



Designing Checklist for Teachers' Teaching Strategies of Secondary School

Prof. Nikme.S. C. Momin¹

Jilpash R. Marak²

¹ Professor, Department of Education, NEHU, Tura –Campus, Tura

¹ Research Scholar, Department of Education, NEHU, Tura-Campus, Tura

ABSTRACT

The 21st century is the age where ever growing, changing, innovations and full of mysterious wonders that is taking place. In every field, including education, the ideas of innovation are playing a vital role that is easily visible in the performances of school in the board examinations. Today, the teachers use teaching strategies for each subject to make the student learn and for better achievement in schools (Amstrong, 2020). The teaching strategy is a generalised plan for a lesson which expected to change learners' behavior through learning objective and the outline of the teaching activities before the class (Study Lecture Notes, 2022). However the strategies utilised by each schools teachers varies from one teacher to the another and this can be evident by result of Secondary School Leaving Certificate(SSLC), Meghalaya Board of School Education (MBOSE), Tura, 2022. Total number of students appeared for the SSLC examination were 57371, out of which only 32678 number of students were passed in the examination. Result indicted that only 56.96 percent out of 100 percent was passed in the examination. Still 24693 number of students failed and those students are mostly from rural Meghalaya and mostly from Garo Hills region. Thus, the **objective of the study** has been considered for designing of Checklist to find out the teaching strategies used by teachers of aggregate performing levels between 100% to 50% in the last 10 years of SSLC Examination in Meghalaya Board of School Education. The **population** comprised of all schools with aggregate performance level from 50% to 100% in the SSLC Examination (w.e.f. 2012-2022), in West Garo Hills District. These schools were divided into three categories, Category A schools (performances between 100% to 90 %); Category B schools (performance between 89.9% to 70%) and Category C schools (performance between 69.9% to 50%). The study used **Checklist of teachers' teaching strategy** as a research tool and data was collected through participant observation and was interpreted with **content analysis**. Findings revealed that teachers' teaching strategies of social science in all the three school categories (A,B&C) across type of school management, appreciated the Cognitive Activation Strategies with highest priority, irrespective of locale. Active Teaching Strategies & Teacher Directed strategies are used mostly in urban private schools and urban government & urban adhoc schools, respectively which indicated that the checklist of teachers teaching strategies can be utilised to identify the teaching strategies used by social science Teachers at schools.

Keyword: Active Teaching Strategies, Cognitive Activation Strategies, Teacher Directed Strategies, Social Science, Checklist of Teachers' Teaching Strategies.

INTRODUCTION:

The 21st century is the age where ever-growing, changing, innovations and full of mysterious wonders that are taking place which is yet to be known. Almost all, including in the field of education, ideas of innovation are playing a vital role in competitiveness that is easily visible in the performances of schools in the board examinations. Unless the reasons are being identified for the growth of schools in performances, others will fall behind against every growing stage in the field of education. Thus the development of tools will help to identify the reasons for the growth of schools in need of an hour.

Today, the teachers use teaching strategies for each subject to make the student learn and for better achievement in schools (Amstrong, 2020). The teaching strategies are methods the teacher use in the class for specific content and to ensure students attain achievable goal. An educational blog called Teachmint (2022) posted that teaching strategies are the practices that teachers utilised to make the students engage in the classroom for their better learning. It requires innovative teaching methods that open paths for all students. However, the method or strategies utilised by each school varies from one another and this can be evident from the result of the Secondary School Leaving Certificate (SSLC), Meghalaya Board of School Education (MBOSE), Tura, 2022. The total number of students who appeared for the SSLC examination was 57371, out of which only 32678 students passed the examination. Results indicated that only 56.96 percent out of 100 percent passed the examination. Still, 24693 students failed and those students are mostly from rural Meghalaya and mostly from the Garo Hills region. This happened almost in the past decade. Thus this present situation turned into questions like, What are the teaching strategies followed by teachers of aggregate performance levels from 50% to 100% in the SSLC Examination in Meghalaya Board of School Education? Are there any tools that can identify those strategies used by performance levels between 100% to 50% in SSLC Examination? What tools would be the most appropriate to study these present situations?

Review of related literature

One of the assumptions to analyse the reasons behind the result of the schools is to study or identify the strategies or the methods that the teachers used in the classroom. Thus, this led to a review of the related literature in the following ways:

Teaching Strategies:

The teaching strategy is a generalised plan for a lesson which expected to change learners' behaviour through learning objectives and the outline of the teaching activities before the class (Study Lecture Notes, 2022). OECD (2016) identified three underlying teaching strategies these are Active teaching strategies, Cognitive Activation Strategies and Teacher Directed Strategies. These three strategies can be summed up in such a way that;

Active Teaching Strategy: The active learning strategy as stated by Bonwell (1991) is the strategy in which where the students are involved in activity more than listening and have less on transmitting messages and more focus on developing students' skills, Shyna Kalra 2021 reported that active teaching strategies are the strategies were the teacher teach the class through activity based teaching where there is the active participation of every student than mere passive listening. To support these reports Prince, M. (2004), Jamie Goodwin (2018), Ashok Kumar Gupta (2019), Singh (2004) stated that active teaching strategies are collaborative, cooperative, group work, discussion, comprehension, problem-based learning where the teacher can promote students engagement in the class.

Cognitive Activation Strategies: Cognitive Activation Strategies are those strategies that encourage students to think deeply and focus on the method they use to find the solution to their problems and there is also cognitive involvement among students as they analyse, synthesise and make an evaluation, (OECD 2016, Bonwell 1991). Examples of those cognitive activation strategies are summarising, memorisation, Higher Order Thinking, Middle Order Thinking, Lower Order Thinking, concept mapping, brainstorming (Ian Cantley 2016, R. Joseph 2022, Maina 2022, Satyawani Polist 2015),

Teacher Directed strategies: In Teacher Directed strategies, the teacher teaches students through lectures, demonstration and direct instruction instead of hands-on or exploratory-based teaching. Here teacher play an active role while student listen passively and the teacher narrates the story and ask them to repeat after him or instruct the direction (Sarah's Classroom 2022, Jackson Best 2020, Mary Dean 2019, Chakrabarti Mukti 1977).

Teaching Skills: Teaching Skills are the skills that help a teacher to keep students engaged in the classroom for which teachers earn attention and respect from the students (Glassdoor Team (2021). Super Teacher (2022) posted that today with the advancement of technology in the field of education several new teaching strategies are rising up and here combination of both traditional and new teaching methods aimed at producing of best learning outcome. However, among many prominent teaching methods, micro-teaching skills were the most useful and popular technique used by teachers. Thus the micro-teaching skills are highlighted as Introduction, Explanation, Probing Question, Stimulus Variations, Black Board Skills, Reinforcement and Conclusion.

Teaching Elements: As taken from Joyce and Well teaching models are the instructional design to bring certain changes to the behaviour of students thus providing valuable guidelines for carrying out teaching activities to realise the specific goals. These models of teaching provide fundamental elements, these are: **Focus:** which indicates the teacher's teaching based on the objective of the lesson, **Syntax:** presentation order and sequences, **Principles of Reaction:** teacher's response with verbal or non-verbal reinforcement, support System: teacher's use of material like a textbook, chart, teaching aids etc, **Social System:** field trip, learning by doing, conversation, extempore speech etc., and **Application:** teachers' use of examples, classwork, homework (guided practice) etc. (Tumbaach Dhammei, 2022)

From the above review, it has been noticed that different researchers have done studies on teaching strategies and the study with the use of checklist where most of the studies are teaching strategies related to students outcome, teaching strategies of science and maths, checklist for identifying health related issues with qualitative and quantitative approach. However, it is noticed that none of the studies found on teaching strategies trying to identify with the help of a checklist through a qualitative approach combining with teaching methods, micro-teaching skills and Elements of Teaching taken from Models of teaching, were very limited.

Justification of the study

Thus, the study has been considered for designing of Checklist to find out the teaching strategies used by teachers of aggregate performing levels between 100% to 50% in the last 10 years of SSLC Examination in Meghalaya Board of School Education, for which the following statement of the problem has been given.

Statement of the problems:

As there is always a gap between the students' outcome in the SSLC result of the private Adhoc, Deficit and Govt. secondary school and the gap between the rural and the urban school. Thus with this rationale, the study has been entitled 'Designing Checklist for Teaching Strategies of Secondary School Teachers in Meghalaya'.

Objectives:

1. To design the checklist of teaching strategies for teacher teaching at the secondary level.
2. To study the usability of checklist for teaching strategies of teacher teaching in secondary school.

Delimitation of the Study

The study is delimited to the following:

- 1) Schools affiliated to the Meghalaya Board of School Education (MBOSE), with the type of school administration Private, Adhoc and Govt. schools and the school belonging to the urban and rural schools of West Garo Hills.
- 2) Teaching Strategies of Social Science subjects.

METHODOLOGY

This study carried out a descriptive method for qualitative information.

Population of the study

The population of the study comprised all the schools of West Garo Hills, with aggregate performance levels from 50% to 100% in the SSLC Examination (w.e.f. 2012-2022). These schools were divided into three categories, Category A whose performances are between 100% to 90 %, Category B schools are between 89.9% to 70% and Category C schools are between 69.9% to 50%. Further, divided into locales, Urban and Rural and types of school management like Government, Deficit, Adhoc and Private schools. From these schools, 100 Social Science teachers were observed for data collection. The study is carried out among the Class X Teachers of Social Science subjects.

District	Locale	Type of School Administration	Category -A	No. of Teacher	Category -B	No. of Teacher	Category -C	No. of Teachers	
			100% - 90%		89.9% - 70%		69.9% - 50%		
West Garo Hills	Urban	Govt.	-	-	1	2	1	2	
		Deficit	5	10	2	4	-	-	
		Adhoc	4	8	6	12	4	8	
		Private	7	14	2	4	-	-	
	Rural	Govt.	-	-	-	-	2	4	
		Deficit	-	-	3	6	3	6	
		Adhoc	-	-	4	8	2	4	
		Private	1	2	2	4	1	2	
	Total			17	34	19	40	14	26

Table1.1. Sample Size of Teachers teaching Social Science(N=100)

Data Collection Procedure

Data was gathered through participant observation during Social Science classes. Content Analysis was used for results and interpretation. With permission from the concerned school authorities, data was gathered from teachers through the administration of CLTTS, and necessary audio/video recordings were done.

Scoring: Checkboxes against all components were tick marked as per the teacher's teaching based on the observations of the teachers' activities against sub-components of each teaching strategy. Every ticked mark scored one.

First draft of Checklist of Teacher's Teaching Strategies (CLTTS)

Slide share(2018) shared that a checklist is a research tool which mostly use for the evaluation of performance. It is a simple instrument that consists of a list of expected items or attributes which are checked by the researcher. Cleo Protogerou and Martin S. Hagger (2020) revealed that constructing a checklist met the following stages like a review of literature related to the tools, expert review, checklist refinement based on content analysis, and checklist scoring. Thus the dimension and sub-dimensions of the checklist of teachers teaching strategies are Sum up in the three parts of the checklist Part A Active Teaching Strategies, Part B Cognitive Activation Strategies, and Part C Teacher Directed Strategies.

Part-A, ActiveTeaching Strategies which makes the learner involved and active in the classroom. The Teaching Methods comprises in this strategy are (i). discussion, (ii). group work, (iii). interactive engagement, (iv).role play and drama, and (v).comprehensive reading. (vi). Debate, (vii)Elaboration, (viii).Learning by doing, (ix) Hands-on Learning, (x) Stimulation, (xi)Field Trip.

Part – B: Cognitive Activation Strategies are teaching strategies which aim to enhance students learning through thinking, analysing, remembering, and focusing on learning with creativity and criticality. The Teaching Method like (i) HOT (ii). MOT (iii). LOT (iv). questioning (v) brainstorming (vi) concept map (vii) summarising;

Part – C: Teacher Directed Strategies are the strategies guided primarily by the teachers. The Teaching Method like(i) Scaffolding and (ii). Story Telling (iii) Demonstration (iv) Lecture (v) Drilling and repetition (vi) Project work.

All the above three Parts of Teaching Strategies contain the same sub-dimension, these are as follows:

Teaching Skills comprises different skills that are expected to see in the classroom.

Teaching Components comprises like the skill of (i).probing questions with-(a). prompting, (b). seeking further information (c). refocusing (d) redirection (e) evaluation; (ii) introduction of the lesson (a) motivating (b) inquiry about the previous topic (c). cognitive linking and (iii). stimulus variation: (a) body gesture (b) change in tone (c) eye contact (d) pause for a moment; (iv). explanation- (a) clear statement (b). language fluency (c). connecting link and (d) use of proper words. (v). blackboard skills where teachers' skills indicate through (a) legible handwriting (b) letter size and alignment (c). utilisation of space, (d) blackboard summary (e). controlling students while using blackboard or whiteboard. (vi).reinforcement that has the teacher using positive verbal and non-verbal reinforcement (a).excellent (b). well done (c) giving praise, and non-verbal cues (a). smiling (b). keeping eye contact to increase students' participation. (vii). the conclusion is that teachers highlight class through important points.

Teaching elements – (i). syntax: presentation order and sequences (ii). principle of reaction: teacher's response with verbal or non-verbal reinforcement. (iii). social system: field trip, learning by doing, conversation, extempore speech etc. (iv). focus which indicates the teacher's teaching based on the objective of the lesson. (v) support system: teacher's use of material like a textbook, chart, teaching aids etc.(vi) application: teachers' use of examples, classwork, homework (guided practice) etc.

Students Learning Outcome: Students learning outcomes can be shown in the form of three learning levels, Lower Order Thinking, Middle Order Thinking and Higher Order Thinking. These are Remember, Understand, Applying, Analysing, Evaluate and Creating.

Scoring: For every item of each component of the checklist 1 to 4 marks were assigned. 4-represents "Very High", 3-represent "High," 2-represent "Average" and 1-represent "Low." These marks could be given if teachers' use of teaching strategies is being observed in the classroom.

First phase of pilot study

Expert Review on Checklist of Teachers Teaching Strategies (CLTTS)

The experts like Prof. of University, Retired Secondary Teachers, DIET Lectures, B.Ed Lecturers and Assistant Lecturers of Higher Secondary and Head Teachers/Principals have reviewed and suggested CLTTS. Besides these, there was interaction with the senior and retired Social Science Teachers and these suggestions are mentioned below:

The Teaching Method is renamed as Teaching Activity as there can be a number of teaching methods but those methods represent the teachers' act. The items described in Teaching Skill were removed, however, items of Teaching Component were moved to Teaching skill.

There are suggestions to arrange the items of Teaching Activity, Teaching Skills and Teaching Element and these are mentioned in the Second Draft of CLTTS.

Second draft of CLTTS

Part – A Active Teaching Strategies:

Teaching Activity: (i). discussion, (ii). group work, (iii). interactive engagement, (iv).role play and drama, and (v).comprehensive reading. (vi). Debate, (vii)Elaboration, (viii).Learning by doing, (ix) Hands-on Learning, (x) Stimulation, (xi) Field Trip.

Teaching Skills: Probing Questions and Reinforcement Skills

Teaching Elements: Syntax, Principle of Reaction and Social System

Students Learning Outcome: Remember, Understand, Applying, Analysing, Evaluate and Creating.

Part -B Cognitive Activation Strategies:

Teaching Activity: HOT, MOT, LOT, Questioning, Brainstorming, Concept mapping and Summarisation.

Teaching Skills: Introduction and Stimulus Variation.

Teaching Element: Focus

Students Learning Outcome: Remember, Understand, Applying, Analysing, Evaluate and Creating.

Part – C Teacher Directed Strategies:

Teaching Activity: Scaffolding, Guided Practice, Story Telling, Demonstration, Lecture, Drilling and Repetition and Project Work.

Teaching Skills: Explanation, Blackboard work, Reinforcement and Conclusion.

Teaching Elements: Support System and Application.

Students Learning Outcome: Remember, Understand, Applying, Analysing, Evaluate and Creating.

Recording Procedure: It was the same as it is mentioned in the first draft of the checklist.

Second phase of pilot study

The Second Draft of the Checklist was once again given to some of the senior and retired social science teachers and B.Ed. and D.I.E.T. Lectures. Some of the items were changed and modified based on their suggestion, these are as follows:

1. The Teaching Skill 'Reinforcement' was mentioned mistakenly two times both in the Active Teaching Strategies and Teacher Directed Strategies, however, Reinforcement skills were removed from Active teaching Strategies but retained in Teacher Directed Strategies.
2. The Recording procedure with marks 1 to 4, was removed and replaced with a 'Check box' for every component. For every check, mark records 1 mark.

Third draft of Checklist of Teachers' Teaching Strategies (CLTTS)

Based on suggestions and advice of the experts the Third Draft of the Checklist of Teachers Teaching Strategies is constructed and considered for Pilot Study.

3rd phase of the pilot study

To validate the Third Draft Checklist of Teachers' Teaching Strategies, the study was conducted among Ten Teachers teaching the Social Science subject. Data was gathered through participant observation during Social Science classes from Govt., Adhoc, Deficit and Private schools. With permission from the concerned school authorities, data was gathered from teachers through the administration of the Third draft of CLTTS, and necessary audio/video recordings were done.

Scoring: For every visible teaching strategy from the checklist was given a tick and every tick mark was recorded as one. Content Analysis was used for results and interpretation.

Modification of CLTTS on the basis result and analysis of the third phase of pilot study

The Students Learning Outcome which was one of the components of the Checklist found it difficult to observe and record students' learning outcomes while observing Teachers' teaching strategies at the same time. Thus the component Student Learning Outcome was removed from the Checklist.

Some of the items of Teaching Activities are shifted to Teaching Elements like Trip Trips, Learning by doing, and Extempore speech and these are listed under the Social system of Teaching Element of Active Teaching Strategies. Besides these, items like teacher reaction with verbal and non-verbal reinforcement in Principle of Reaction were also added.

Some of the items were also shifted from Teacher Activity to Application of Teaching Elements under Teacher Directed Strategies, such as Home Work, Guided Practice, Example, classwork etc.

After the 3rd Phase of the Pilot Study, the items on the checklist have come up in the following Table 1.2

Teaching Strategies	Teaching Activity	Teaching Skills	Teaching Elements	Total
Active Teaching Strategies	6 (Items)	1 (Item)	3 (Items)	10 (Items)
Cognitive Activation Strategies	7 (Items)	2 (items)	1 (item)	10 (Items)
Teacher Directed Strategies	6 (Items)	4 (Items)	2 (Items)	12 (Items)

Table 1.2 Total number of items per Teachers' Teaching strategy in CLTTS

Fourth phase of pilot study

After the Third Draft of CLTTS was modified with some items of the components, it was considered for final study. The 100 numbers of Social Science Teachers from West Garo Hills Schools from four types of School Management which were Govt., Adhoc, Deficit and Private schools belonging to both Urban and Rural areas as represented in Table 1.1.

RESULT AND DISCUSSION**The result, Analysis and Discussion on the basis of Fourth Phase of Pilot Study**

The descriptive Method was followed with simple percentages. The result and interpretation of data are presented in the following tables as per the 03 categories of schools.

Category A (100 – 90 %) Schools								
Strategies	Urban Private		Urban Adhoc		Urban Deficit		Rural Private	
	Score	%	Score	%	Score	%	Score	%
Active Teaching Strategies	119	85%	54	68%	72	72%	13	65%
Cognitive Activation Strategies	117	84%	63	79%	78	78%	16	80%
Teacher Directed Strategies	118	70%	67	70%	80	67%	14	58%

Table 1.3 Percentage scores on Teachers' Teaching Strategies on Social Science of Category A Schools

Table 1.3 revealed that under Category A group of schools, 85 % of teachers at Urban Private schools, teaching Social Science subjects habitually use Active Teaching strategies, actively involving students through discussion, group work, interactive engagement, and questioning. While the highest percentage of 79% of Urban Adhoc schools, 78% of Urban deficit schools as well as 80% of Rural Private schools' teachers highly equip themselves with strategies mainly focusing on questioning, brainstorming, concept mapping, summarising, stimulus variation, Higher Order Thinking and Lower Order Thinking skills.

Discussion:

The Category A schools' social science subject teachers belong to (i). Urban Private utilise Active Teaching Strategies more than other strategies. Shyna K. (2021), Prince (2004) post that active involvement of teachers with students in the classroom can take place through questioning, discussion, group activities and debating which creates more interest among the students on some social issues related to the topic. Thus, utilisation of these strategies in the classroom can be a productive outcome for understanding social relationships and issues with a stronger grip on the subject as a whole. (ii). The Urban Adhoc, Urban Deficit and Rural Private schools' teachers appreciated more Cognitive Activation Strategies such as questioning, brainstorming, concept mapping, summarising, stimulus variation, HOTS and LOTS. Besides that teachers' teaching was focused on the lesson by motivating students, some of the elements of stimulus variation such as eye contact, body gestures etc. Ariel et al.(2019), Ian Cantley (2016) R. Joseph (2022) were also found to have considered cognitive Activation Strategies, supporting students to concentrate deeply and reflect on their mental abilities in the form of their answering the questions correctly and ability to create the information through their responses and writings. Thus, a reason for bringing laurels to their schools every year in their Secondary School Leaving Certificate (SSLC) under MBOSE.

Category B (89.9 -70%) Schools														
Strategies	Urban Private		Urban Adhoc		Urban Deficit		Urban Govt.		Rural Private		Rural Adhoc		Rural Deficit	
	Score	%	Score	%	Score	%	Score	%	Score	%	Score	%	Score	%
Active Teaching Strategies	17	43%	79	66%	18	45%	9	45%	29	73%	38	48%	29	48%
Cognitive Activation Strategies	25	63%	83	69%	25	63%	17	85%	30	75%	36	45%	33	55%
Teacher Directed Strategies	23	48%	100	69%	29	60%	16	80%	39	60%	41	43%	34	47%

Table 1.4 Percentage scores on Teachers' Teaching Strategies on Social Science of Category B Schools

Table 1.4 revealed that from amongst the Category B group of schools, 55% Rural Deficit, 63% Urban Private & Urban Deficit, 75 % Rural Private, as well as 85 % Urban Government schools' teachers, respectively indicated the highest percentage use of Cognitive Activation Strategies, While 69 % teachers of Urban Adhoc schools indicated use of both strategies Cognitive and Teacher Directed Strategies in equivalent strengths. On the contrary, 48% of Rural Adhoc school teachers display the use of Active Teaching Strategies.

Discussion:

The Category B schools' social science teachers of (i). Rural Deficit, Urban Private, Urban Deficit, Rural Private and Urban Government utilised mostly Cognitive Activation Strategies. However, some of the rural-based social science teachers depend on motivation and inquiring about the previous lesson so as to make the students thoughtful learners considering their background and capacities. Polist (2015) and Galindo (2020) stated that Cognitive Activation Strategies are the pedagogical path that directs the learners to go through the correct way. (ii). Urban Adhoc Schools Social Science teachers specified an equal percentage for both Cognitive and Teacher-Directed Strategies indicating teachers' skills to identify individual differences of students in the classroom. Thus, besides body gestures, change in tone, cognitive linking and motivation, teachers scaffold and guided the students as supported by Seifert and Sulton (2021). (iii). Rural Adhoc schools' social science teachers used Active Teaching Strategies through discussion, comprehensive reading, interactive engagement, some probing questions and presenting of lessons in the manner of logical and sequential order and which were affirmed by Bonwell (1991).

Category C (69.9 -50%) Schools													
Strategies	Urban Adhoc		Urban Govt.		Rural Private		Rural Adhoc		Rural Deficit		Rural Govt.		
	Score	%	Score	%	Score	%	Score	%	Score	%	Score	%	
Active Teaching Strategies	44	55%	9	45%	8	40%	19	48%	31	52%	19	48%	
Cognitive Activation Strategies	48	60%	11	55%	13	65%	27	67%	46	77%	27	68%	
Teacher Directed Strategies	53	55%	14	58%	13	54%	25	52%	43	60%	31	65%	

Table 1.5 Percentage scores on Teachers' Teaching Strategies on Social Science of Category C Schools

Table 1.5 revealed that 60 % of Urban Adhoc, 65% Rural Private, 67% of Rural Adhoc, 77% of Rural Deficit, and 68%, as well as Rural Government school teachers, display the highest percentage in the usage of Cognitive Activation Strategies. While 58% of Urban Government school teachers are in Teacher-Directed Strategies.

Discussion:

The Category C schools' social science subject teachers belong to (i). both Urban Adhoc, Rural Private, Rural Adhoc, Rural Deficit, and Rural Government schools apply Cognitive Activation Strategies. However, both urban and rural-based school teachers mostly focus on questioning, analysing, and evaluating the students often to make them recall and remember. It also has been observed that teachers' body gestures like body movement and keeping eye contact with students are directed toward the objective (Galindo, 2020). (ii). Besides the other two strategies Active Teaching and Cognitive Activation strategies, the Urban Government school teachers used Teacher-Directed Strategies, supporting students through scaffolding, project works, storytelling, lecture, and also observed the usage of some reinforcement like verbal and non-verbal, explanation, blackboard works, support system and application of their learning (Best, 2020; & Gupta 2019).

Finalisation of CLTTS

Considering the above result, analysis and discussion of the Methods and techniques that the teacher used to help the student to learn the specific contents, ensuring goal attainment of learners are the teaching strategies like Active Teaching Strategies, Cognitive Activation Strategies & Teacher-Directed Strategies. These elements that consisted in the Final checklist are as follows:

a. Active Teaching Strategies are teaching strategies which make learners more involved, active and focused on the development of skills. The 03 sub-components are teacher activities like (i). discussion, (ii). group work, (iii). interactive engagement, (iv). role play and drama, and (v). comprehensive reading. (vi). debate: teaching skills: the skill of probing questions with- (a). prompting, (b). seeking further information (c). refocusing (d) redirection (e) evaluation; and teaching elements are (i). syntax: presentation order and sequences (ii). principle of reaction: teacher's response with verbal or non-verbal reinforcement. (iii). social system: field trip, learning by doing, conversation, extempore speech etc.

b. Cognitive Activation Strategies are teaching strategies which aim to enhance students learning through thinking, analysing, remembering, and focusing on learning with creativity and criticality. The 03 sub-components are teacher activities like (i) HOT (ii). MOT (iii). LOT (iv). questioning (v) brainstorming (vi) concept map (vii) summarising; teaching skills like (i) introduction of the lesson (a) motivating (b) inquiry about the previous topic (c). cognitive linking and (ii). stimulus variation: (a) body gesture (b) change in tone (c) eye contact (d) pause for a moment; & teaching elements - focus which indicates the teacher's teaching based on the objective of the lesson.

c. Teacher-Directed Strategies are the strategies guided primarily by the teachers. The 03 sub-components are teacher activities like (i) Scaffolding (ii). Story Telling (iii) Demonstration (iv) Lecture (v) Drilling and repetition (vi) Project work; teaching skills like (i). explanation- (a) clear statement (b). language fluency (c). connecting link and (d) use of proper words. (ii). blackboard skills where teachers' skills indicate through (a) legible handwriting (b) letter size and alignment (c). utilisation of space, (d) blackboard summary (e). controlling students while using blackboard or whiteboard. (iii). reinforcement that has the teacher using positive verbal and non-verbal reinforcement (a). excellent (b). well done (c) giving praise, and non-verbal cues (a). smiling (b). keeping eye contact to increase students' participation. (iv). the conclusion is that teacher's highlighting of class through important points; teaching elements (i) support system: teacher's use of material like a textbook, chart, teaching aids etc. (ii) application: teachers' use of examples, classwork, homework (guided practice) etc. Consequently, Alberta and Shiela (2002 & 2011) acknowledged that every teacher must articulately use the best teaching strategies to motivate and help students learn.

Conclusion:

Without evaluation of the actions and performances of teachers, there could not be able to identify the path of successful teachers (Slide share, 2018). Every teacher is not born talented but most of them are learned from others' examples. The checklist of teachers' teaching strategies is the one way to identify the strategies followed by aggregate performances of school teachers in the board examinations. The teaching strategies play a vital role in education that every teacher who desired to see the students' success, always keeps priority and pursue it. The checklist of teachers' teaching strategies which contains three strategies; Active Teaching Strategies, Cognitive Activation Strategies and Teacher Directed Strategies along with different sub-components are designed and found that could identify the strategies used by social science teachers in three categories of schools that is Category A, B and C. Its result indicated that school categories (A, B&C) across a type of school management, appreciated the Cognitive Activation Strategies with the highest priority, irrespective of locale. Active Teaching Strategies & Teacher Directed strategies are used mostly in urban private schools and urban government & urban adhoc schools.

REFERENCE

- Steve Amstrong (2020). The ten most important teaching strategies. *Journal Innovate my School*. <https://www.innovatemyschool.com/ideas/the-10-most-powerful-teaching-strategies>. Retrieved on 5 Nov. 2021
- Quizelize (2018). Seven Effective Teaching Strategies for the classroom. *Quizelize Blog*. <https://www.quizalize.com/blog/2018/02/23/teaching-strategies/> Retrieved on 5 Nov. 21
- Rupali Karekar (2021). Top eight teaching methods that make Abu Dhabi Indian Schools the best. *Global Indian International School*. <https://abudhabi.globalindianschool.org/blog-details/top-8-teaching-methods-that-make-abu-dhabi-indian-schools-the-best>. Retrieved on 5 Nov. 2021
- Kamboj, Pooja, Singh, Shushil Kumar (2020). Effectiveness of Selected Teaching Strategies in relation to the learning styles of secondary school students in India. *Eric*. Retrieved on 5 Nov. <https://eric.ed.gov/?id=EJ1080391>
- Shivangi Mishra (2019). Teacher Training is Changing the face of Education in Meghalaya. *Times of India*. Retrieved on 8 Nov. 2021 <https://timesofindia.indiatimes.com/home/education/news/teacher-training-is-changing-the-face-of-education-in-meghalaya/articleshow/69115477.cms>
- Princess Giri Rashir (2021). Meghalaya Worst in school education but things will improve says minister. *East Mojo Meghalaya*. Retrieved on 8 Nov. 2021 <https://www.eastmojo.com/meghalaya/2021/06/10/meghalaya-worst-in-school-education-but-things-will-improve-says-minister/>
- Karan Chhabra (2021). NISHTHA Teachers Training programme online Registration 2021 at NISHTHA.NCERT.GOV.T.IN. *Sarkariyojan.com*. Retrieved on 9 Nov. 2021 <https://sarkariyojana.com/nishtha-teachers-training-program/>
- DERT (2010). Directorate of Educational Research & Training, Shillong, Meghalaya. Analysis of the Qualitative and Quantitative Performances of the different recognised Schools in Meghalaya in the SSLC Examination, 2007. Retrieved on on 9 Nov. 2021. megeducation.gov.in/dert/pubs/qqanalysisssslcresults.pdf

- Maina, E., (2012). Curriculum Factors Influencing Students Performance in Mathematics. Unpublished Master's Thesis: Maseno University Press.
- Jamie Goodwin (2018). Top ten teaching strategies to use in your classroom. *Magoosh*. Retrieved on 9 Nov. 2021. <https://schools.magoosh.com/schools-blog/top-10-teaching-strategies>
- Bonwell, Charles C. & Eisen, J.A. (1991). Active Learning: Creating Excitement in the Classroom. School of Education and Human Development, George Washington University: Washington DC
- Prince, M. (2004). Does Active Learning Work? A Review of the Research. *Journal of engineering education*.
- Slide share April (2018). Checklist on Research. *Slide share a Scribe company*. Retrieved on 13 Nov. 2021 <https://www.slideshare.net/Manjubeth/checklist-on-research>
- Heather Munthe Kaas, Heid Nokleby and Lien Nguyen (2019). Systematic mapping of checklists for assessing transferability. *PMC*. Retrieved on 14 Nov. 2021. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6330740/>
- Cleo Protogerou and Martin S. Hagger (2020). A checklist to assess the quality survey studies in psychology. *Elsevier*. Retrieved on 14 Nov. 2021. <https://reader.elsevier.com/reader/sd/pii/S2590260120300187?token=28D59F14FE514F231E38CF5E98760E96A37ABDCCD09D292A31A2F84DF009B8C10480A1A0EA08E2505E5077BAAEAF3B9B&originRegion=eu-west-1&originCreation=20211114075446>
- Hannah Dorling, Donna White, Sheila Turner, Kevin Campbell and Tara Lamont (2014). Developing a checklist for research proposals to help describe health service interventions in UK research programmes: a mixed methods study. *Health Research Policy and Systems*. Retrieved on 14 Nov. 2021. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3996017/>
- Ben Davis (2021), What is checklist method of data collection? MV Organizing. Retrieved on 14 Nov. 2021. <https://www.mvorganizing.org/what-is-checklist-method-of-data-collection/>
- Shailendra Kumar Verma (2020). Research tool construction procedure. <https://mgkvp.ac.in/Uploads/Lectures/15/2680.pdf>
- Bit.ai a blog for workplace and document collaboration platform(2019). How to create a checklist the Right. Way? Blog. <https://blog.bit.ai/how-to-create-a-checklist/>
- Checkify (2021) Create a Checklist; Simple Steps to increase Productivity. Checkify Blog. <https://checkify.com/blog/create-a-checklist/>
- Ashok Kumar Gupta (2019). Techniques to Improve teaching Practices in India. DOI:10.34256/iorip1915. https://www.researchgate.net/publication/333505151_

- Shyna Kalra (2021) Covid lesson for teachers: How teaching-learning methods evolved during pandemic. The Indian Express. <https://indianexpress.com/article/education/covid-lesson-for-teachers-how-teaching-learning-methods-evolved-during-pandemic-7161376/>
- Satyawan Polist (2015). Developing among the students communicative competence through the mediation of the curriculum and teaching strategies at the University level in the state of Haryana A Case study. Thesis. <http://hdl.handle.net/10603/272317>
- Chakrabarti Mukti (1977) An inquiry into Strategies of classroom Teaching. Thesis. <http://hdl.handle.net/10603/58465>
- Tiwari, D.D. (1967). An experiment in micro-teaching: A research report, Central Pedagogical Institute, Allahabad. <http://hdl.handle.net/10603/81083>
- Mary Dean (2019) Ten effective teaching strategies for every classroom. *Classcraft*. <https://www.classcraft.com/blog/effective-teaching-strategies-for-every-classroom/>
- Jackson Best (2020) Twelve effective teaching strategies for every teacher toolkit. *3P Learning*. <https://www.3plearning.com/blog/12-effective-teaching-strategies-every-teacher-toolkit/>
- Ediger M. (2004) Importance of Social Studies. *Experiment in Education*.
- Sing V.P. (2004) Value inculcating among younger generation. A suggested model. *University News*.
- Teachmint (2022). Teaching Strategies. *Teachmint*. <https://www.teachmint.com/glossary/t/teaching-strategies/>
- MBOSE (2022). Meghalaya Board of School Education: Tura. Result of the Secondary School Leaving Certificate, 2022. <http://megresults.nic.in/22resultabs/Booklet-SSLC-Exam-2022-V2.pdf>
- Ian Cantley (2016). *International Journal of Educational Research*. <https://www.sciencedirect.com/science/article/abs/pii/S0883035516307649>
- R. Joseph (2022) Cognitive strategies. The University of Kansas. https://specialconnections.ku.edu/instruction/cognitive_strategies
- Sarah's Classroom, (2022). Teacher Direct Method. <https://sarahperkinsclassroom.weebly.com/teacher-directed-method.html>
- Study Lecture Notes (2022). What is Teaching Strategies Definition and meaning. studylecturenates.com/what-is-teaching-strategy-definition-meaning/

Glassdoor Team (2021). Teaching Skills: Definition and Examples. *Glassdoor*.

<https://www.glassdoor.com/blog/guide/teaching-skills/>

Super Teacher (2022) What is the Micro Teaching Technique?

<https://superteacher.co/blog/online-teaching/what-is-the-micro-teaching-technique/>

Tumbaach Dhammei, (2022). Model of Teaching: Meaning of Teaching Models, Characteristics of Teaching Models and Elements of Teaching models.

<https://onlinenotebank.wordpress.com/2022/01/23/teaching-model-meaning-characteristics-and-elements-of-teaching-model/>

