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ANALYSIS OF CURRICULUM ALIGNMENT AT ELEMENTARY LEVEL IN PUNJAB-PAKISTAN

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ABSTRACT-The objective of this study is to explore the alignment of the enacted curriculum with the classroom instruction, assessment and the supported curriculum. The study was delimited to subject science for Grade 8 of schools and teachers of one district of Punjab. The sample of the study consisted of 200 schools, 200 teachers, Textbook of Science 8 and Curriculum of Science 8th class. The sample was selected stratified random sampling method and universal sampling method. Self-developed observation sheet for schools, questionnaire for teachers, and content analysis sheet for textbook and curriculum were the instruments employed for data collection. It was concluded that the classroom instruction and classroom assessment were not aligned with the National Curriculum Science 2006 because most of the teachers did not follow the instructional guidelines given in the curriculum. Moreover, the assessment also was not aligned with the curriculum.

Key Words: Assessed curriculum, Curriculum alignment, enacted curriculum, supported curriculum, taught curriculum.

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1.INTRODUCTION 1.1. Background of study:

The enacted curriculum represents collective and comprehensive output of all the educational stakeholders who have a role to play in any form for curriculum development. It represents the agreement after discussion of the educational experts (for suggesting content be taught), managers (representing expectations), and the teachers (who suggest possibility of content to be taught). So, it is vital for the teachers to plan their teaching in such a way that the objectives outlined in the intended curriculum are achieved (Kuhn & Rundle-Thiesle, 2009, p. 352). Conversely, it is "supreme paradox that in many accounts of schooling the written [enacted] curriculum, this most manifest of the social constructions, has been treated as 'given'" (Goodson, 2010, p. 193). There is a common tendency that this enacted curriculum is not actually followed practically.

A few studies, conducted in Pakistan, aiming at finding the congruence among different types of curriculum reflect that different types of curriculum may not be congruent. Educational managers need to be well aware of the enacted curriculum as only then they can provide necessary resources for implementing the enacted curriculum. However, the study conducted by Bhatti & Jumani (2011, p. 7) reflects that the educational managers did not have proper familiarity the enacted curriculum. Similarly, Jumani and Bhatti (2012) in a research entitled "Professional development needs of Pakistani teachers for teaching English as foreign language to primary classes" concluded that the teachers needed proper in-service training of the written curriculum for its proper implementation of curriculum. Bhatti, Jumani, & Bilal (2015) analyzed the Biology textbook at secondary level in Punjab and found misalignment between the textbook and the written curriculum. Similarly, Bhatti Global Journal of Management, Social Sciences and Humanities 872 Vol 4 (4) Oct-Dec,2018 pp.870-891 ISSN 2520-7113 (Print), ISSN 2520-7121 (Online) www.gjmsweb.com.editor@gjmsweb.com Impact Factor value = 4.739 (SJIF).

(2015) conducted curriculum audit at secondary level in Punjab and found misalignment of taught curriculum and tested curriculum with the written curriculum. In the same way, the actualized curriculum and the assessed curriculum may not be congruent with the enacted curriculum at elementary level. Therefore, it is necessary to find out level of congruence between various curricula. So, this study tried to explore level of congruence of the enacted curriculum with the supported and actualized curricula at elementary level in the Punjab (a province of Pakistan)

1.2 Objectives of study:

The study was undertaken to:

a) Explore the alignment of the classroom instruction with the enacted curriculum

b) Find out the alignment of the classroom assessment with the enacted curriculum,

c) Discern the alignment of the supported curriculum with the enacted curriculum, d) Examine alignment of the textbook with the enacted curriculum

2.REVIEW OF LITERATURE

2.1 Curriculum

Curriculum is essence of education. Education is transfer of knowledge, attitudes and skills from one generation to the next generation whereas curriculum "reflects forms of knowledge, habits of thinking, and cultural practices that a society considers important enough to pass on to succeeding generations" (Triche, 2002, p. 1). Curriculum is:

- revamping of child's experience to "the organized body of truth" (Dewey, 1902, p.11),
- sum of "all the learning experiences planned and directed by the school" (Tylor, 1957, p.79)
- "a systematic group of courses or sequences of subjects" (Good, 1988, p.157),

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- "the formal and informal content and process by which learners gain knowledge and understanding, develop skills, and alter attitudes, appreciations, and values under the auspices of school" (Doll, 1996, p.15).
- a "plan for providing sets of learning opportunities for persons to be educated" (Saylor, Alexander & Lewis, 1981, p.8),
- "entire range of experiences, both directed and undirected, concerned with unfolding the abilities of the individual" (Bobbit, 1918, p. 43)

All these definitions broaden the scope of curriculum. So, anyone who is interacting with the learner becomes part of the curriculum.

3.TYPES OF CURRICULM

3.1 Recommended Curriculum/Ideological Curriculum:

The curriculum construed by the educational stakeholders (such as policy makers, educationists, scholars, professional associations, legislators) at national level is called recommended curriculum or ideological curriculum. It is broader in scope and most often gives policy guidelines. It not only suggests basic framework of curriculum but also identifies key learning areas. The example of recommended curriculum in Pakistan is National Education Policy 2017.

3.2 Enacted Curriculum:

According to the broad guidelines given in the recommended curriculum, the educational experts, the teachers, pupils and parents approved a practicable plan that is called written curriculum. It represents compromise between the ideals given in the recommended curriculum and the real situation. In fact, the general goals of the recommended curriculum are interpreted into explicit learning outcomes.

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3.3. Supported Curriculum:

Relevant resources are essential to implement the written curriculum. These essential resources needed to implement the written curriculum are called the supported curriculum. These resources may include (a) Human resources (teachers), (b) Physical Resources.

3.4 Actualized Curriculum/Taught Curriculum:

It is teacher who basically implements the curriculum. The curriculum taught by the teacher in the classroom is called actualized, taught curriculum or operational curriculum. In fact, teacher knows the ground realities for implementation of curriculum such as nature, background and individual differences of the learners, and the available resources. Therefore, teacher makes important decisions and adaptation about implementing curriculum. Many curriculum experts favour the authority of teachers to make decisions about curriculum, instruction and use of instructional resources.

3.5 Learned Curriculum:

Curriculum is developed to bring desirable changes among the learners. Learned curriculum is defined as the entire changes taken place in the learners due to their experience in school. Learned curriculum is also called experienced curriculum. Curriculum has also been defined as everything the learner experiences. As matter of fact this is definition of learned curriculum.

3.6 Tested/Assessed Curriculum:

The part of curriculum which is represented through formative and summative evaluation of learners is termed as assessed or tested curriculum. The assessed curriculum is important as its outcomes help the stakeholders in evaluating the impact of written and taught curriculum upon the learners. Global Journal of Management, Social Sciences and Humanities 875 Vol 4 (4) Oct-Dec,2018 pp.870-891 ISSN 2520-7113 (Print), ISSN 2520-7121 (Online) www.gjmsweb.com.editor@gjmsweb.com Impact Factor value = 4.739 (SJIF).

3.7 Hidden curriculum:

Hidden curriculum includes all the unintended consequences of teacher's activities or behaviour. This is called the unintentional because the teachers and the schools are not aware of the impact of their unconscious behaviour upon the learners.

3.8 Curriculum Alignment

Curriculum guides teaching as it not only outlines learning content but also directs breadth and order of teaching. The implementation of curriculum is process in which all the members in the hierarchy of education system have important role to play. The objectives of curriculum may be achieved if all the members in the hierarchy of education system collectively work as an organized team in a coordinated manner. Shared goals can be achieved if various components of education system make joint efforts. Curriculum alignment has been defined as degree of 'match or overlap" between instruction and "content and format" of assessment (English, 2000, p. 63). Leitzel and Vogler (1994, p. 5) are of the view that curriculum is aligned if the delivery of the content and the evaluation of the content (evaluation) are in accordance with the planned content.

The main factor behind misaligned curriculum is that educational tasks (e.g. developing curriculum, training teachers, making assessment, etc) are performed by different agencies. Owing to misalignment between enacted and assessed curricula, the teachers face conflicting situation of making balance between demand of policy makers and the real circumstances in the classroom (Fuhrman, 1993). Therefore, we can conclude that alignment of curriculum, assessment and the professional development of teachers play an important role in the educational decision-making.

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4.RESEARCH DESIGN AND METHODOLOGY

According to Creswell (2009, p. 18) mixed methods approach of data collection gives a better understanding of the research problem as it focuses on behaviour as well as meaning. Therefore, to achieve the objectives of study, mixed methods approach of research was adopted in this study.

4.1 Population:

The following entities constituted the population of study.

- 1. All the teachers teaching to elementary classes in Elementary, Secondary or Higher Secondary schools in Punjab,
- 2. Punjab Textbook Board Lahore, and
- 3. Punjab School Education Department curriculum wing Lahore.

4.2 Sample of the Study:

The sample of the study has been described as under.

Sr. No.	Sample	Sample size	Data source	Number
1	Schools	200	Schools	200
			Teachers	200
4	Punjab Textbook Board	1	Textbook of Science 8	1
5	School Education Department of Punjab Lahore	1	Curriculum of Science 8	1

Global Journal of Management, Social Sciences and Humanities 877 Vol 4 (4) Oct-Dec,2018 pp.870-891 ISSN 2520-7113 (Print), ISSN 2520-7121 (Online) www.gjmsweb.com.editor@gjmsweb.com Impact Factor value = 4.739 (SJIF).

4.3 Sampling Techniques:

If we require equal representation of all groups, stratified random sampling is proper sampling technique to be adopted (Gay, 2005, p. 117). Therefore, 100 schools (100 boys schools and 100 girls schools) were selected through stratified random sampling method. Curriculum and textbook were selected through universal sampling method.

4.4 Research Instruments:

Table 2 gives the detail of research instruments used the study.

Sr.#	Sample	Instrument
1	Schools	Observation sheet
3	Teachers	Questionnaire
4	Textbooks	Content analysis sheet
5	Curriculum	Content analysis sheet

Table 2 Research instruments

4.5. Data Collection:

First of all, the enacted curriculum was examined by using the content analysis sheet for curriculum. The textbooks were explored by using the content analysis sheet for the textbook. For observation of the schools, the District Education Officer (SE), District Education Officers (EE-M, EE-W) and the heads of the institutions of the teachers were contacted for getting permission properly to observe schools. The teachers were persuaded to allow the researcher to observe their classes. It was Global Journal of Management, Social Sciences and Humanities 878 Vol 4 (4) Oct-Dec,2018 pp.870-891 ISSN 2520-7113 (Print), ISSN 2520-7121 (Online) www.gjmsweb.com.editor@gjmsweb.com Impact Factor value = 4.739 (SJIF).

explained to them that their data would be used anonymously and the they would also be provided the results of study.

5. FINDINGS AND RESULTS

Following findings were drawn based on data analysis. The findings have been categorized under the objectives of the study.

5.1 Alignment of the classroom instruction with the enacted curriculum

- Most of the teachers (83%, mean -0.78) were of the opinion that the teachers did not start the lesson with an open-ended question or demonstration. Only a few teachers (15.5%) thought that teachers started the lesson with openended question or statement.
- 2. Majority of the teachers were of the opinion (63%, mean -0.37) that teachers did not employ teaching strategies that respond to a diversity of learning styles, while some teachers (36.5%) thought that teachers employed teaching strategies that respond to a diversity of learning styles.
- 3. Majority of the teachers (67.5%, mean -0.56) were of the opinion that teachers did not use hands-on students' learning strategies, while some teachers (31.5%) were of the view that they used of hands-on students' learning strategies.
- 4. Majority of the teachers (63.5%, mean -0.40) were of the opinion that visually stimulating learning environments were not provided in class.
- Majority of the teachers (62%, mean -0.32) were of the opinion that the teachers did not ask questions that encourage inquiry and stimulate thinking.
 Some teachers (37.6%) were of the view that they asked questions that encourage inquiry and stimulate thinking.

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- 6. Most of the teachers (78%, mean -0.69) were of the opinion that teachers did not engage students in scientific inquiry, while only a few teachers (21.5%) favoured the statement that teachers engaged students in scientific inquiry.
- Majority of the teachers (60%, mean -0.19) were of the opinion that teachers did not incorporate all literacy strategies (reading, writing, speaking, & listening). A smaller number of teachers (38.5%) were of the opinion that teachers incorporated all literacy strategies (reading, writing, speaking, & listening).
- 8. Most of the teachers (76%, mean -0.58) were of the opinion that teachers did not encourage students to use their new ideas and skills in a variety of contexts. However, a few teachers (21.5%) were of the view that the teachers encouraged students to use their new ideas and skills in a variety of contexts.
- Most of the teachers (74%, mean -0.87) were of the opinion that the teachers did not provide creative learning environment using discovery techniques. However, a few teachers (23%) were of the view that the teachers provided creative learning environment using discovery techniques.
- 10. Most of the teachers (76.5%, mean -1.00) were of the opinion that the teachers did not engage students in problem solving and constructing meaningful experiences. However, a few teachers (21%) were of the view that the teachers engaged students in problem solving and constructing meaningful experiences.
- 11. Most of the teachers (83%, mean -0.78) were of the opinion that the student did not ask questions to clarify their concepts, while only a few teachers (15.5%) were in favour of the statement.

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- 12. Majority of the teachers (63%, mean -0.37) were of the opinion that students did not evaluate various scientific concepts they had studied. However, some teachers (36.5%) were of the opinion that students evaluated various scientific concepts they had studied.
- 13. Majority of the teachers (67.5%, mean -0.56) were of the opinion that students did not use the new ideas and skills in challenging and unfamiliar situations. However, some teachers (31.5%) were of the view that students' used new ideas and skills in challenging and unfamiliar situations.
- 14. Most of the teachers (63.5%, mean -0.40) were of the opinion that students did not consider science relevant and useful to them and to society. However, some teachers (33.5%) were of the view that students did not consider science relevant and useful to them and to society.
- 15. Majority of the teachers (62%, mean -0.32) were of the opinion that the students could not give evidences from daily life to explain concepts they had studied. Some teachers (37.6%) were also of the view that the students could give evidences from daily life to explain concepts they had studied.
- 16. Most of the teachers (78%, mean -0.69) were of the opinion that students did not interact purposefully leading to effective communications. Only a few teachers (21.5%) thought that students interacted purposefully leading to effective communications.
- 17. Majority of the teachers (60%, mean -0.19) were of the opinion that students did not acquire a greater understanding of the purpose of learning. However, some teachers (38.5%) thought that students acquired a greater understanding of the purpose of learning.

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5.2 Alignment of the classroom assessment with the enacted curriculum

- Most of the teachers (76%, mean -0.58) were of the opinion that assessment did not enable students to present relevant information from a variety of sources. A few teachers (21.5%) were of the view that assessment enabled students to present relevant information from a variety of sources.
- 2. Most of the teachers (74%, mean -0.87) were of the opinion that the teachers did not conduct assessment to enable students to report trends and draw inferences. A few teachers (23%) were of the view that the teachers conducted assessment to enable students to report trends and draw inferences.
- 3. Most of the teachers (76.5%, mean -1.00) were of the opinion that the teachers did not conduct assessment to enable students make predictions and hypotheses and deduce relationships. A few teachers (21%) were of the view that the teachers conduct assessment to enable students make predictions and hypotheses and deduce relationships.
- 4. Most of the teachers (83%, mean -0.78) were of the opinion that the teachers did not conducted assessment to enable students identify the problem, plan and carry out an investigation to solve the problem. Only a few teachers (15.5%) were in favour of the statement.
- 5. Majority of the teachers (63%, mean -0.37) were of the opinion that teachers did not assess students to enable them conduct scientific investigation using appropriate tools and technologies. However, some teachers (36.5%) thought that they assessed students to enable them conduct scientific investigation using appropriate tools and technologies.
- 6. Majority of the teachers (67.5%, mean -0.56) were of the opinion that teachers did not assess students to enable them apply and communicate

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information through science process skills. However, some teachers (31.5%) were of the view that teachers assessed students to enable them apply and communicate information through science process skills.

- 7. Majority of the teachers (63.5%, mean -0.40) were of the opinion that teachers did not conduct assessment to enable students apply science principles to both familiar and unfamiliar situations/problems. Some teachers (33.5%) were of the view that teachers conducted assessment to enable students apply science principles to both familiar and unfamiliar situations/problems.
- 8. Majority of the teachers (62%, mean -0.32) were of the opinion that the teachers did not conduct assessment to enable students show understanding of connections between science and technology and the world outside the school as well as their implications. However, some teachers (37.6%) were of the opinion that the teachers conducted assessment to enable students show understanding of connections between science and technology and the world outside the world outside the school as well as their implications.
- 9. Most of the teachers (78%, mean -0.69) were of the opinion that teachers conducted assessment to enable students propose solutions to problems with respect to science & technology and its relation with society and environment. However, only a few teachers (21.5%) thought that teachers conducted assessment to enable students propose solutions to problems with respect to science & technology and its relation with society and environment.
- 10. Majority of the teachers (60%, mean -0.19) were of the opinion that teachers conducted assessment to appraise students' problem-solving skills. However,

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some of teachers (38.5%) were of the opinion that teachers conducted assessment to appraise students' problem-solving skills.

- Most of the teachers (76%, mean -0.58) were of the opinion that teachers conducted assessment to appraise students' analytical and creative thinking. However, a few teachers (21.5%) were of the view that the teachers conducted assessment to appraise students' analytical and creative thinking.
- 12. Most of the teachers (74%, mean -0.87) were of the opinion that the teachers conducted assessment to appraise students' positive attitudes toward science and scientific methods of thinking. However, some teachers (23%) were of the view that the teachers conducted assessment to appraise students' positive attitudes toward science and scientific methods of thinking.
- 13. Most of the teachers (76.5%, mean -1.00) were of the opinion that the teachers conducted assessment to appraise students' ability to work together with others.
- 14. Majority of the teachers (64.5%, mean -0.28) were of the opinion that the teachers conducted assessment to appraise students' ability to manipulate and utilize science equipment. However, some teachers (32.5%) were of the view that the teachers conducted assessment to appraise students' ability to manipulate and utilize science equipment.

5.3 Alignment of the supported curriculum with the enacted curriculum

Textbooks were available for all the students of nearly all the schools (94.5%). Similarly, teacher's guides were available in some schools (32%). However, all the other resources mentioned in the curriculum were almost unavailable in the schools. Student's work book and video tapes were not available in all the schools (100%). Similarly, most of the schools (88%) did not have reference books related to

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science subjects. Likewise, majority of schools (65%) did not have Instrument, Chemicals and Materials for conducting experiments.

5.4 Alignment of the textbook with the enacted curriculum

Textbook content is fully congruent with the curriculum with respect to accuracy of content, being biased-free, and being related to the goals of curriculum. However, the textbook content follows the guidelines given in the curriculum to some extent with respect to developing important skills, illustration being helpful to understand the concepts, and the end of chapter exercises which can encourage students to think and develop their skills. However, end of chapter exercises do not encourage students to be creative. It also shows that the textbook do not contain the activities which stimulate interest that would lead to further study.

6.CONCLUSIONS AND DISCUSSIONS

6.1 Alignment of the classroom instruction with the enacted curriculum

National Curriculum Science 2006 aims at encouraging students to: (a) develop a critical sense for wonder and curiosity (b) use science and technology to acquire new knowledge and solve problems, (c) critically address social, economic, ethical, and environmental issues, and (d) engage in science-related activities appropriate to their interests and abilities. To achieve these aims class room instruction plays a role as it is the place where implementation of curriculum takes place. For classroom instruction the curriculum has proposed clear suggestions. However, the major portion of these guidelines was not followed during classroom instruction.

Beginning a lesson with open ended question not only increases interest of students but also develops creative faculty of students. However, mostly teachers did not start the lesson with an open-ended question or demonstration. Similarly

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individual differences always exist in a class, and teaches need to adopt diversity in teaching style but majority of teachers did not employ teaching strategies that respond to a diversity of learning styles. The teachers also did not use hands-on students' learning strategies. In the same way, majority of the teachers did not provide visually stimulating learning environments in class. Moreover, majority of teachers did not ask questions that encourage inquiry and stimulate thinking.

Engaging students in scientific inquiry is essential for developing scientific skills and attitude among students. However, only a few teachers engaged students in scientific inquiry and incorporated all literacy strategies (reading, writing, speaking, & listening). A few teachers encouraged students to use their new ideas and skills in a variety of contexts. Moreover, teachers mostly could not provide creative learning environment using discovery techniques. Likewise, the teachers did not engage students in problem solving and constructing meaningful experiences. Asking questions indicates curiosity and interest of students in the subject but only a few teachers could motivate their students to ask questions to clarify their concepts.

Achieving objectives of higher order level is also essential for teaching of science. However, majority of students neither evaluated various scientific concepts they had studied nor used the new ideas and skills in challenging and unfamiliar situations. The students also could give evidences from daily life to explain concepts they had studied. Similarly, the most of the students lacked interest in science as they did not consider science relevant and useful to them and to society.

6.2 Alignment of the classroom assessment with the enacted curriculum

Assessment is important for students, teachers, and the curriculum developers. The objectives of assessment are achieved if assessment is congruent with the curriculum. Assessment is valid and reliable if it is conducted according to the

Global Journal of Management, Social Sciences and Humanities 886 Vol 4 (4) Oct-Dec,2018 pp.870-891 ISSN 2520-7113 (Print), ISSN 2520-7121 (Online) www.gjmsweb.com.editor@gjmsweb.com Impact Factor value = 4.739 (SJIF).

guidelines given in the curriculum. The assessment in science education aims at assessing students about their capability of understanding science principles conducting scientific inquiry, applying science principles.

Assessment is a comprehensive appraisal of students' knowledge, skills and attitudes. So, assessing the students' ability to present relevant information from variety of sources is the first principle suggested in the National Curriculum 2006. However, most of the teachers did not conducted assessment that enabled students to present relevant information from a variety of sources. Mostly teachers did not conduct assessment to enable students to report trends and draw inferences.

Similarly, developing scientific attitude among the students is key objective of teaching science as well as assessment in science. However, most of the teachers conducted assessment neither to enable students make predictions and hypotheses and deduce relationships nor to enable students identify the problem, plan and carry out an investigation to solve the problem. Moreover, majority of the teachers did not assess students to enable them conduct scientific investigation using appropriate tools and technologies. Similarly, majority of the teachers did not assess students to enable them apply and communicate information through science process skills.

A small number of teachers conducted assessment to enable students apply science principles to both familiar and unfamiliar situations/problems. Similarly, only a few teachers conducted assessment to enable students show understanding of connections between science and technology and the world outside the school as well as their implications. Likewise, only some teachers conducted assessment to enable students propose solutions to problems with respect to science & technology and its relation with society and environment. Nonetheless, some of teachers conducted assessment to appraise students' problem-solving skills. Only a few teachers Global Journal of Management, Social Sciences and Humanities 887 Vol 4 (4) Oct-Dec,2018 pp.870-891 ISSN 2520-7113 (Print), ISSN 2520-7121 (Online) www.gjmsweb.com.editor@gjmsweb.com Impact Factor value = 4.739 (SJIF).

conducted assessment to appraise students' (a) analytical and creative thinking (b) positive attitudes toward science and scientific methods of thinking (c) ability to work together with others, and (d) ability to manipulate and utilize science equipment.

6.3 Alignment of the supported curriculum with the enacted curriculum

Educational resources are also vital for proper implementation of curriculum. Textbooks were available for all the students of nearly all the schools. Similarly, teacher's guides were available in some schools. However, all the other resources mentioned in the curriculum including (a) student's work book and video tapes, (b) reference books related to science subjects, and (c) instrument, chemicals and materials for conducting experiments were not available in most of the schools.

6.4 Alignment of the textbook with the enacted curriculum

Textbook content is fully congruent with the curriculum with respect to accuracy of content, being biased-free, and being related to the goals of curriculum. However, the textbook content follows the guidelines given in the curriculum to some extent with respect to developing important skills, illustration being helpful to understand the concepts, and the end of chapter exercises which can encourage students to think and develop their skills. However, end of chapter exercises do not encourage students to be creative. Moreover, the textbook do not contain the activities which stimulate interest that would lead to further study.

7.RECOMMENDATIONS

Following recommendations are being made in the light of findings and conclusions:

1) First-hand knowledge of curriculum is essential for teachers, so they may be made fully aware of the complete content and guidelines in the curriculum.

Global Journal of Management, Social Sciences and Humanities 888 Vol 4 (4) Oct-Dec,2018 pp.870-891 ISSN 2520-7113 (Print), ISSN 2520-7121 (Online) www.gjmsweb.com.editor@gjmsweb.com Impact Factor value = 4.739 (SJIF).

- Complete content of curriculum may be included in both in-service and preservice teachers training programmes.
- 3) Dissemination of written curriculum document may be circulated to every concerned person i.e. teacher, educational managers, textbook developers etc.
- 4) While revising the curriculum, the available educational resources particularly teachers' qualification and classroom facilities be considered properly.
- 5) Teachers may be properly trained about the assessment in science education.

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CONTRIBUTION OF AUTHORS AND CONFLICT OF INTEREST

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