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Emotional Intelligence and Teaching Styles of Primary School Teachers

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Abstract

For studying teaching styles of teachers, teachers were categorised in four groups according to their level of Emotional Intelligence (EI) viz., Extremely High EI (EHE), high EI (HE), moderate EI (ME), and low EI (LE). By comparing and contrasting teaching styles of teachers of different groups, it was observed that teachers of EHE and HE groups were "INDIRECT" in their teaching styles and their counterparts were "DIRECT" in their teaching styles. In addition, constructivist compatible elements were observed to be embedded in teaching styles of teachers of EHE and HE groups than their counterparts.

Key words: Emotional intelligence; indirect teaching style; direct teaching style; clock-wise flow diagram; percentage master matrix.

1. Introduction

This article is tries to answer the question 'how Emotional Intelligence (EI) plays an important role in teaching style of teachers'. This is a descriptive research study. What is known about EI today is grounded primarily in psychobiology and modern neuroscience and pointed out the distinction between intellectual and emotional capacities. The Harvard psychologist, Howard Gardner, introduced the theory of "multiple intelligence". His research identified seven kinds of intelligences including mathematical and verbal abilities as well as two personal varieties identified as "knowing one's inner world" and "adeptness" (Kemper, 1999). The concept of EI, as it is referred to today, was formally conceptualised in 1990 by two American psychologists, John Mayer and Peter Salovey. According to Mayer and Salovey, EI reflects not a single trait or ability but, rather, a composite of distinct emotional

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reasoning abilities: perceiving, understanding and regulating emotions. Emotional Intelligence (EI) implies that humans are both rational and emotional beings. They are predominately neither rational beings nor emotional beings. Hence, adaptation and coping abilities in life are dependent on the integrative functioning of both rational and emotional capacities (Salovey, Bedell, Detweiler and Mayer, 2000). Peter Salovey and John Mayer (1990) defined EI as a mental ability that consists of "ability to monitor one's own and other's feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p. 189). Goleman (1995) however has defined EI in different way. His model of EI includes (a) knowing one's emotions, (b) managing emotions, (c) motivating oneself, (d) recognising emotions in others (e) and handling relationship. Later Mayer and Salovey (1997) revised their theory a bit to emphasise the cognitive components and talked about a hierarchy of mental abilities. In contrast, Raven Bar-On (1997) defined EI as "an array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures" (p.14).

1.1 Correlates of EI

A perusal of findings revealed EI as significant predictor of social quality relationship, inter-personal relationship, teaching self-efficacy, and communication effectiveness, which portray importance of EI for teaching behaviour.

1.1.1 EI and Inter-personal Relationship

Teaching occurs in the social context (Flanders, 1970). As such teacher is required to be efficient in inter-personal relationship. Here, EI of teachers seems to be important. EI is defined as one's ability to manage and monitor one's own emotions; recognise different type of emotions in others; distinguish the difference between one's emotions and those of others, and use that information to guide one's thinking and actions (Pinos, Twigg and Olson, 2006).Then, teacher high on EI is capable to perceive and understand feelings and emotions of students and consequently can guide his action in consistent with feeling and emotion of students. EI is observed as significant predictor of quality of social relationship (Brackett, Mayer and Warner, 2004; Eisenberg, Fobes, Guthrie and Rieser, 2000; Lopes, Salovey and Straus, 2002). EI of teacher is likely to affect his or her inter-personal relationships with students. The way teacher relates himself or herself to students; it decides the conduciveness of social-emotional climate of classroom (Flanders, 1970).

Singh (2003) in his study revealed that teaching profession requires high EI. He further added that the teaching profession entails emotional competencies such as empathy, rapport, harmony and comfort while

dealing with groups. Hence, teachers with high EI seem to exhibit open and free expression of ideas which lead them to creativity and mutual respect. Empathy is critical skill for both getting along with students of diversified backgrounds. Empathy is an "antidote" that attunes people to subtleties in body language, or allows them to hear the emotional message beneath the words and has a deep understanding of the existence and importance of cultural and ethnic differences (Goleman, 2004).

1.1.2 EI and Classroom Verbal Behaviour

Ergur (2009) discussing attributes of an emotionally intelligent teacher has written that responding to learners is a great opportunity for the teacher to reflect his emotional intelligence while replying to a comment or a question from a student. If it is handled skilfully, it will motivate the students, affect the emotional environment, clarify what is an acceptable answer, show the learners that they are valued by the teacher and their teacher is listening to them attentively. Responding could be achieved at two levels – cognitive and affective. Informing about a specific topic, clarifying the situation, expanding the subject by giving details can be defined as "cognitive responding" whereas through "affective responding" the teacher responds to the feelings of the questioner or the commander. In other words, the teacher has the potential to make the students feel respected, valued, belittled, dismissed or humiliated through the use of his affective responding skills.

1.1.3 EI and Teaching Self-efficacy

Researches conducted to study role of EI in teaching self-efficacy and in communication effectiveness showed that teachers with higher on EI will tend to have positive believes about his teaching capabilities (self-efficacy), due to awareness about his strengths and weaknesses. Teaching self-efficacy is one of the most important variables consistently related to positive teaching and student learning outcome (Penrose, Perry and Ball, 2007). Significant association between EI and teaching self-efficacy appears to underscore validity of theory of EI and its application for teachers.

1.1.4 EI and Communication Effectiveness

Communication is culmination of all EI abilities. EI is defined as the capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions to promote emotional and intellectual growth (Mayer and Salovey, 1997). The high EI individual, most centrally, can better perceive emotions, use them in thought processes, understand their meanings, and manage emotions better than others and tends to be more open and

agreeable (Mayer, Salovey and Caruso, 2004).

Each emotion conveys a unique set of identifiable signals- emotional information (Scherer, Banse, and Wallbott, 2001). Emotion information processing an evolved area of communication (Mayer, Salovey, Caruso and Sitarenios, 2001). Teachers high on EI seem to be in advantageous position in carving out conducive-social-emotional classroom climate by having capacity to reason about emotions. The teachers with EI are likely to be aware of their own feelings and those of students and is able to communicate both positive and negative emotions and internal experience at appropriate times. This has an impact on students' mood. Thus, possessing EI is likely to permit teacher to have a closer understanding of students and their surroundings.

1.2 EI and Teaching Style

On the basis of above mentioned findings, it appears that level of EI is likely to be influential in shaping the teaching style of primary school teachers. Teaching style is defined as group of teaching behaviours which are consistently reflected in classroom teaching of teachers (Pandey, 1981). Flanders had evolved two teaching styles: 'Indirect' and 'Direct' (Flanders, 1970). Indirect teaching style refers behaviours which tend to encourage and support pupil participation. The reasons why teachers with EI seem to be influential in "Indirect teaching style' might be due to the abilities of EI teachers required for "Indirectness". For indirect teaching style, teacher is required to perform teaching activities related to Categories 1, 2, 3, and 4 of FIACs (Flanders Interaction Analysis Category System). The way EI is likely to be influential in performing activities related to foregoing categories are given below:

- *To recognise and read feelings and emotions of students (Category 1 of FIACs)*: Emotional intelligence abilities like ability to perceive emotions and ability to use emotions to facilitate thoughts and actions are essential for manifestation of teaching behaviours related to Category 1 of FIACs. These are lowest abilities in the hierarchy of EI abilities (Mayer and Salovey, 1997). It implies that emotionally intelligent teachers can easily read emotions and feelings of students, and, can guide his further actions showing concern towards students.
- *To praise and appreciate ideas and behaviour at cessation of pupil talk (initiation or responding) (Category 2 of FIACs):* Ability to appreciate view-points and ideas of students are social skills as propounded by Goleman (1995). It implies that manifestation of this is dependent on EI of teachers.
- *To integrate pupil ideas with classroom fabric (Category 3 of FIACs):* Emotionally intelligent teachers appreciate view-points of students and further integrate

students responding and initiation with classroom communication fabric (Ergur, 2009).

- *To ask diversified questions (Category 4 of FIACs):* Emotionally intelligent teachers are observed to ask diversified questions, it implies narrow questions (low cognitive level questions) and thought-provoking questions (high cognitive level questions) (Ergur, 2009).

Emotional intelligence abilities underlie above mentioned teaching behaviours. So, it seems that primary school teachers having high level of EI will tend to perform those teaching behaviours, which constitute 'Indirect Teaching Style'.

If teachers lack Emotional intelligence abilities in that case likelihood of occurrence of teaching behaviours *viz.,* giving directions (Category 6 of FIACs) and criticising the ideas and behaviour of students and using extreme self-reference (Category 7 of FIACs), will tend to increase. These teaching behaviours indicate "Direct Teaching Style" in classroom. Hence nature of teaching style either Indirect or Direct is likely to be affected by level of EI of teachers.

1.3 Rationale for Conducting Study on Sample of Primary School Teachers

Dynamic interchange between the mind of the teacher and individual learner is kernel of effective pedagogy. If teacher succeeds in bringing about the dynamic interchange, it might be attributed to his EI (Ergur, 2009). Dynamic interchange between the mind of teacher and his students is contingent on socio-emotional climate of the classroom (Pandey, 1981). Here, level of EI is likely to be important for teachers (Ergur, 2009). This study is to be concentrated around primary school teachers because the first exposure of child in terms of learning and developing capabilities to relate to the external world starts at school. For the first time in their lives, children feel the need to emotionally react differently to a whole set of new relationships coming as stimuli from the environment, hitherto alien to them. The transition from dealing with informal to formal relationships along with the need to balance both, creates tremendous role strains in the children, thereby disturbing their hitherto undifferentiated emotional and social world. Level of EI enabled teachers to respond tactfully to social, emotional and cognitive needs of students (Ergur, 2009). *National Curriculum Framework*-2005 emphasises constructivist approach of teaching. Constructivism refers active participation of students in teaching-learning situation, so that, they can actively construct knowledge as well as organise, reorganise and transform earlier knowledge. Indirect teaching style is likely to facilitate active participation of students. Teachers having high level of EI, ask open-ended questions and encourage pupil initiation in their classroom (Ergur, 2009).

Against this backdrop, it was postulated that level of EI is likely to be influential in teaching style of primary school teachers. If teachers' teaching style tend to be 'Indirect', constructivist compatible elements are likely to be reflected in their classroom teaching. It is further postulated that due to low level of EI, teachers are likely to be 'Direct' in their teaching style. The study was conducted with the objective, "To study the influence of Emotional Intelligence on teaching styles (Verbal Behaviour Pattern) of primary school teachers."

2. Methodology

Descriptive research method was used in this study.

2.1 Population and Sampling Technique

Primary school teachers of government, government-aided and private schools of Varanasi city constituted the population of the study; 'Multi-stage random sampling technique' was employed for selection of sample. At last 91 primary school teachers constituted the sample of this study.

In the first stage five educational wards were randomly selected from nine education wards in Varanasi city of Uttar Pradesh (Table 1). In second stage, from each sampled educational ward, five government and five private schools were randomly drawn (Table 1). In third stage, from each sampled school, two teachers were randomly drawn. Nine teachers did not respond to "Emotional Intelligence Test", so they were dropped from the sample. Hence ninety-one teachers finally constituted the sample of the study.

Table 2 depicts details of sample of the study concerning demographic variables (Sex, Stream, School type and Training).In sample of this study, teachers who have pursued B.Sc. (Graduation in Science stream subjects) were designated as belonging to science stream and who have pursued B.A., were designated as belonging to art stream. 'Training' in this study implies, pursing of B.Ed. course. Teachers who have pursued

Table 1: Sample break-up as per educational wards in Varanasi city

S. No.	*Ward Name*	*No. of Government School*	*No. of Private School*	*Total no. of Schools*
1.	Bhelupur	05	05	10
2.	Chauk	05	05	10
3.	Chetganj	05	05	10
4.	Dashaswamedha	05	05	10
5.	Shivpur	05	05	10
	Total	25	25	50

Table 2: Sample Break Up: As per Demographic variables of study

Sex		*Stream*		*School type*		*Training*	
Male	*Female*	*Science*	*Art*	*Government*	*Private*	*B.Ed.*	*Non-B.Ed.*
36	55	35	56	40	51	61	30
91		91		91		91	

B.Ed. course were designated as trained teachers and teachers who have not pursued B.Ed. course were termed as non-trained teachers. Schools which are run by government are categorised as 'Government type school' and schools which were not run by government were categorised as 'private school'.

2.2 Tools Used

2.2.1 Flanders Interaction Analysis Category system (FIACs)

Flanders Interaction Analysis Category System (FIACs) (1970) (Table 3) was used to observe the classes. For ensuring reliability of data on FIACs inter-observer and intra-observer reliability were established by using Scott's coefficient. Inter-observer reliability was obtained to be 0.78 and intra-observer reliability was found to be 0.86. As pointed out by Ober and others an *r* of 0.60 is frequently established as an acceptable level (Pandey, 1981).

2.2.2 The EQ Test [developed by Prof. N. K. Chadha and Dr Dalip Singh, 2003.]

The EQ Test (developed by Prof. N. K. Chadha and Dr Dalip Singh) was

Table 3: Flanders Analysis Category System.

		Categories
(a)	Teacher Talk	
	Indirect Influence	1. Accepts feelings
		2. Praises or encourages
		3. Accepts or uses pupil ideas
		4. Asks questions
	Direct Influence	5. Lecturing
		6. Giving Directions
		7. Criticising or justifying authority
(b)	Pupil Talk	
	Response	8. Pupil talk response
	Initiation	9. Pupil talk initiation
(c)	Silence/Confusion	10. Silence or confusion

(Flanders, 1970)

adapted in Hindi by the investigator for the measurement of EI of primary school teachers. Reliability of the tool has been established by 'test-retest method' and 'internal consistency method'. Stability coefficient was found to be 0.89. Cronbach-alpha coefficient (α) was computed for each dimension of EI-emotional sensitivity, emotional maturity and emotional competency, which were obtained to be 0.76, 0.69 and 0.74, respectively.

Content validity was established with expert judgements and for ensuring empirical validity of the tool, it was correlated with 'Bhattacharya Instrument of EI' (BEIS-In).The validity was found to be 0.58, which indicates that this EI test is valid.

2.3 Data Collection and Analyses

Procedure of data collection and categorisation of teachers in different groups as per their level of EI:

2.3.1 Phase 1

2.3.1.1 Observer Training

Prior to observation of each sampled teacher by FIACs, the investigator received comprehensive training in observing teachers in classroom situations. The categories (FIACs) were memorised thoroughly. By the end of the training period the inter-observer reliability, using Scott's coefficient correlation was consistently near about 0.78.

2.3.1.2 Procedure of Observation and Data Collection

Each teacher was observed once, for 35 minutes by using FIACs.

2.3.2 Phase 2: Categorisation of Teachers in Different Groups

On the basis of scores on 'EI Test', teachers were classified into four groups; as per established norms of the test,

- Teachers who scored 285 or above were grouped as EHE (teachers having extremely high EI);
- Teachers who scored in the range of '250-284' were grouped as 'HE' (teachers having high EI);
- Teachers who scored in the range of '200-249' were grouped as 'ME' (teachers having moderate EI);
- Teachers who scored in the range of '150-199' were grouped as 'LE' (teachers having low EI).

Out of 91 primary school teachers, 14 teachers were identified as having extremely high EI (EHE), 16 teachers were identified as having high EI (HE), 32 teachers were identified as having moderate EI (ME), and 19 teachers were identified as having low EI (LE). Group-wise distribution of teachers is given in Table 4. Table 5 depicts the distribution of teachers of EHE, HE, ME and LE groups as per type of school (government and private).

Table 4: Number of teachers in each group

S.No.	*Groups*	*No. of Teachers*	*Range of Scores*
1.	EHE	14	285 or above
2.	HE	16	250-284
3.	ME	32	200-249
4.	LE	19	150-199

Table 5: Sample break-up as per nature of School and level of EI

School	*EHE*	*HE*	*ME*	*LE*
Kendriya Vidyalaya	04	02	--------	--------
Nagar Nigam School	03	06	13	12
Reputed Private School	05	08	03	--------
General Private School	02	---------	16	07
Total	14	16	32	19

2.3.3 Phase 3: Treatment with Data Obtained by Observation of Each Teacher by FIACs

2.3.3.1 Tabulating Interaction Analysis Matrices

After observing each sampled teacher, 10x10 matrices were complied. After classifying teachers in four groups according to their level of EI, master matrix was compiled for each group of teachers. Four master 10x10 matrices were compiled. Later on, the cell frequencies of these four master 10x10 matrices were converted into percentages to get the percentage matrices.

2.3.3.2 Clock-wise Communication Flow Diagram

Clockwise communication flow diagrams were drawn for each of the four groups of teachers, separately for analysing their teaching style.

3. Results, Analysis and Discussion

Teaching styles of teachers of EHE, HE, ME, and LE groups were studied by preparing anti-clock-wise flow diagram for each group separately. An anti-clock-wise flow diagram was drawn corresponding to each percentage master matrix. Moreover for all 10 categories of FIACs mean percentage values were computed for all groups of teachers in combined. In addition to this mean percentage value, FIACs for each group were also computed, which are given in Table 6.

3.1 Teaching Style of Teachers having Extremely High EI (EHE)

3.1.1 Pattern of Teaching Behaviours Constituting Teaching Styles of Teachers having EHE as per Figure 1:

As per the Figure 1, it appeared that almost 78.04 per cent of teaching behaviours of teachers of the EHE group were found to be concentrated in 16 cells of the matrix, these behaviours constituted three patterns in the interaction patterns of EHE group teachers:

Pattern 1: Cell "5-5" (extended lecturing) → "5-4" (asking question just after lecturing or while lecturing) → cell "4-8" (students' responding after teachers' questioning) → cell "8-8" (extended students' responding) → "8-5" (lecturing following students' responding).

Pattern 2: Cell "9-9" (extended students' initiation or students' initiation steady state) → cell "9-8" (students' responding following students' initiation) → cell "8-3" (appreciation and integration of the pupil ideas with classroom communication fabric) →

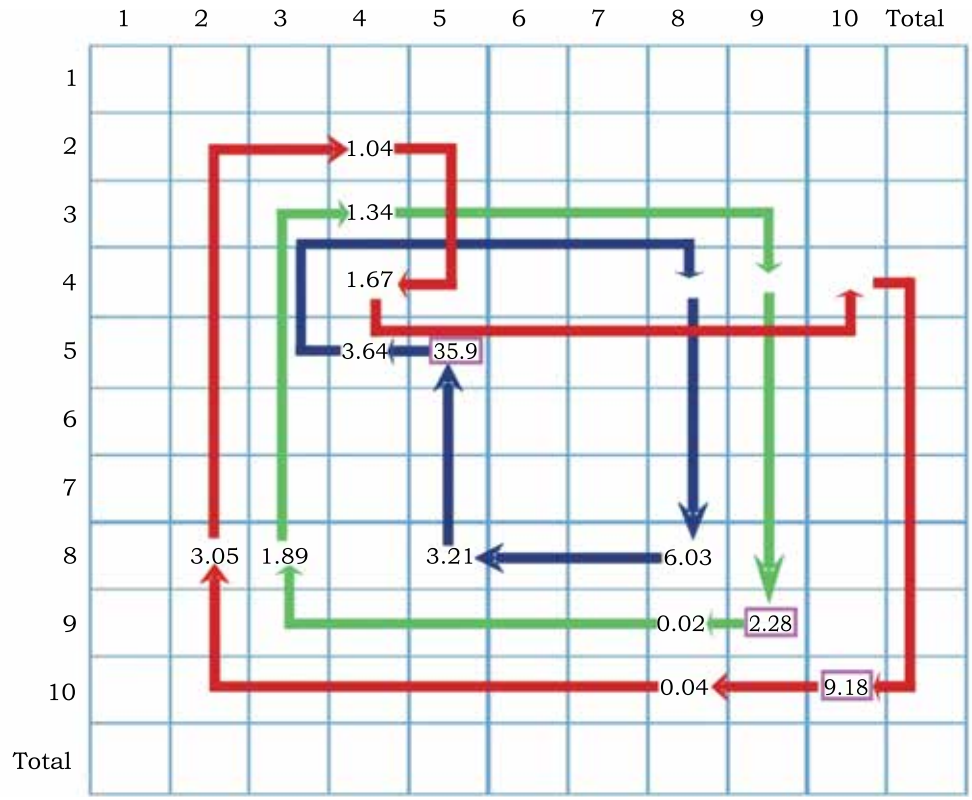

Figure 1: *Communication pattern in the classes of teachers of EHE GROUP as per FIACs..*

cell "3-4" (asking question based on the expressed pupil ideas for enlarging the pupil thinking further) → cell "4-9" (students initiation in consequent to the divergent or thought-provoking question).

Pattern 3: Cell "10-10" (silence in the classroom in consequent to the asking thought-provoking or divergent question) → cell "10-8" (students' responding after silence following divergent or thought-provoking question) → cell "8-2" (praising the students' responding) → cell "2-4" (Praising and consequently asking questions) → cell "4-4" (extended asking question) → cell "4-10" (silence following though-provoking questions).

3.1.2 Discussion

Although lecturing (Category 5 of FIACs) of EHE group's teachers occupied 42.8 % (Table 6) of their total teaching behaviours, the extended lecturing (cell '5-5') was only 35.9 per cent. The word lecturing connotes the total lecturing done by teacher either in extended manner or in transition phase while shifting from one teaching behaviour to another. The term extended lecturing refers to the time period during which the teacher constantly been teaching. The difference between lecturing percentage and extended lecturing percentage indicates the healthy teaching practice (Pandey, 1981). It appears that such teachers utilised that portion of lecturing time in creating environment for thinking in the students.

Table 6: Mean percentage (%) value for each category of FIACs for all groups of teachers

Group of teachers	*Categories*									
	Accepts feeling	*Praises or encourages*	*Accepts or uses ideas of pupils*	*Asking questions*	*Lecturing*	*Giving directions*	*Criticising or justifying authority*	*Pupil talk response*	*Pupil-talk initiation*	*Silence or confusion*
EHE	0	3.94	3.48	10.59	42.8	3.18	4.16	17.8	3.18	10.88
HE	0	3.68	2.22	8.35	41.74	4.12	4.43	13.8	3.5	18.17
ME	0	1.9	1	5.63	47.52	5.9	3.4	14.84	0.89	18.9
LE	0	0.84	0.35	1.86	37.72	3.76	4.21	9.66	0.68	40.92
Mean value	0	2.59	1.76	6.61	42.41	4.24	4.05	14.03	2.06	22.22

Percentage (%) of pupil-talk response (PTR), which is 17.8%, is found greater than the mean value of 14.03% for all groups. Likewise, percentage of pupil talk-initiation (PTI), which is 3.18%, is also found greater than the mean value of 2.60% for all four groups (Table 6). Higher percentages of PTR and PTI might be attributed to the higher percentages of the behaviours 'Praising or encouraging' and 'Accepting or using ideas of the students', which are obtained as 3.94% and 3.48%, respectively and greater than the mean values obtained as 2.59% and 1.76%, respectively for all groups of the teachers (Table 6). Praising and acknowledging pupil ideas are illustrated by cells '8-2'-'8-3' transitions (Figure 1). When the teacher accepts, clarifies or uses constructively pupil's ideas, they are encouraged to participate further.

Higher PTI is also likely to be due to patterns of open questions, illustrated by cells '3-4'- '4-4'-'4-9'-'9-9' transitions (Figure 1). Percentage of the asking questions, (10.59%) for the teachers of the EHE group is greater than the mean value (6.61%) for all four groups of the teachers (Table 6). Higher percentage of asking questions than that of their counterparts (HE, ME, and LE groups' teachers) refers the higher level of intellectualism in their classes.

Effect of higher percentage of asking questions is likely to be seen in higher percentage values of PTR and PTI than classes of teachers in the HE, ME, and LE. Patterns of teaching behaviors: extended asking questions (cell '4-4') and silence in classroom in consequent to asking thought-provoking or divergent question (cell '4-10' and cell '10-10') and patterns of teaching behaviours: asking question based on ideas expressed by students for broadening the viewpoints of students and students' initiation (cell '3-4' and cell '4-9') and extended students' initiation (cell '9-9') characterised the enriched cognitive characteristic of classroom teaching of these teachers (Figure 1).

It has been observed in previous studies that teachers who predominately used higher cognitive questions had a positive effect on students' achievement, and teachers that were trained in effective questions and used higher cognitive questions greatly affected their students' achievement (Redfield and Rousseau, 1981). Students can be stretched mentally through sensitive teacher-led but not teacher dominated discourse, when a teacher dominated a discussion, it controlled the whole discussion and the students do not have the freedom to voice their thought (Redfield and Rousseau, 1981; Chin, 2006; Wells and Arauz, 2006; Myhill and Dunkin, 2005; Schleppenbach, Perry and Miller, 2007).

PTR and PTI in consequent to divergent or thought-provoking questions asked by teachers reflect the presence of constructivist practices in the classes of teachers of EHE group. If the questions asked are unto the task, creative, thought-provoking, critical and contextually correct, they assist

the process of knowledge construction. It is desirable to have more number of higher order questions trying to probe the deep understanding. EHE group teachers allow students to actively participate in their learning versus the traditional idea of passively receiving information. Instead of giving lectures and expecting students to regurgitate what has been lectured, teachers show students how to listen to others and question ideas when they are unknown. Classroom discourse is socially meaningful activity because it creates a situation in which all students are encouraged to participate. Students' participation during classroom discourse allows students to practice problem-solving and decision-making skills. At the same time it helps to build the students self-confident to voice their own view and able to justify their ideas to the class.

Percentage (%) of 'Silence or confusion' which denotes the category 10 of the FIACs is found to be 10.18% (Table 6). Silence in the classes of teachers of EHE group is likely to occur due to the higher percentage of the asking question which is confirmed by patterns of open questions cells '4-4'-'4-10'-'10-10' transitions; which implies that silence have been used for the stimulating the thinking skill.

3.1.3 Nature of Teaching Style of Teachers of EHE Group

It is evident from Table 2 that percentage of the occurrences of the categories: 2 (Praising or encouraging),

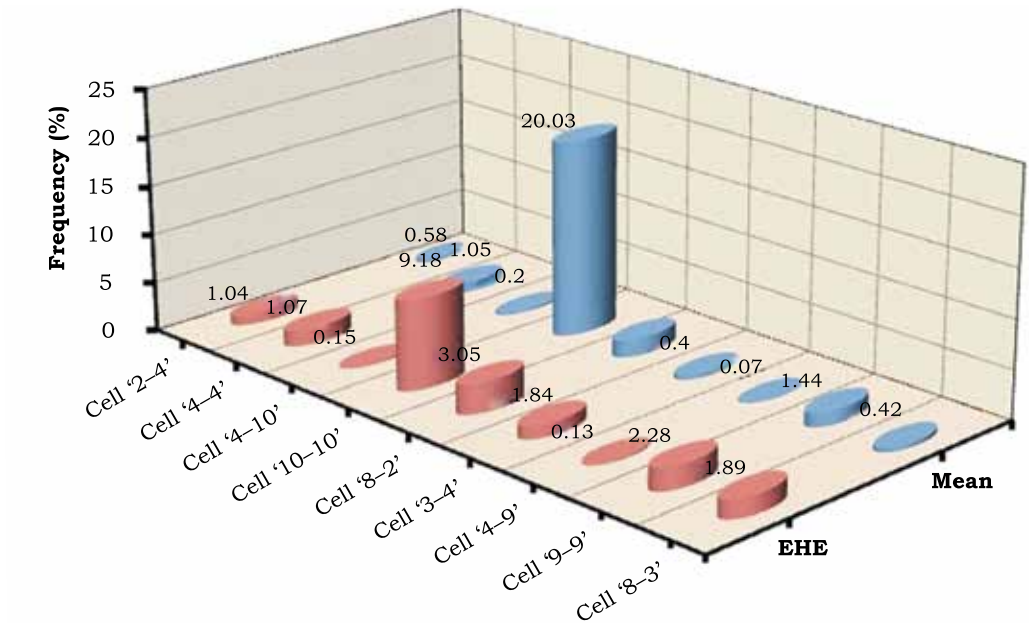

Figure 2: *Cell-wise percentage value for EHE and mean percentage value for each cell for all groups of teachers*

3 (Accepting or using ideas of the students), 4 (asking question), 8 (PTR), and 9 (PTI) are greater than obtained mean values for all these categories for combined groups of the teachers, which signifies that teachers of EHE group are "INDIRECT" in their teaching style (Flanders, 1970).

Figure 2 revealed that percentage of the frequencies in the cells: '2-4'(Asking questions following praising students), '4-4'(asking question), (4-10) and (10-10) (silence in the classroom in consequent to the asking thought-provoking or divergent question), (8-2) (praising the students' responding), (3-4) (asking question based on the expressed pupil ideas for enlarging the pupil thinking further), (4-9) (students initiation in consequent to the divergent or thought-provoking question), (9-9) (extended students initiation or students initiation steady state), (8-3) (appreciation of the pupil ideas and building on the ideas expressed by the pupil) are greater than the obtained mean values for all these cells for combined teachers of all groups, which further confirmed the 'INDIRECT' teaching style of the teachers of EHE group (Flanders, 1970).

3.2 Teaching Style of Teachers Having High EI (HE)

3.2.1 Pattern of Teaching Behaviours Constituting Teaching Style of Teachers HE Group

Figure 3 depicts that near about 80.61% of total frequencies of observed teaching behaviours of teachers of these groups, got concentrated in the seventeen cells. Patterns which are identified are:

Pattern 1: Cell "5-5" (extended lecturing) → "5-4" (asking question just after lecturing or while lecturing) → cell "4-8" (students' responding after teachers' questioning) → cell "8-8" (extended students' responding) → "8-5" (lecturing following students' responding).

Pattern 2: Cell "9-9" (extended students' initiation or students' initiation steady state) → cell "9-8" (students' responding following students' initiation) → cell "8-2" (praising at cessation of pupil talk) → cell "2-3" (asking question based on pupil talk following praising at cessation of pupil talk) → cell "3-4" (asking question based on ideas expressed by students) → cell "3-9" (students' initiation in consequent to thought-provoking questions asked at cessation of pupil talk).

Pattern 3: Cell "10-10" (silence in the classroom in consequent to the asking thought-provoking or divergent question) → cell "10-8" (pupil responding following silence) → cell "8-4" (asking question following students' responding) → cell "4-4" (extended asking question) → cell "4-10" (silence as result of thought provoking questions).

3.2.2 Discussion

Percentage (%) of lecturing (category 5) is observed to be 41.74 less than

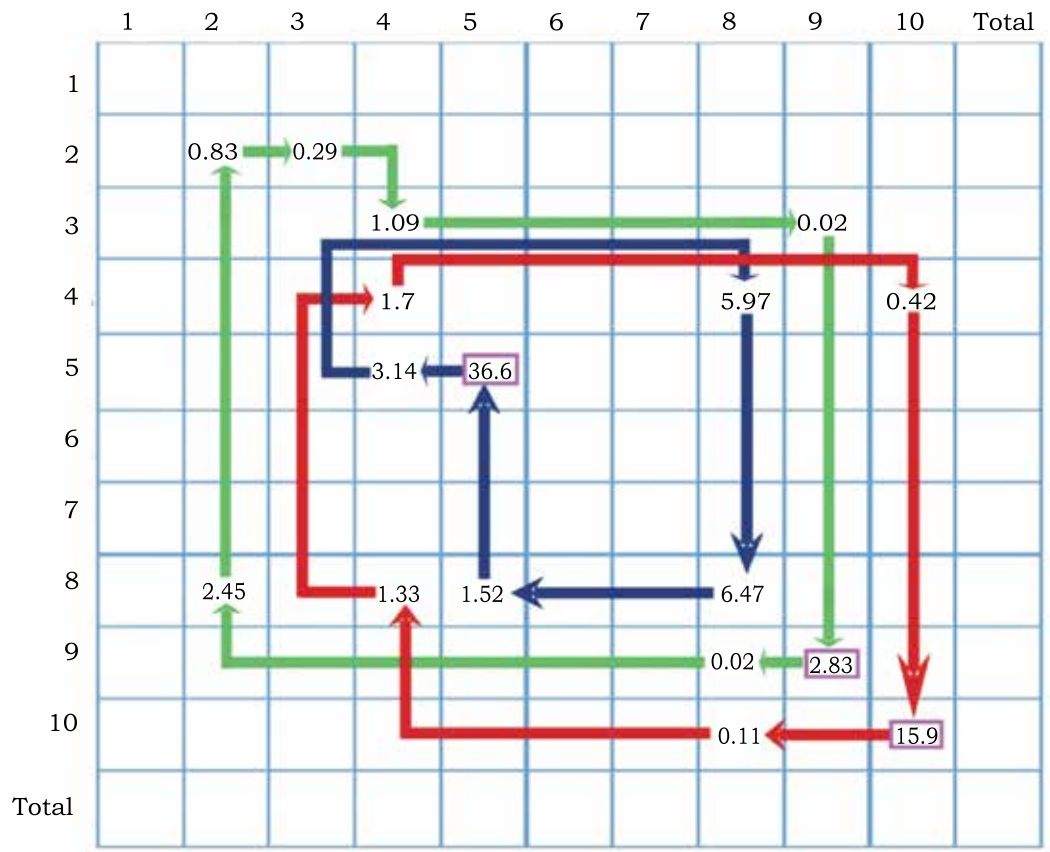

Figure 3: *Communication pattern in classes of teachers of HE group as per FIACs*

the mean value of 42.41 for the entire four groups (Table 6). As per Figure 3, percentage (%) of extended lecturing (cell 5-5) is found to be 36.6; difference between the percentages of the lecturing and the extended lecturing signifies the attempts of the teacher to ensure the active participation of the students.

Like the teachers of the EHE group, for HE group teachers, percentage (3.68%) of the occurrences of the behaviour 'praising or encouraging' is found to be greater than the mean value (2.59%) for the entire groups (Table 6). Praising or encouraging at cessation of PTR or PTI, is illustrated by patterns of cells '8-2'-'2-2'-'2-3' transitions in Figure 3.

Percentage (2.22%) of occurrence of the behaviour appreciating and integrating PTR and PTI with classroom communication fabric is found to be greater than the mean value (1.76%) of the entire groups (Table 6). It is evident by pattern of cells '2-3'-'3-4' transitions (Figure 3).

A teacher can react to student ideas by acknowledging, clarifying and using them in problem-solving process. Responding to learners is a great opportunity for the teachers to reflect his EI while replying to a comment or a question of a student. If it is handled skilfully, it will help the motivation of the students, affect the emotional environment, clarify what is an acceptable answer, show the learners that they are valued by the teacher and their teacher is listening to them attentively. Table 6 reveals comparatively higher percentage of 'PIR' (3.5%) in classes of these teachers. It has been found higher than mean percentage value (2.06%) for all groups of teachers; this higher percentage of 'PIR' might be attributed to 'accepting or building upon the ideas expressed by pupil'. Higher PTI show more willing involvement in the lesson. PTI is evident from pattern of cells '3-9'-'9-9' transitions (Figure 3).

For HE group teachers, higher percentage (8.35%) of occurrence of behaviour 'asking questions' is found to be higher than the mean value (6.61 %) of the entire groups (Table 6). These teachers try to build upon the information provided by the student instead of declaring it right or wrong like traditional pedagogies. Pattern of cells '4-4'-'4-10'-'10-10' transitions, indicates silence in classroom in consequent to the asking thought-provoking or divergent question.

Chain of teaching behaviours, asking question based on ideas expressed by students for broadening the viewpoints of students and students' initiation and extended students' initiation characterised the enriched cognitive characteristic of classroom teaching of these teachers (HE), like teachers of EHE group, which is evident from pattern of cells '3-4'-'3-9'-'9-9' transitions (Figure 3). The level of questions asked determines the quality of the activity of learning going on. It is needed to make questions more innovative and demanding in order to provoke thinking and support understanding among the students. Higher percentage (18.17%) of occurrences of the behaviour 'silence or confusion' are found to be greater than mean value (22.22%) of the entire groups (Table 6). Higher percentage of silence in classes these teachers might be attributed to levels of questions which make students to think creatively and imaginatively.

Higher percentage (3.5%) of occurrences of the behaviour PTI are found to be greater than mean value (2.06%) of entire groups: On the contrary to the EHE group, percentage (13.8) of occurrence of the behaviour PTR is found to be slightly less than the mean value (14.03%) of the entire groups (Table 6); but it does not seem matter of concern. Higher percentage of PTI reflects constructivist compatible changes in the classes of these teachers. One way to loosen up a rigid pattern of interaction, providing this is to be the teacher rather than a pupil prerogative, is to ask questions which invite participation by the pupils. The pattern of open questions

is illustrated by the cells '3-4'-'4-4'-'4-9'-'9-9' transitions in the Figure 3. These questions stimulate pupils to express their own ideas and to contribute their own suggestions.

3.2.3 Nature of Teaching Style of Teachers of HE Group

Table 6 showed that percentage of the occurrences of the categories: 2 (Praising or encouraging), 3 (Accepting or using ideas of the students), 4 (asking question), 8 (PTR), and 9 (PTI) are greater than obtained mean percentage values of corresponding categories for all groups of the teachers in combined, which signifies that HE group teachers are 'INDIRECT' in their teaching style like EHE group teachers.

In addition to this, Figure 4 depicts that percentage of the frequencies in the cells: '2-2' (Praising in the extended manner), '2-3' (praising and using the ideas expressed by the pupil), '3-3' (extended appreciation of the pupil ideas), '3-9' (students initiation in consequent to appreciation of the students' responding on the part of the teacher) '4-4' (asking question), (4-10) and (10-10) (silence in the classroom in consequent to the asking thought-provoking or divergent question), (8-2) (praising the students' responding), (9-9) (extended students initiation or students initiation steady state), (8-3) (appreciation of the pupil ideas and building on the ideas expressed by the pupil) are found higher than obtained mean values for these cells for entire teachers of all groups, which further authenticated the 'INDIRECT' nature of the teaching style of these teachers.

3.3 Teaching Style of Teachers Having Moderate EI (ME)

3.3.1 Pattern of Behaviours Constituting Teaching Style of Teachers of ME Group

Figure 5 shows that near about 82.69% of the total frequencies of teaching behaviours are found to be concentrated in the fourteen cells and patterns which emerged are:

Pattern 1: Cell "5-5" (extended lecturing) → cell "5-4" (asking questions following lecturing or while lecturing) → cell "4-4" (extended asking questions) → cell "4-8" (students' responding following questions asked by teacher) → cell "8-8" (extended pupil responding) → cell "8-5" (teachers' lecturing at cessation of pupil talk).

Pattern 2: Cell "10-10" (silence following criticism of students' behaviour and ideas) → cell "10-6" (directing or giving instruction following silence) → cell "6-6" (extended giving instruction).

Pattern 3: Cell "8-2" (praising at cessation of pupil responding) → cell "8-4" (asking questions following praising at cessation of pupil responding).

3.3.2 Discussion

For teachers of ME group, percentage (1.9%) of the occurrences of the behaviour 'praising or encouraging' is found to be less than the mean value (2.59%) for the entire groups. Pattern of cells '8-2'-'2-2'-'2-3' transitions, which denotes praising at cessation of PTR, are not evident in classes of

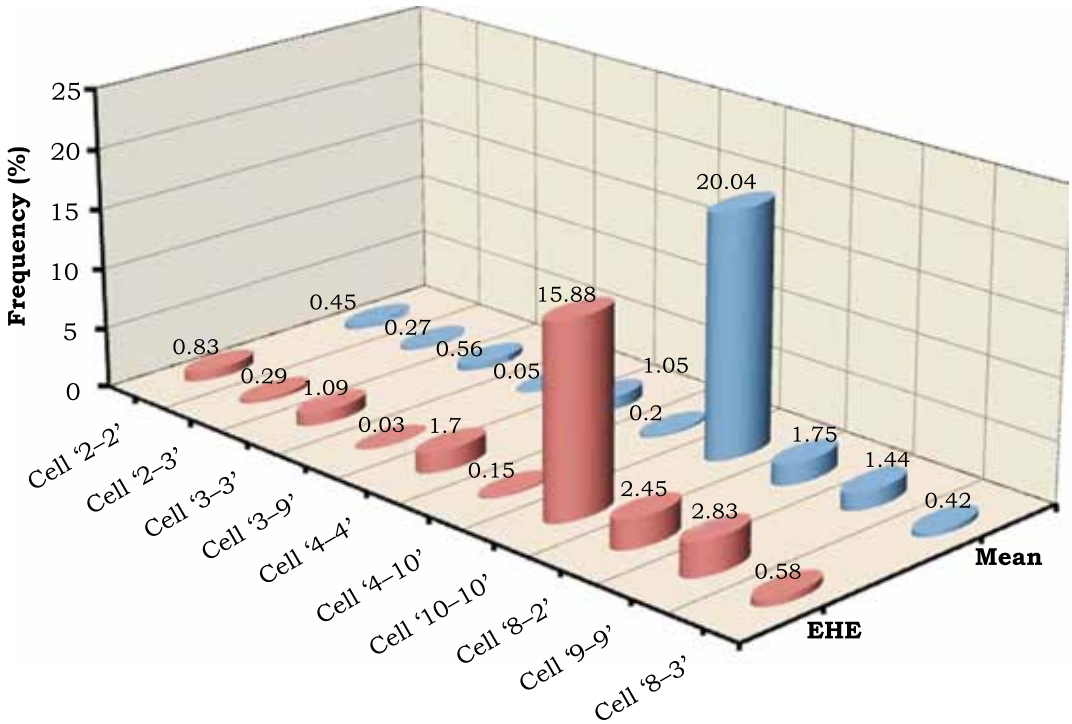

Figure 4: *Cell-wise percentage value for teachers of HE group and mean percentage value for each cell for all groups of teachers*

these teachers like to teachers of HE groups.

Percentage (1%) of occurrence of the behaviour 'accepting or using the ideas of the pupil' is found to be less than the mean value (1.76 %) of the entire groups (Table 6). Integrating PTR with communication fabric of classroom, which revealed itself by pattern of cells '2-3'-'3-4' transitions in classes of teachers of EHE and HE groups is not evident in classes of these teachers.

Percentage (5.63%) of occurrence of the behaviour 'asking questions'; is found to be less than the mean value (6.61 %) of the entire groups (Table 6). PTR and PIR are decided by the way teachers handle PTR and PIR and asks diversified questions (from narrow ended to open ended). Diversified questioning patterns like cells '4-4'-'4-10'-'10-10' transitions or cells '3-4'-'3-9'-'9-9' transitions or cells '3-4'-'4-4'-'9-9' transitions are very frequent in classes of teachers of EHE and HE groups, these patterns are rare in classes of teachers of ME group. These questions stimulate pupils to express their own ideas and to contribute their own suggestions; so these teachers seem incapable to ask questions which invite participation.

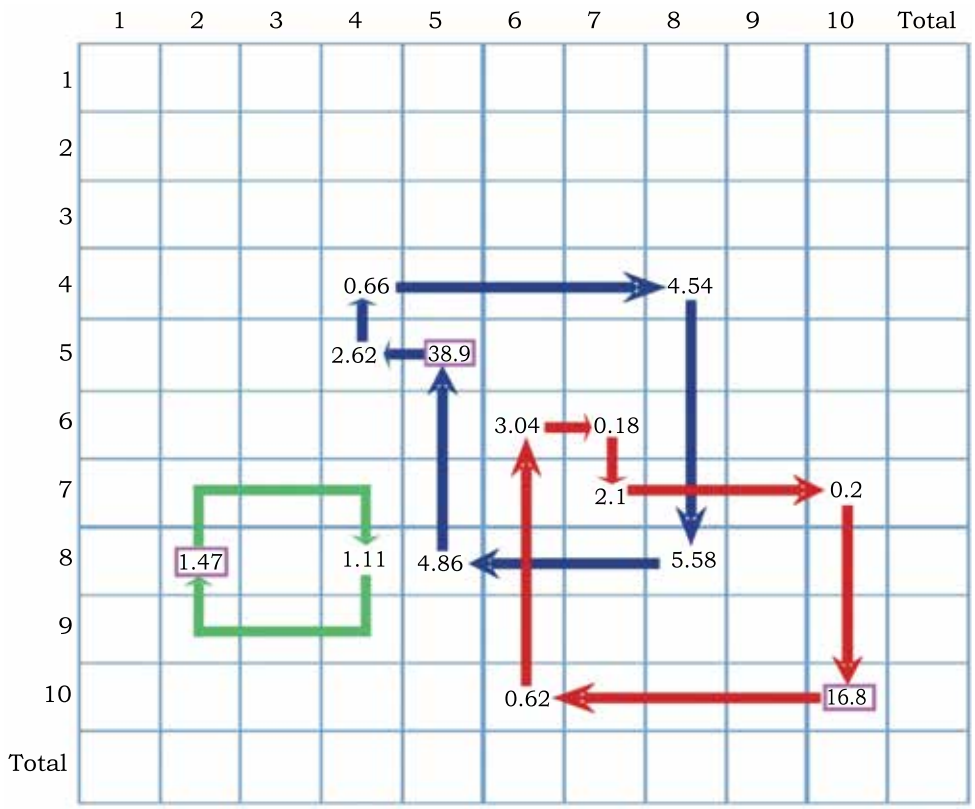

Figure 5: *Communication pattern in the classes of teachers of ME groups as per FIACs*

Percentage (0.89%) of the occurrence of the behaviour PTI; which is found to be less than the mean value (2.06%) of the entire groups; might be also attributed to incapability of these teachers to praise at cessation of PTR and PTI and integrating pupil ideas with classroom communication fabric unlike teachers of EHE and HE groups. These teaching behaviours manifest themselves by patterns like cells '8-2'-'2-2'-'2-3' transitions or cells '8-3'-'3-4' transitions, can rarely be seen in classes of teachers of ME group, these are very frequent in classes of teachers of EHE group and HE group. PTI and PTR which show more willing students' involvement are found lacking in classroom teaching of teachers of ME group.

Percentage (5.9%) of the occurrence of the behaviour 'giving directions' are found to be higher than the mean value (4.24 %) of the entire groups. Unlike EHE group and HE group, percentage (3.4%) of the occurrence of the behaviour 'criticizing or justifying authority' is found to be less than the mean value (4.05%) of the entire groups; though it is high enough to

poison social-emotional climate (Table 6); giving directions and criticising PTR is illustrated by pattern of cells '6-6'-'6-7'-'7-7' transitions in Figure 5. Higher percentage of 'giving directions' shows inefficient management of lesson plan, class time and classroom interaction. Higher percentage of direction also implies less student involvement in the lesson.

3.3.3 Nature of Teaching Style of Teachers of ME Group

Due to below average occurrence of the categories: 2 (Praising or encouraging), 3 (Accepting or using ideas of the students), 4 (asking question), and 9 (PTI), which are major constituents of the 'INDIRECT' teaching style (Flanders, 1970) and above average percentage of the occurrence of the category '5' (Lecturing), and category '6' (giving directions) which are major ingredients of 'DIRECT' nature of teaching style (Flanders, 1970), it is inferred that ME group teachers are 'INDIRECT' in their teaching style.

A comparative study of Figures 1, 3 and 5 of teachers of EHE, HE, and ME groups depicts that higher concentration in cells '7-7' (extended criticising), '6-6' (extended giving direction), '6-7' (criticising pupil behaviour following giving direction) are characteristic features of the teachers of ME group, which supported the 'DIRECT' nature of their teaching style (Flanders, 1970).

Moreover, concentration of percentage frequencies in cells'2-3' (praising and using the ideas expressed by the pupil), '3-3' (extended appreciation of the pupil ideas), '3-9' (pupil initiation following appreciation of pupil ideas by teachers), '4-4' (asking question), (4-10) and (10-10) (silence in the classroom in consequent to the asking thought-provoking or divergent question), (8-2) (praising the students' responding), (9-9) (extended students initiation or students initiation steady state), (8-3) (appreciation of the pupil ideas and building on the ideas expressed by the pupil), which are major ingredients of the 'INDIRECT' nature of the teaching style, are observed to be absent in Figure 5 of these teachers; which prove the 'DIRECTNESS' of the teaching style of the teachers of ME group.

In addition to this, as per the Figure 6, it appears that percentage of extended lecturing (cell 5-5) is above average in the classes of these teachers, which denotes that these teachers have tendency to monopolise the duration meant for teaching and pay less attention toward encouraging students' participation. This tendency of teachers has been further authenticated by the below average occurrence of students' responding (cell 4-8). Incapability of teachers to stimulate active participation emerged from the below average occurrences of percentage frequencies of the extended questioning (cell 4-4) and instantaneous reinforcing or praising of students responding (cell 8-2) (Pandey, 1981). Above average occurrence of percentage frequencies of 'extended giving direction' (cell 6-6)

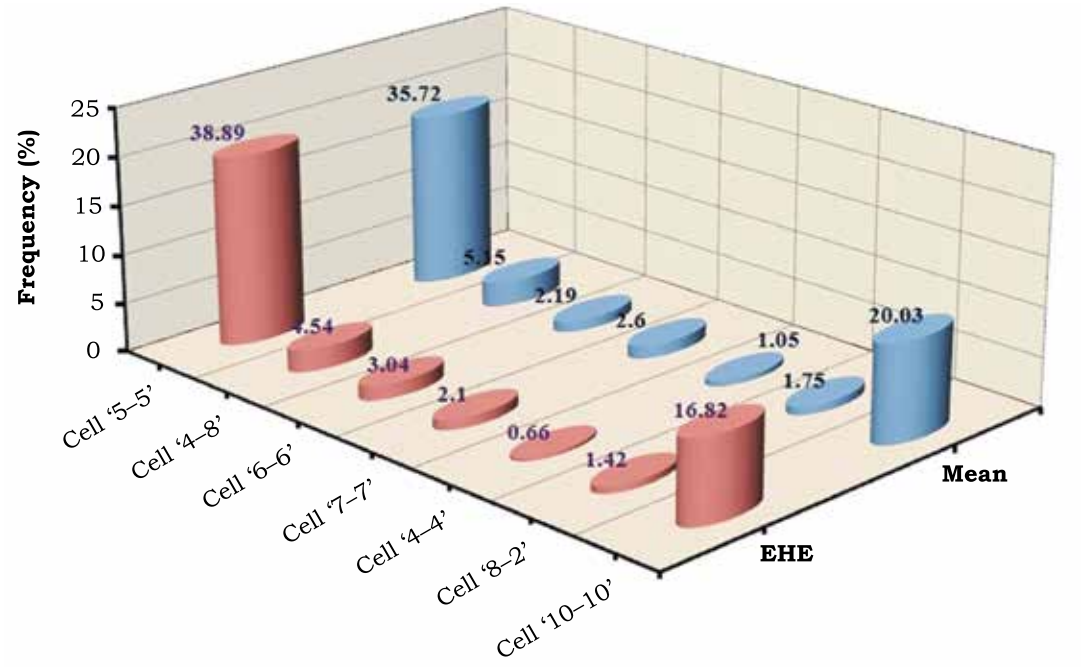

Figure 6: *Cell-wise percentage value for ME and mean percentage value for each cell for all groups of teachers*

tended to present these teachers as autocratic and further this behaviour in conjunction with higher percentage of extended criticism of pupil behaviour (cell 7-7) caused the lower students responding and initiation.

3.4 Teaching Styles of Teachers Having Low Emotional Intelligence (LE)

3.4.1 Pattern of Teaching Behaviours Constituting Teaching Styles of Teachers of LE Group

As per the Figure 7, it is revealed that nearly 87.88% of the total frequencies of the teaching behaviours according to FIACs have been found concentrated in the just nine cells, patterns constituted by these cells are:

Pattern 1: Cell "10-10" (extended confusion and mismanagement in classroom session) → cell "10-5" (teachers' lecturing at cessation of confusion) → cell "5-5" (extended lecturing) → cell "5-10" (confusion at cessation of teachers lecturing).

Pattern 2: Cell "8-8" (extended students' responding) → cell "8-5" (teachers' statement at cessation of students' responding) → cell "5-8" (students' responding following teacher's statement), this is drill

pattern (Flanders, 1970) in classes of these teachers.

Pattern 3: Cell "7-7" (Extended criticism at cessation of pupil talk or behaviour) → cell "6-6" (Extended giving instruction to students).

3.4.2 Discussion

Unlikely to teachers of EHE and HE groups, teachers of LE groups lack ability to praise at cessation or termination of PTR or PTI, this is reason why pattern of cells '8-2' (praising or appreciating at cessation of pupil responding)→'2-2' (extended appreciation) transitions or '9-2' (praising or appreciating at cessation of pupil initiation) →'2-2' (extended appreciation) are absent in classes of these teachers. For the teachers of LE groups, percentage (0.84) of the occurrences of the behaviour 'praising or encouraging' is found to be less than the mean value (2.59%) for the entire groups (Table 6).

In classes of teachers of LE group, pattern of integrating PTR or PTI with classroom communication fabric, which is manifested by pattern of cells '8-2'-'2-3'-'3-3 transitions or '9-2'-'2-3'-'3-3' transitions or cells '8-3'-'3-3' transitions or '9-3'-'3-3' transitions,

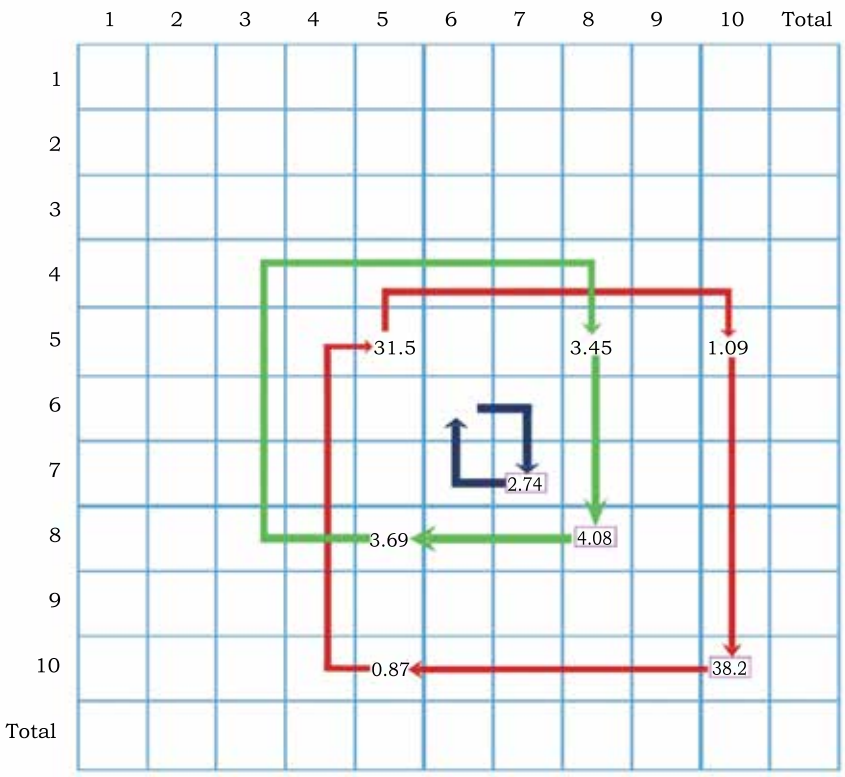

Figure 7: *Communication pattern in the classes of teachers LE groups as per FIACs*

are found to be absent in classroom teaching of these teachers. Percentage (0.35%) of occurrence of behaviour 'accepting or using ideas of the pupil' is found to be less than mean value (1.76 %) of entire groups (Table 6).

Thought-provoking or open-ended questions which manifest itself by patterns of cells '4-4'-'4-8'-'8-9'-'9-9' transitions or patterns of cells '3-3'-'3-4'-'4-9'-'9-9' transitions are observed to be absent in classes of teachers of LE groups. Percentage (1.86%) of occurrences of the behaviour 'asking questions' are found to be less than the mean value (6.61 %) of entire groups (Table 6).

Giving direction to students and criticising at cessation of pupil talk or undesirable behaviour are manifested in classes of these teachers by pattern of cells '6-6'- '7-7' transitions are found very frequent in classroom communication fabric of these teachers. Percentage (3.76%) of occurrences of the behaviour 'giving directions' are found to be slightly less than the mean value (4.24%) of the entire groups and percentage (4.21%) of occurrence of behaviour 'criticising or justifying authority' is found to be higher than the mean (4.05%) value of the entire groups (Table 6).

Percentage (0.68%) of occurrences of the behaviour PTI are found to be less than the mean value (2.06%) of the entire groups and percentage (9.66%) of occurrences behaviour PTR are found to be less than the mean value (14.03%) of the entire groups. This might be attributed to absent of patterns of praising at cessation of PTR and PTI, pattern of asking thought-provoking questions and pattern of integrating pupil ideas with classroom communication fabric (Figure 7).

Percentage (40.92%) of occurrences of the behaviour 'silence or confusion' are found to be higher than mean value (22.22%) of the entire groups. In case of least pupil talk, it is likely to be due to lack of command over classroom activities; it is confirmed by pattern of giving direction to students and criticising students' behaviour (Figure 7).

3.4.2 Nature of Teaching Style of Teachers of LE Group

On the basis of the foregoing discussion of the teaching style of the teachers of LE group, it can be inferred that like teachers ME group, they are 'DIRECT' in their teaching style, too.

This deduction is based on the below averages occurrences of the categories 2 (Praising or encouraging), 3 (Accepting or using ideas of the students), 4 (asking question), 8 (PTR), and 9 (PTI), which are major ingredients of the 'INDIRECT' teaching style (Flanders, 1970). As revealed from Figure 7, cells '2-3' (praising and using the ideas expressed by the pupil), '3-3' (extended appreciation of the pupil ideas), '3-9' (students initiation in consequent to appreciation of the students' responding on the part of the teacher), '4-4' (asking question), (4-10) →(10-10) (silence in the classroom in consequent to the asking thought-provoking or divergent question), (8-2)

(praising the students' responding), (9-9) (extended students initiation or students initiation steady state), (8-3) (appreciation of the pupil ideas and building on the ideas expressed by the pupil), which are major ingredients of the 'INDIRECT' nature of the teaching style and found very frequent in the Figure 1 and 3 of the teachers of EHE and HE groups, respectively, are not found in the Figure 7of the teacher of LE group (because of negligible occurrence, below 1%) which prove the 'DIRECTNESS' of the teaching style of the teachers of LE group.

From the inspection of the Figure 7 of the teachers of LE group, it reveals that out of 9 cells, cell '6-6' (extended giving direction), '7-7' (extended criticising pupil behaviour or justifying authority), '5-5' (extended lecturing), '10-10' (extended silence or confusion) have higher concentration of the frequencies, which further authenticated the 'DIRECTNESS' of the teaching style of the teachers of LE group (Flanders, 1970).

4. Conclusions

On the basis of findings, now it is likely to infer that EI of teacher play important role in shaping the nature of teaching styles of teacher. Teachers of EHE and HE groups are found to be 'INDIRECT' in their teaching style. On the contrary, teachers of ME and LE groups are found to be 'DIRECT' in their teaching style. In general, teaching styles of teachers of EHE group and HE group are characterised as teacher responsiveness rather than initiation (INDIRECTNESS). Indirectness of teaching style of EHE and HE groups accept and use of students' ideas or opinions, ask diversified pattern of questions (blend of narrow and thought-provoking questions), encourage active participation of student, appreciate students' responding and initiation, deal feeling and emotions in friendly manner and promote flexibility of teachers, influence more classroom interaction pattern. More than their counterpart teachers of ME and LE groups.

Constructivist compatible elements are observed to be embedded in teaching styles of teachers of EHE and HE groups. Like constructivist teachers, these teachers ensure active participation of students and ask diversified questions (low cognitive level questions and higher cognitive level questions or open-ended question or thought-provoking questions). Asking diversified questions disturb stage of equilibration (balance between assimilation and accommodation), which is likely to result into intellectual development of child through modification of existing cognitive structure or creation of new cognitive structure.

Initiations of students are found to be higher in classes of teachers of EHE and HE groups than that of their counterparts teachers of ME and LE groups. Students' initiation refers to social constructivism embedded in teaching styles of teachers of EHE and HE groups. Due to this,

teachers promote active participation of students in learning. Asking questions based on students' answers refers to attempt of teachers of EHE and HE groups to broaden students' thinking. This attempts of teachers implies scaffolding (under concept of zone of proximal development). When teachers of EHE and HE groups try to ask higher cognitive level question, this refers to their role of cognitive apprenticeship in classroom teaching, through which these teachers try their best to cultivate critical thinking in students related to subject-matter being taught.

In various studies, these teaching patterns are found to be positively related to pupil achievement in different content areas, as well as to a number of other variables like-attitude, independence and self-direction, verbal recall, creativity, manipulative skills, etc.

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