks are inaccurate and responsible for creating anxiety and stress among students (Thorndike, 1969). Moreover, some teachers focus more on theoretical work and less on practical work. In addition, the school buildings are on rent and there is a need to provide proper space and environment to the students that facilitates effective teaching and learning. and there is a need to provide appropriate facilities including library, auditorium, science laboratories to each branch of the school separately, there is need to provide more facilities to students based on new technology coping the needs of 21<sup>st</sup> century.

The concern of the study was to implement CIPP model for quality evaluation at school level. For that purpose the researchers evaluated the context, input, processes and outputs of the school. CIPP model helps in evaluating the quality and accountability of education at school level. Many researches have been conducted using CIPP model for evaluation of educational programs, quality of education, courses and text book evaluation. This study is in consistence with previous researches as it also used CIPP model for quality evaluation and for aligning internal evaluation with external evaluation. According to the research done on

“The Relevance of the CIPP Evaluation Model for Educational Accountability” Stufflebeam (1971), CIPP evaluation model helps in both internal/external evaluations, helps in evaluating the credibility and accountability of education, and assists the evaluator and staff in decision making. Without Context, Input, Process, and Product Evaluation Model, we cannot highlight the errors, weaknesses or strengths of the education system which may lower its effectiveness.

The findings of the present study showed that there is a requirement for more resources, learner friendly environment, proper equipment, effective communication and needs based focus for all beneficiaries involved. These findings support the results of the research conducted to evaluate effectiveness of textbook using CIPP model (Asad et al., 2016) which also highlighted the problems of lack of resources, piloting and video testing, positive attitudes, population of teachers and students, healthy environment and focus on the needs of beneficiaries including the people from all levels of society. A previous research also emphasized that the most important thing to make quality better is to make efforts to improve not just to prove (Stufflebeam & Shinkfield, 2007). A research conducted on teacher service learning program at university and local school level (Zhang, Zeller, Griffith, Metcalf & Williams, 2011) also supported the findings of present study that used CIPP model for assessing needs, formulated plans by using input evaluation, monitored progress using process evaluation and assessed inputs using product evaluation.

However, the present study differed from previous researches in a few aspects, because in the current research, quality evaluation was done at two branches falling under a Welfare School System, in which all the context, input, process and product evaluation were done by different qualitative instruments. The study also highlighted the gaps that effect quality of education in schools, including lack of proper equipment, library and laboratory facilities, less focus on practical work, cramming system, less friendly communication between teachers and students.

In order to improve and be accountable and to develop further, it is necessary to take steps to eradicate the problems hindering the way towards quality education and effective learning. The present study will help future researches involving CIPP evaluation model for quality evaluation and quality development of schools.

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## Conclusion and Recommendations

The aim of this study was to implement CIPP model for evaluating the quality of education in schools. Evaluation is the process which is responsible for monitoring the progress of an institution towards desired goals and objectives. For the purpose of evaluation, Stufflebeam's CIPP evaluation model was used to guide the evaluation systematically by looking at different aspects of educational quality at schools. In this study, the researchers tried to evaluate the quality of education at school level by assessing the context, inputs, processes and products of two schools falling under a Welfare School System in Rawalpindi. According to different researches CIPP model is an effective model used to enhance and assess the quality from each and every angle. Many researchers apply this model for evaluating the quality of textbooks, curriculum and school evaluation. It covers all the aims, objectives, resources, environment, methodologies, teaching learning processes and the outcomes of the school in the form of effective and successful learners (Scriven, 1973).

It was concluded from the findings that the Welfare School System under study, barring a few shortcomings, is one which is trying to maintain quality and is taking further steps for the improvement of quality of education in their schools. By using different instruments and as a result of data analysis it was found that all the processes focused on the students, especially those coming from the middle class of society. This school system is providing quality education and proper facilities to the students. Linn and Miller (2013) recommend that schools that schools should deliver an environment to students which ensures creativity by providing a moral based structure which caters to the social needs of the students and creates an atmosphere where students are able to compete with every challenge (Linn & Miller, 2013).

This study will be an example for future research studies on the systematic evaluation of quality education at school level. This study was aimed to evaluate the quality of education by implementing CIPP evaluation model. Through this research there are some recommendations for the principal, teachers and administration of the school for improving the quality of education at school level.

1. For improving the quality of education, well qualified and trained teachers may be hired.

2. The overall school environment may be conducive to learning and Audio Visual aids may be provided for effective learning. Parents and teachers should be in close contact with each other.
3. Rote learning should be eradicated and learners must be appreciated for their uniqueness and creative efforts.
4. Learning must be ensured, not marks.
5. While designing the curriculum, the needs and requirements of the 21st century must not be ignored because this is the era of globalization and students must be aware and updated accordingly.
6. Student centered methodologies, ensuring mental and physical growth of the students through co-curricular and extracurricular activities have to be adopted.
7. A two- way channel of communication between management and parent may be needed.
8. There may be a need to transform the techniques and formulate a method that favors creativity and originality; by means of this the quality of education will definitely improve.
9. The students should be provided a platform for research projects to improve quality of education.
10. Different educational trips and regular assessments may be organized for the improvement and maintenance of quality of education at school level.

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