5. Implications of the Study

CHAPTER OUTLINE

5.0 Introduction

The discussion in the previous chapters has traced the need to address ELT problems at the primary level through teacher development. The positive hypothesis of the present study from data triangulation in the previous chapter, indicates how MI-RBT task-framing, supplementing the prescribed NCERT texts, can facilitate teacher education inside the classroom. Materials development thus extends beyond the domain of expertise in pedagogical theory to become a practical pathway to efficacious classroom practice. This serves the purpose of causatively connecting theoretical knowledge with practical skill in TBLT, leading ultimately to differentiated and autonomous language learning through MI and RBT applications. Tasks framed by teachers evolved in structure within the Communicative English classroom while their cognitive outcomes and language learning objectives extended across content subject domains. This chapter traces implications of MI-RBT-TBLT as a self-sustaining process for teacher empowerment, learner autonomy and curriculum development.

5.1 Implications for Teacher Development

Teacher development is one of the most voiced needs in education. Lack of good ELT teachers vis-à-vis projected global benchmarks of language learning makes teacher education in ELT imperative at the grassroots. A shortfall of over 22 lakh teachers at the primary and middle levels of school, affects almost 24 crores of students, at present (2012 Report of The District Information System for Education). Sumer Singh, former principal of The Daly College, Indore, wrote in an article titled 'The gifted teachers option' (*Education World* magazine, June 2012, P. 76) that 20 percent of any community being responsible for 80 percent of its success, the educators' community should concentrate on transforming 20 percent of the nation's teachers into gifted facilitators capable of creating a collaborative rather than competitive learning environment through processes of differentiated learning based on Gardner's MI Theory.

This view reflects not only central policy statements on teacher education, but is unfortunately, also the slogan of a growing commercial enterprise in teacher education. At present, therefore, teacher training and educational technology constitute a business proposition constituted of a curriculum development package offered by firms claiming a monopoly on 'smart learning'. MI, RBT and pedagogy, regrettably, have been commercialized into advertisement jargon promising teacher efficacy and learner improvement. Learning is peddled wholesale, with increasing numbers of reputed schools opting for training modules claiming to compensate for teacher error and inability. The CBSE itself, however, is responsible for this unprecedented state of affairs.

Teacher Training by the CBSE: The CBSE is transitioning from traditional testing to Continuous Comprehensive Evaluation (CCE), making it imperative to train its huge population of English teachers in affiliated schools through 'capacity building' workshops

on teaching-learning and assessing ESL. The CBSE however, has taken two dubious steps to achieve this end. First, by converting formative testing into a series of smaller graded assessments, with explicit instructions to document and record oral/written 'evidences' of testing, CBSE emphasises product outcomes rather than CCE processes like diagnosis of learning needs, contradicting the very purpose of formative testing. Second, instead of approaching authentic, qualified ELT resource persons for teacher education, the CBSE 'outsourced' in common business parlance, its training responsibility to commercial firms, which mushroomed overnight in direct consequence of this policy:

> … In the light of … the various educational reforms initiated by the Board over the years, continuous empowerment of heads of schools and teachers has become imperative. To address this issue, the Central Board of Secondary Education has identified various agencies (as per enclosed list) to conduct … Training Programmes for the head teachers and teachers of its affiliated schools on the various aspects of CCE and Effective School Management & Leadership… (Circular No. CBSE/ACAD/DIR (ACAD.&TRG.)/2013)

These firms are named in a ten-page (but still growing) 'List of agencies empanelled' (retrievable at http://www.cbseacademic.in/web_material/Circulars/2013/2_Training_Data.pdf). The agencies named cite no academic credentials. Instead, their operational USP lies in hastily sub-contracting trainers with only superficial scrutiny of educational qualification or experience. Teacher 'educators' are therefore recruited solely on the basis of the frequency of 'training sessions' they can conduct within a limited time, their network of contacts among schools, and their willingness to travel to workshop locations. This indiscriminate outsourcing is the CBSE's solution for the logistical problem it confronts in attempting to train its very large teacher population.

As a result of indiscriminate outsourcing, teacher-training has become an adjunct to the wholesale business of selling educational hardware and software like language labs, digitally programmed smart boards and automatized generators of CCE reports, all of this being offered as a composite package! The 'training' or 'capacity building' workshops by CBSE-empaneled agencies replicate the traditional autocratic training model of governmental SLTE institutions without even the benefit of a reliable ELT academician or experienced English teacher conducting the workshops. The researcher, interviewing subsidiary training agencies of CBSE, repeatedly found that the teacher training team included dancers, psychiatrists, management graduates, writers, toy designers, educational entrepreneurs, documentary film-makers, social activists and school principals, in short, almost anyone with some social recognition or general bearing on education.

The English teacher at the receiving end of such 'capacity building' could thus be subjected to a variety of techniques, beliefs, principles and instruction, some of which may even be contradictory or not directly applicable in their specific ELT contexts. Subsidiary trainers lacking in specific ELT knowledge, experience or vision, therefore, focus on exam outcomes rather than highlighting ELT processes. These workshops, moreover, are often indefinitely postponed if lack of response from schools make them financially non-viable. The situation is compounded by the absence of any authentic measurement of the actual teaching-learning outcomes of CBSE training workshops in classrooms.

Autonomous Teacher Education: The failure of the CBSE in providing authenticated pedagogical resources for teacher education in ELT, leaves the grassroots English teacher (like this researcher) with reading and action research as more reliable primary resources for improving her teaching-learning skills for self-empowerment. MI-RBT-TBLT, as the outcome of such action research shared with other English teachers, could help them in

implementing the learner-centric policy statement of NCFTE 2009 in their classrooms, without being dependent solely on mandatory outsourced capacity-building by the CBSE or on dubious agencies empaneled by it.

Along with action research, another reliable resource for teacher learning verified by the evidence of the present study, is peer-learning among teachers. Teacher-collaboration, as observed during MI-RBT-TBLT in the present study, can constitute a relevant alternative to the logistical problem of teacher development faced by the CBSE, and for ELT teacher-empowerment in other contexts as well. Shared contexts of teaching and learning can lead to valuable insights and habits of reflection with teacher autonomy and empowerment as the outcome. Teacher collaboration is thus, at the root of the success of the present study, as it helped resolve all emerging problems in MI-RBT-TBLT.

5.1.1 Teacher Collaboration

Collaborative problem-solving by teachers is observed as an emergent phenomenon of MI-RBT-TBLT in the present study. This may be equated with **Collaborative Practice** (CP), which gained significance in SLTE as Content and Language Integrated Learning (CLIL) encouraged collaboration of ESL/EFL teachers with content-area teachers (Crandall and Kaufmann, 2002; Davidson, 2006; Hurst and Davidson, 2005).

It was seen in Chapter Four (pp. 189-192) that the EG English teachers collaborated with each other as well as with colleagues in other departments for interdisciplinary task-framing, team-teaching, class-observation and peer-feedback. Tasks framed in collaboration integrated content from other subjects within the MI-RBT cognitive framework, extending language learning across the curriculum. Teachers of other subjects learnt about language skills and strategies applicable for higher-order thinking in their

lessons from collaborative task-framing with EG English teachers. This confirms the benefits of collaboration which made CP policy initiatives central to TBLT pedagogy and research (Nunan, 1992; Bourne, 1997; Crandall, 1987, 1998a, 1998b; Wild, Mayeaux and Edmonds, 2008). Comprehensive strategies for CP in CLIL became part of the SLTE curriculum, integrating language learning into content in various disciplines (Snow and Brinton, 1997; Teemant et al., 1996; Echevarria, Vogt and Short, 2004). The overall aim of peer-collaboration in CLIL is professional development for improved classroom instruction with better learning outcomes (Roger and Johnson, 1994). This collaborative SLTE model articulates the core beliefs, challenges and benefits of CP (Hargreaves 1994, Johnson et al., 1994) while also motivating teachers to improve relationships with their learners (Chamberlin-Quinlisk, 2008, Senior, 2010).

No professional collaboration was observed in the CG schools where neither English nor content subject teachers expressed interest in teaching-learning skills or strategies. Teacher attitudes and interests fostered by rigidly maintained inter-disciplinary boundaries ordinarily obstruct peer-collaboration in schools, thereby negating a valuable learning resource. This could be due to different reasons. Content teachers often consider themselves as professionals in mainstream curriculum whereas ELT is regarded as lacking in legitimate content and language teachers viewed as support providers for mainstream teachers of legitimate content (Arkoudis, 2006; Creese, 2002, 2005). This attitude would lead to passive compliance rather than creative collaborative co-construction between English and content subject teachers (Davidson, 2006). CP in culturally diverse settings challenges teacher understanding of the relational dynamics of trust, reciprocity, and approachability (Johnson and Johnson, 1989, 1994) and can only emerge from articulation of individual belief, adaptation to individual ability and motivation, recognition of

individual achievement, and establishing of reciprocal relationships (Hargreaves, 1994; Chamberlin-Quinlisk, 2008).

The interdisciplinary dialogue between English and content subject teachers in the EG schools, was self-motivated, emerging spontaneously as a problem-solving tool for planning and implementing innovative MI-RBT tasks enabling cross-curricular language proficiency. The EG teachers realized the need for formal arrangements in time-tabling, turn-taking and feedback formats to facilitate collaboration and enable positive outcomes in planning, team-teaching, peer observation and feedback. CP in this study being a teacher-initiative instead of top-down institutional policy, facilitated its as an autonomous problem-solving tool in MI-RBT task-framing, team-teaching, peer observation and feedback. Divergent and conflicting beliefs about ELT and content-subject teaching also create ground for dialogue in CP, leading to strategic lesson-planning through complex negotiations involving the articulation of teacher beliefs, adaptation to different areas of teaching expertise and developing of reciprocal and participatory relationships (Creese, 2006; Davidson, 2006).

A significant outcome of CP in the present study was introspective teaching. Self-initiated reflective processes fostered changes in classroom teaching behaviours through changes in attitude and awareness of teachers. EG teachers summed up experience and insights gained at the end of this study (Appendices K, L) as:

- Learner choice, enabling democratic decision-making plays an integral role in successful learning
- Learners are capable of helping peers in making appropriate choices
- Learning strategies help learners to metacognitively utilise their own strengths
- Teachers can develop learning strategies by observing learners

- Teachers develop their ability to influence learning along with an increased personal responsibility for slow learners, feeling challenged rather than frustrated by them
- Success in facilitating group-interaction motivates more innovative teaching practices
- A supportive and reflective CP environment is essential for MI-RBT-TBLT

These observations by EG teachers on learning strategies and metacognition were the outcome of reflection on collaborative feedback from task-planning, class-observation, peer-assessment and pedagogical reading. Research in CP emphasises its effectiveness in initiating reflective teaching habits (Roger and Johnson, 1994; Chamberlin-Quinlisk, 2008; Senior, 2010). The process of reflective practice can be viewed as a process of reframing already existing perceptions of reality and constructing new meanings in individual ways (Stanley, 1998).

Transformative learning was shaped mainly by EG teacher reflection based on collaborative discussion of Critical Learning Episodes (CLE) from classrooms in supportive, reassuring contexts of shared values. Collaborative learning by EG teachers reflected the interpersonal dynamics of teachers mutually reviewing anecdotal reports and journal entries and sharing conceptual frameworks through group video-observation and discussion of lessons. Teachers with little scope for reading research literature, or considering standard models of pedagogy inapplicable to local contextualised practice, frequently incorporate perspectives, principles and values from their own experience of analysing CLE, as substitutes for these models (Kiely and Davis, 2010). CP as a model of SLTE, therefore, provided a common platform for significant ongoing dialogue on action research, teacher engagement and theoretical insight, as validated by the study outcomes discussed in Chapter Four.

CP for SLTE: Cross-curricular teacher collaboration, by enabling shared learning of innovative methods through materials development, can become a self-sustaining means of teacher education for empowerment within the classroom. This would solve logistical problems for the CBSE by reducing teacher reliance on external workshops. It would also help teachers to learn from legitimate and authentic ELT resources by equipping them with the necessary skills and strategies for selecting, decision-making and transforming theory into practice through trial and error. Autonomous learning is thus the natural outcome of CP in MI-RBT-TBLT.

Teacher education through autonomous learning, as demonstrated by EG teachers of the present study, is 'work in progress', having to adapt to innovations in the field vis-à-vis individual learner needs, as well as the global ELT scenario. EG teachers learning in collaboration through continual MI-RBT task-framing, manifested better understanding of language skills and strategies than they had earlier, from attending the optimal number of annual CBSE capacity building workshops cited in Rule 3.3 h (vi):

> *Every school should organise at least one week training programme for teachers every year in association with any teacher training institute recognized by the state or Central Government or by any agency identified by the Board.* (Circular CBSE/AFF/DS/Trng/2012 dated 4.1.2013)

Action research through MI-RBT-TBLT led to the meaningful transformation of learning as intended by the above CBSE policy directive. Framing MI-RBT tasks for language learning across the curriculum was enabled through CP with colleagues teaching other subjects. Materials development for CLIL by practitioners rather than experts was facilitated through CP.

Teacher education, moreover, is also shaped by individual creativity, motivation, attitude and circumstances. The EG teachers all showed remarkable growth over the study period, yet with individual differences in the pace and direction of growth. While some EG teachers assumed motivational leadership roles, others excelled in team-teaching, a few read and researched extensively, while yet others showed exceptional creativity in task-framing. A very few even evolved task-framing parameters of their own, by the end of the study. MI-RBT-TBLT thus, enabled individual teachers to grow at their own pace, according to their specific interests, aptitudes and motivation.

The individual developmental patterns observed in EG teachers of the present study were the outcome of intrinsic motivation for self-sustained learning that is missing, along with continuity and follow-up support, in the seven-day teacher-training workshops conducted by CBSE-empaneled agencies. Attending CBSE workshops did not motivate the CG teachers to experiment with technology for curriculum delivery, or even to move beyond the text-bound and lecture-intensive structure of their lessons. MI-RBT-TBLT is self-sustained in the present study not only by teacher collaboration for problem-solving but also through optimal use of technological resources to motivate learning. The learning environment of the EG schools enabled inclusion of technology in MI-RBT task phases from planning to presentation.

5.1.2 MI-RBT-TBLT and Technology

MI-RBT-TBLT as practised by EG teachers in the present study was, in retrospect, technology intensive. MI-TBT-TBLT does not essentially require technology for successful teaching-learning outcomes. It is, however, completely compatible with the available innovative mobile and digital technology for learning English and for using language in

problem-solving across the curriculum (Gardner, 2002; Chapelle and Jamieson, 2008; Schuurink and Rvies, 2009). Technology not only helped transpose LSRW into thinking skills within the MI-RBT framework, but its functions in the task-cycle also led to significant decrease in teacher-talk and dominant teacher roles in ELT and other subjects in the EG schools. The acquisition of 'tech-savvy' tips from learners motivated this dimension of professional development.

Video-recordings and photographs of MI-RBT task performance being uploaded on class blogs also enabled self and peer-evaluation by learners and parental participation and feedback. Learner expertise in operating electronic gadgets gained for them an active role in decision-making along with EG teachers, as discussed later. EG learner improvement from self-assessment through recorded performances was paralleled by EG teacher improvement on task-planning and teaching techniques. MI-RBT-TBLT through CP therefore established a causal connection between task-planning and ensuing teaching-learning strategies. In this process, the technological skills of the digital immigrants (teachers) and digital natives (students) (Prensky, 2001) increased considerably over the duration of the present study, leading to democratisation in their roles.

The spurt in technological knowhow was a significant causative factor in the high motivation levels observed in EG teachers and learners throughout the study. The tasks framed by EG teachers enabled optimal use of technology in blogs, wikis, iPad apps and smart board software within the theoretical framework of MI-RBT-TBLT for language learning as well as for using language in problem-solving across the content curriculum. Mobile digital software for language-learning with built-in MI inputs, RBT cognitive outcomes and instant feedback was used in the input, planning or presentation phases of tasks, catering to individual differences in learning and sustaining intrinsic motivation in

learners. Technology as an equalising interface between learner-natives and teacher-immigrants in the present study balanced the EG learners' practical skills in the digital medium with EG teachers' knowledge of language content, thus, projecting a viable democratic medium of future learning.

Implementing MI-RBT tasks modified the EG teacher role from controlling, decision-making and directing to facilitating group work and task-fulfilment during the lesson. The ensuing relaxed environment encouraged EG learners to interpolate questions and suggestions into teacher instruction. Teachers recognised and adapted to increased learner familiarity with MI-RBT task modality involving youth icons or digital inputs by allowing them to modify and restructure activities during task-implementation. This change in the knowledge-hierarchy increased learner interest and motivation for MI-RBT tasks and was instrumental in meeting task-goals with reduced teacher guidance. Learner autonomy was partly the outcome of MI-RBT tasks accessing technology for language-learning across the curriculum.

5.2 Implications for Learners

Learners as digital natives are intrinsically motivated by mobile technology as a medium for language-learning and problem-solving at different RBT levels of cognitive challenge, catering to individual learner differences, allowing learner collaboration, choices and decision-making, providing instant feedback, and thus, enabling autonomy. To take just one comprehensive instance of MI-RBT in a digital task, Minecraft incorporates learner-collaboration in its inherent features like resource management, project design, decision-making and problem-solving, integrated with the use of authentic vocabulary in real-life contexts (Beckett and Slater, 2005; Egbert, 2010). The 'Minecraft' game required

the EG teacher to programme/build worlds in the creative mode, incorporating scenarios, characters and events based on textual content. The learners then accessed these virtual worlds and interacted with the inhabitant characters on fact-finding missions that elicited their reading and listening skills, while also increasing their computer programming knowledge. This game, when played by several players, built interpersonal collaborative skills (Warschauer, 1997). EG learners thus co-created worlds with interactive textual content researched and written by them and accessed by team-mates through interactive prompts (Gee, 2004; Folse, 2006).

Learner-centric features operated in MI-RBT tasks even in the absence of technology. While the analysis-reflection phases of MI-RBT tasks motivated learners to assume responsibility for their own learning, planning and presentation phases enabled peer-learning through collaborative problem-solving and feedback. Collaborative Learning (CL) thus plays a crucial role in enabling learner autonomy through intrinsic motivation. The written and oral presentations of EG learners based on the information acquired by them, covered the factual-expository, narrative-descriptive, persuasive, reflective and creative styles of composition, with MI transpositions of content between the Visual-spatial, Musical-rhythmic, Naturalistic, Physical-kinesthetic and the Verbal-linguistic Intelligences occurring at all cognitive levels of RBT. MI-RBT-TBLT thus enabled teachers to integrate language learning objectives with thinking skills through innovative mobile technology like Minecraft, iMovies and iComics. Mobile technology therefore, as as aspect of MI-RBT-TBLT, combines learner autonomy with teacher development, enabling task-framing using all the MI and RBT levels.

EG teachers cited the ability of CL to balance teacher-led lessons through MI-RBT-TBLT integrated with the syllabus. CG teachers, on the contrary, equated CL with fun-activity that was ineffectual for serious learning, based on the following beliefs:

- Explanation of textual content by the teacher was necessary to enable learning
- Group work diminished individual effort and learning
- CL would be time-consuming and prevent syllabus completion

It was thus, not surprising that CG English lessons included few opportunities for CL. Learner response in the CG schools, however, contradicted CG teacher beliefs about CL, indicating that the majority of CG learners were willing to engage in CL with peers. CG learner motivation and readiness for CL thus, remained unexplored due to rigid teacher belief in the greater efficacy of lectures for 'serious learning'. The negative outcome of this was that CG learners manifested greater teacher dependence than EG learners, who emerged at the end of the present study as confident autonomous learners, with high self-esteem, tolerance of differences, capacity for reflection and intrinsic motivation (Appendices A, B, C).

EG lessons, changing gradually over the study to include CL across the curriculum, did not always transition smoothly. Some EG teachers admitted to feeling 'guilty' at not being 'in charge' of learning, or of feeling themselves 'unfairly relegated to a marginal position'. Some EG teachers at early stages of this study experienced this maladjustment or feeling of exclusion from learners in 'flow' (Csikszentmihályi, 1990; Hickey, 2004; Shore, 2004), which inhibited the ability to intervene unobtrusively while checking on task progress or to be non-judgemental in feedback. Teachers sometimes reacted by deliberately ignoring groups of on-task learners to focus solely on learners needing help. Teacher intervention in these groups then disrupted learner thinking as teachers tried to reassert

control through criticism, and by redirecting trial-and-error problem-solving into more accurate channels, thus, restricting or taking over learner activity. Autocratic and disruptive teacher intrusions into inherently democratic operations of MI-RBT tasks inevitably resulted in learner resentment, manifested as passive-aggressive compliance, forcing entire teacher takeovers and thus nullifying the learning objectives.

Feedback from peer-observers eventually helped in reducing these negative teacher propensities, while the breakthrough to a more democratic sharing of responsibility and decision-making was enabled by technology, as discussed earlier. EG teachers and learners also gained equality by debating the validity and relevance of information mutually pooled from online resources for MI-RBT tasks. Learner feedback and suggestions gradually came to be recognised as a valuable task-planning resource by teachers.

5.2.1 Collaborative Learning

Collaborative Learning (CL) indicates learners working in groups of two or more, mutually solving problems, creating meaning through negotiation, or creating a product by working together (Smith and MacGregor, 1992, p. 1). CL, based on the theory that learning is a social act (Bloom, 1956; Vygotsky, 1978; Bruner, 1985; Dewey, 2009), led to the development of learner-centric environments. In the present study, CP by EG teachers was mainly instrumental in enabling CL. EG teachers learnt the operational framework of collaboration and its advantages through trial and error, using CL as a tool for integrating individual differences with the following outcomes:

- EG learners manifested greater task engagement and intrinsic motivation when working in a collaborative environment, confirming the benefits of collaborative over competitive learning (Slavin, 1989; Lee and Smagorinsky, 2000).

- EG learners demonstrated greater understanding of content at deeper levels through learner negotiation, confirming that collaboration ensures higher rates of achievement and retention than individualistic learning (Johnson et al., 1981).
- High levels of confidence, self-esteem and tolerance of individual difference were observed in EG learners, confirming outcomes predicted by studies on learner collaboration (Totten et al., 1991).

EG teachers replaced individual competition with learners working together to help each other learn. They allowed learners autonomy in choices and decisions, whereas CG teachers expressed preference for traditional classroom relationships structured, manipulated and controlled by the teacher. CG teacher viewpoint of CL as an obstruction to individual learning limited it to rare instances of debates, skits or poster-making for CCE. Collaborative learning processes were inhibited by product-focussed assessment in teacher-centric, text-based methods, fostering rote-learning and low motivation in learners. This teacher-led, authoritarian model, positing a monolithic, text-based concept of knowledge handed down from the teacher to passive learners (Beglar and Hunt, 2002; Jacobs and Hall, 2002), results in almost absolute teacher/text dependence (Fig. 5.1):

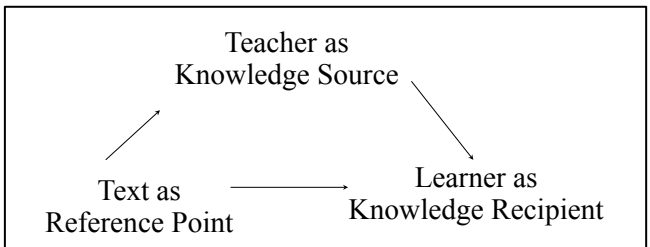

Fig. 5.1: Authoritarian Classroom

The mismatch between learner aptitude for CL and teacher preference for lecture method was attributed by CG teachers to greater emphasis being laid on exam scores than on equipping students to read independently, think critically and become autonomous learners. Despite CBSE training or capacity building in ELT/CLT, exam-induced, teacher-

led and text-bound lessons continue to prevail. This detracts from the skill-based, learner-centred, self-monitored and collaborative approach cited in the NCF 2005. The traditional competitive concept of knowledge as an independent construct to be mastered individually, therefore, needs to be replaced by knowledge as a socially constructed entity, cooperatively structured through classroom interaction (Cohen, 1994; Johnson and Johnson, 1994; Hollins, 1996; Slavin, 1990, 2006). Cooperative and collaborative classrooms are not identical, though both develop thinking socially, through conversation (Bruffee, 1984). The terms cooperation and collaboration indicate differing degrees of learner autonomy. Cooperative learning is more teacher-directed with pre-determined products while collaboration is more open-ended and discovery-oriented.

Cooperative as well as collaborative classrooms however, share knowledge and authority through heterogeneous grouping of learners, with teachers acting as mediators or facilitators, structuring activity sequences, time allocation, roles, relationships and language use in interactions, to promote L2 learning (Doyle, 2006; Carter and Doyle, 2006). Interpersonal interactions in CL enhance group responsibility for shared learning (Sheets, 2005). CL posits a receptive learner as the active co-constructor of knowledge from multiple points of reference in a democratic classroom (Senior, 1997; Spratt and Leung, 2000), with the teacher facilitating peer-interaction (Fig. 5.2):

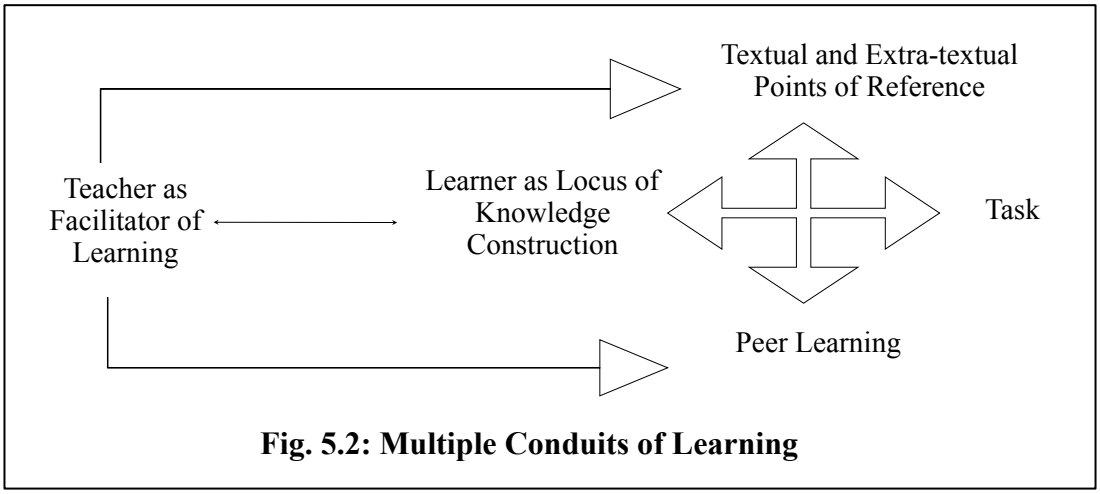

Fig. 5.2: Multiple Conduits of Learning

Individual EG learners doing MI-RBT tasks interacted with the teacher, task, peer group, text and various external information sources, thus accessing multiple conduits of learning (Fig. 5.2). No learner thus, remained a passive recipient of knowledge, or had recourse to rote learning. On the contrary, MI-RBT-TBLT in the EG classroom enabled peer learning, thereby reducing the incidence of teacher-led lessons and fostering learner autonomy. Inter-subjectivity or shared understanding in language-mediated communication in CL increases the amount of comprehensible input and thereby encourages motivation and self-confidence through interaction between peer learners (Lantolf and Thorne, 2006). The EG teachers found CL advantageous because they had to 'explain' less with learners actively participating in discussions.

Reduction in teacher-talk time compensated for the increase in time spent by EG learners in discussing problems. Syllabus topics were therefore, completed in less than planned time, freeing time for revision tasks. EG learners expressed greater confidence in knowledge acquired through CL. Shared or peer-learning of strategies helped in minimising individual differences. The principle of heterogeneous grouping in CL increases learning opportunities through individual differences in skill level, interest, motivation and cognitive profile (Jacobs and Hall, 2002). Peer-interaction between learners with different MI profiles during CL enables cognitive development in the language classroom (Gardner, 1999a), while CL principles of simultaneous interaction and equal participation ensure individual accountability. Positive interdependence and individual accountability develop from effective group collaboration and commitment (Johnson et al., 1994). The study results confirm earlier research findings stating that CL and TBLT enable development of cognitive and interpersonal strategies, leading to high motivation and learner autonomy (Piaget, 1973; O'Malley and Chamot, 1990; Nunan, 1992c).

CL promoted EG learner autonomy and personal responsibility for language learning by allowing individual learner choices and decisions, with emphasis on the learning process rather than the product. CL as an inbuilt feature of MI-RBT-TBLT was causative in increasing task engagement, motivation and autonomous learning as EG learners worked together at all aspects of a task, solving problems through positive interdependence (Johnson et al., 1994) to accomplish the group goal. CL thus, increases learner motivation, promotes group dynamics, lowers learner anxiety, and facilitates peer interaction (Ushioda, 2003). Individual accountability in EG learners was ensured through the assessment of individual roles in group grades. The overall outcome of this learning environment is group autonomy (Jacobs and Hall, 2002).

5.2.2 Learner Autonomy

'Autonomy' often remains an alien or unexplored concept for learners in the social ambience of Surat, where career goals dominate learning processes and career choices are frequently determined parentally without reference to learner aptitude, interest or motivation. Autonomy to select and decide strategies, goals and learning processes cannot emerge if independent problem-solving on these issues is not encouraged in learners. During informal interactions with older EG and CG learners before the study, both groups expressed firm faith in parental ability and conceded the right to determine career goals. These learners, lacking the knowledge and experience of their parents, had no clear opinion on choice of subject stream or profession. A few learners who expressed ambitions or desires of their own, simultaneously admitted lack of confidence in their ability to achieve these goals without parental guidance and ratification of their choices.

At the end of the study, most CG learners remained firmly entrenched in such views. EG learners, however, stated that collaborative problem-solving and peer-learning increased self-confidence and made them less teacher or parent dependent, by identifying their strengths and weaknesses and reshaping their self-knowledge. According to parental feedback, more than thirty percent of EG students had stopped attending private coaching by the end of the study. MI-RBT-TBLT processes motivated them for autonomous learning, keeping them engaged even if challenge levels were high. Autonomy through CL thus emerged as a feasible learning goal for EG learners in the present study.

Language learning in MI-RBT tasks involved learners in acquiring new knowledge and skills while combining academic lessons with enjoyable projects like cooking, composing music, making puppets, conducting experiments, going on field trips, interviewing professional experts, creating computer games, iMovies and blog posts, and surfing the Internet. They also had opportunities to interact with teammates and other members of the school community in more meaningful ways. Being engaged in planning out the school garden, envisaging a mini zoo, or drafting contingency measures for natural disasters, enabled learners to share in planning and decision-making in school and the wider community, which significantly helped every learner to forge an identity vis-à-vis peers, teachers and parents, with a deeper awareness of their role in the social environment.

Autonomous learner roles may open new horizons for exploration. Students normally do not play any role in curriculum planning, textbook selection, timetabling or any other fundamental aspect of school life. Academic lessons, in fact, rarely have any immediate bearing on student life outside school, where many young learners, however, play vividly assertive and dynamic roles that are very different from their rather passive acquiescent functions within the classroom. Outside school, most learners claimed to have much more

individualised three-dimensional personalities. Informal talk revealed that this vibrant life comprising their interests, identities, role-models, specialised argot and culture found no reflection in their academic subjects. Hence, serious studies at school and fun at their favourite hang-outs constituted the segregative norm of their existence. Instead of the school curriculum exploiting the rich learning resources in the learners' external world, it gradually expands this alienating rift between their two worlds. Consequently, as learners grow older, many tend towards a passive-aggressive role at school.

To prevent this dichotomy between school and real life, EG teachers suggested that classroom structures and teacher-student roles and relationships needed to be redefined along more inclusive and liberal lines, in which language use could play a significant part. Interaction with learners revealed that they engaged in discovery learning outside school to a great extent, from peers, T.V. and Internet. In addition, to deal with the information overload from a flat world of mobile technology and the Internet, they have developed keen acumen, digital savoir-faire and the ability to make complex choices combined with an aggressive demand for yet more novelty and excitement. The traditional hierarchical classroom does not fulfil this demand, mistakenly assuming a much more simplistic mind-frame in the young learner, verging on tabula rasa or little of academic worth. The present study revealed to the researcher that most learners regarded the prescribed CBSE CLT curriculum as, declaredly, insufficient for learning any content subject.

Learners also asserted that better language-content integrated knowledge could be acquired from extra-textual print or online resources, and that learning was more reliable when structured collaboratively through discussion, debate and logical consensus. They unanimously voiced the need for discussion, debate and practical experimentation to balance teacher lectures. Learners clearly appreciated knowledge they had constructed as

much, if not more than facts handed down by the teacher. Teacher authority as the sole source of learning declined as learners confidently assumed leadership to express their own views and display knowledge during peer-teaching. Discovering the Internet as an alternative (though not always reliable) source of information, released learners from the academic constraints of textual and teacher authority. EG teachers who had hitherto lectured from an entrenched and superior position of information monopoly, freely admitted that they were now forced to come off their pedestals and argue, justify, illustrate and defend, in order to prove the veracity of the information they were providing. This participatory accessing of knowledge replaced teacher explanation, increasing the range of language use by learners across the subject curriculum.

CG students, on the contrary, remained entrenched in the safety-belt of double teacher-dependence at school and in private coaching, which they described as a comforting and reliable precaution for securing good test scores. It is interesting to note that EG teacher collaboration influenced healthy learner collaboration and autonomy through MI-RBT-TBLT, whereas the negative CG learner response to autonomy was a direct reflection of CG teacher beliefs about learning. Rote-learning, prevalent in the exam-oriented CG approach, left no scope for CL or autonomous problem-solving, obstructing the fulfilment of individual academic potential, and thus, negating the curricular objectives of language learning for cognitive development (NCF 2005).

The contrast between the EG and CG learning environments described above indicates the conduciveness of MI-RBT-TBLT for language learning and use for problem-solving in a collaborative environment, across the curriculum. The inclusive framework of MI-RBT tasks allowed autonomous learner roles to evolve within new, democratic classroom structures and procedures, by enabling teachers to recognise the need for learner

to validate learning by using it in the real world. For instance, EG language lessons extended to discussions including prime time TV news, when teachers discovered that learner interest in concurrent political issues exceeded that in the sterilised textual information content. The prescribed textbooks collapsed into a micro-byte within the macro-byte of satellite information sources.

Demoting non-textual learning to a lower rung in the academic hierarchy, although it absorbs the learner's focal interest, would be a serious pedagogical error. Absorbing student priorities into language curriculum, on the other hand, would help teachers access learner interests, understanding and objectives. It is not practicable to implement pedagogical theory exclusive of the idea revolution concurrent in the private world of learners. More active learning can be enabled through ideational contribution by learners to decision-making and lesson-planning, forming an inclusive basis for curriculum-framing.

5.3 Implications for the ELT Curriculum

Motivating participative and inclusive peer-learning across the curriculum would be possible through MI-RBT-TBLT catering to psychological and intellectual differences in individuals and facilitating optimal use of technological resources to engage learners in verbal-linguistic problem-solving at different RBT levels. The interest thus created in learners would lead to task-engagement and translate into opportunities for analysing and selecting information, organising and revising facts, and synthesising ideas coherently. These features, even when inbuilt in prescribed NCERT/CBSE texts, may remain dormant due to lack of teacher knowledge in learner-centric methodology.

EG teachers in the present study worked with colleagues in other departments to identify connections between thinking and language functions in task-instructions in

prescribed NCERT/CBSE texts across the curriculum. Prescribed textual tasks in all subjects were thus, examined vis-à-vis MI and thinking skills activated at various RBT levels. Differentiated language outcomes in MI task products were found to be elicited by task instructions in content subject texts across the curriculum. Task products, catering to different MI-profiles of learners, are listed (Table 5.1) as identified by teachers:

Language in MI Tasks from NCERT/CBSE Texts in all Subjects	
Verbal-linguistic	Compositions, plays, reports, essays, letters, novels, short-stories, debates, biography, reviews
Mathematical-logical	Problems, acrostics, puzzles, mazes, riddles, mnemonics, quiz, codes
Visual-spatial	Timelines, maps, charts, flow-charts, bar-graphs, pie-charts, Venn diagrams, tables, comic strips, posters, picture-writing, family-tree, book-cover
Musical-rhythmic	Poems, lyrics, rap, recitation, Ads and commercials,
Physical-kinesthetic	Models, charades, skits, experiments, board-games, puppet-show, pantomime
Interpersonal	Interviews, dialogues, team/partner problem-solving, discussion panels, presentations, radio shows
Intrapersonal	Self-assessment, peer-review
Naturalistic	Diorama, eco-cycles, scrapbook

Table 5.1 Differentiated language outcomes in MI task products across the CBSE curriculum

MI-RBT-TBLT may thus be identified as underlying tasks in prescribed texts, enabling learners to use language in specific content domains across the curriculum. Dynamic language learning processes activating thinking skills in learners assume greater importance than static products of learning, in prescribed texts. EG teachers collaboratively analysed the vocabulary of task instructions in prescribed texts to identify how cognitive processes were elicited at various levels of RBT. Task instructions thus, coded the

operation of verbal-linguistic and logical thinking objectives. These RBT-specific task instructions in prescribed texts are represented below (Table 5.2) as identified by EG teachers in collaboration with colleagues in other subject departments:

RBT Language Functions from NCERT/CBSE Content Subject Texts					
Know	**Understand**	**Apply**	**Analyse**	**Evaluate**	**Create**
Recall	Interpret	Plan	Question	Conclude	Introduce
Recognize	Explain	Organise	Differentiate	Generalize	Imagine
Find	Exemplify	Implement	Sequence	Examine	Construct
Identify	Summarize	Report	Compare	Justify	Connect
Name	Discuss	Instruct	Classify	Defend	Design
List	Reflect	Suggest	Characterize	Debate	Produce
Define	Infer	Respond	Review	Check	Script
Describe	Decode	Enact	Contrast	Hypothesize	Invent
	Integrate	Change	Match	Decide	Compose
	Outline	Transpose	Map	Predict	Multiply
		Add	Divide	Coordinate	
		Proceed	Subtract	Test	
		Use	Distinguish	Monitor	
		Interview	Focus	Reason	
			Select	Judge	
			Attribute		
			Detect		

Table 5.2 Language functions in RBT thinking skills across the CBSE curriculum

These RBT-specific instructions (Table 5.2) were then incorporated by English teachers to frame MI-RBT tasks in collaboration with colleagues in other departments, eliciting higher-order thinking skills across the curriculum. This process, firstly, modified curriculum delivery, dissolving rigid boundaries and enabling teachers to explore common cognitive language functions in all subject texts. Secondly, this led to a democratic "re-evaluation of those subjects typically taught, with increased emphasis placed on the arts, nature, physical culture, and other topics traditionally limited to the periphery of the curriculum" (Armstrong, 2003, p. 4). Thirdly, MI-RBT tasks encouraged learners to master extra-textual academic information while challenging teachers to find ''ways that will

work for this student learning this topic'' (Gardner, 1999a, p. 154), regardless of inter-disciplinary differences. The ensuing high degrees of intrinsic motivation and task-engagement manifested by learners throughout this study enabled teachers to make MI-RBT tasks the basis of language use in different subjects within the academic curriculum.

5.3.1 Inclusive Language Learning

MI-RBT task-framing as discussed above, changed teaching-learning environment in the EG schools into an inclusive culture of support and respect for diverse learner and teacher endeavour to generate stimulating ideas for developing a grassroots language curriculum in accordance with the NCF 2005 and the CBSE. The process of language learning became imbued with a sense of joy and great excitement visible in eagerly and actively engaged students (Appendices M, N). These outcomes corroborate characteristic features of MI application in language classrooms (Kornhaber 2004, Gardner 2004b).

Planning MI-RBT tasks helped teachers in identifying and utilising diverse strengths in learners as well as colleagues which, in turn, enhanced the language-learning experience by developing skills and strategies through constructive teamwork. Learning horizons extended to include innovative ways of demonstrating new knowledge and skills. The findings of Kornhaber's (2004, pp. 71ff) 'Schools Using MI Theory' (SUMIT) Project describe almost similar outcomes in schools implementing MITA. The present study showed an overall performance improvement across the curriculum in speaking and writing skills of learners, indicated qualitatively by learner motivation as well as quantitatively in academic grades at the end of the year. This improvement can be attributed to the fact that instead of remaining limited to prescribed textbooks, the MI-RBT tasks framed by EG teachers included learners of differing abilities in extensive and

intensive reading, brainstorming, debate, note-taking, oral and written presentations of knowledge acquired, systematic peer feedback and self-monitoring.

The EG teachers framed MI-RBT language tasks, in collaboration with colleagues teaching Social Sciences, Mathematics, and General Science, to complement textual learning as well as reduce learner anxiety in these subjects. Concepts in different disciplines along with their specialized vocabulary and syntax were thus demonstrated, exemplified and learnt through puppetry, role-play and games. These tasks enabled stress-free formative assessment of learning and fulfilled diagnostic requirements, in the true spirit of CCE according to the CBSE. Learners specifically mentioned the economy of time and effort enabled in learning complex concepts like binomials and the periodic table through MI-RBT-TBLT, compared with conventional lessons. Anxiety induced by science and maths as difficult subjects was reportedly reduced by MI-RBT-TBLT assessment. The input for such lessons was teacher investment in task-planning, peer observation-feedback and reflection, ultimately leading to teacher development and learner autonomy.

Successful teaching innovation rests with the adaptability and initiative of individual teachers in the classroom. Orienting teachers in MI-RBT-TBLT alone could not have led to positive outcomes without proactive MI-RBT task-planning, implementing and reflecting. Teacher collaboration led to empowerment across the curriculum, reversing the earlier top-down policy of CBSE teacher-training. MI-RBT-TBLT also significantly affected recruitment policy in the EG schools. New applicants for teaching posts had earlier been required to demonstrate their ability to transfer textual content through lecture and explanation. By the end of the study, applicants for teaching posts in English as well as

other subjects were expected to be interactive and inclusive, following learner-centric principles and catering to individual differences.

There was visible improvement in learning behaviours and class discipline as the logical outcome of greater task engagement, even in learners lacking the linguistic and logical abilities typically valued in academics. Classroom management was redefined in practical terms by teachers adapting to the realities of group work and learning to discriminate between disruptive behaviour and meaningful interaction in learners. A significant feature of MI-RBT-TBLT involved outcomes for learners with learning disabilities (LD) like dyslexia, dysgraphia, Attention Deficit Disorder (ADD) and Attention Deficit Hyperactive Disorder (ADHD). These LD, ADD and ADHD students feature either as passive non-participants or active disruptors in teacher-led lessons. MI-TBT tasks provided these students with opportunities to participate in learning by operating from their individual strengths. This had both academically and emotionally positive outcomes. Parental reports verified teacher observation that certified LD/ADHD students participating in this study showed marked improvement in motivation, engagement, peer-collaboration and language learning.

Increased parental participation in learner effort and achievement was another noteworthy outcome of curriculum delivery through MI-RBT-TBLT in the present study. MI-RBT tasks invited parents from different professions to share their knowledge and expertise with learners at school and through experiential learning excursions to their workplaces. Doctors, architects, interior designers, photographers, and other professional experts among parents willingly adjusted busy schedules to take part in interactive sessions, being interviewed by learners who consulted them on technical problems and listened to their clarifications and solutions. Parents were happy to participate in the

learning process at school that normally excluded them. Recognising and valuing diversity of adult contributions in different roles across cultures, apart from those including academic credentials, helps in developing human resources (Gardner, 2005).

Parents with demanding careers specifically stated their approval of MI-RBT-TBLT because of the opportunities it provided for shared time and space in dialogue with (otherwise reluctant) teenage children. In two such successful instances, learner groups translated rough-notes into programmes for computer games with the help of software and guidance provided by parents, and also created an iMovie on their school with music and commentary. Linking real-life knowledge with textual concepts thus, provided a practical context of language use for meaningful negotiation. Such participatory learning also helped parents to understand how MI-RBT-TBLT enabled learners to modify task instructions and goals to fulfil more challenging learning objectives.

Many parents consequently, arrived at in-depth understanding of problematic issues regularly confronted by learners and teachers. PTA meets before the present study had centred on the discussion of test results. Towards the end of the study, parents showed greater interest in discussing classroom procedures, textbook selection, extra-textual learning resources, psychological factors affecting learning and alternative modes of learning. This led to improved communication between parents and children in difficult areas like academic performance and LD.

Parental consensus being essential for modifications of teaching-learning and assessment in existing school curriculum, parental feedback constituted a crucial aspect of the decision to introduce MI-RBT-TBLT in English at the beginning of this study, a well as to continue integrating it with the textual syllabus of all subjects, after its conclusion. The

knowledge, opinions, experience, memories, expertise and judgement of their parents had been tapped by learners in the course of MI-RBT task performance across the curriculum, drawing mixed reactions from them. While some parents responded with comments suggesting that teaching should remain geared primarily towards exams, the majority, however, were inclined positively towards MI-RBT-TBLT across the curriculum, after observing its outcomes in learning English.

Parents in opposition expressed reservations about the long-term academic viability of MI-RBT-TBLT in helping learners prepare for more serious competitive exams. They expressed greater faith in text-directed and teacher-centric learning which, according to them, would be more focussed academically and time-saving. The teachers collectively counselled these parents on evidence of effective learning from MI-RBT-TBLT in the present study. It was due to learner persuasion, however, that their parents ultimately came to approve of MI-RBT-TBLT.

In this context, it should be observed that limited exposure to educational innovation alone is not responsible for parental scepticism. Parents are swayed by the widespread culture of competitive testing and ranking in all subjects, even for very young learners, often endorsed, patented and promoted by entrepreneurs whose academic credentials add weight to their commercial expertise. These popular brands in education technology and testing sustain the prevalent misconception that frequent testing is a dependable learning tool. Learners express the more practical view that serious academic learning needs a ‘fun’ quotient in order to become self-sustaining. Learners also stated that MI-RBT-TBLT, by promoting divergent and creative thinking based on individual ability, indicated that they could achieve success in future life, irrespective of their examination results.

This pedagogical pragmatism is typical of holistic and proactive approaches according to Howard Gardner:

> I would happily send my children to a school that takes differences among children seriously, that shares knowledge about differences with children and parents, that encourages children to assume responsibility for their own learning, and that presents materials in such a way that each child has the maximum opportunity to master those materials and to show others and themselves what they have learnt and understood. (Gardner, 1999b, pp. 91-92)

Parental endorsement of the various learning outcomes of MI-RBT tasks, from teacher collaboration to learner autonomy and from democratic classroom processes to learning with mobile technology, contributed to these tasks being added to the school curriculum.

5.3.2 Integrating Language with Content Across the Curriculum

The cross-curricular impact of MI-RBT tasks was therefore, the outcome of learner request, stemming from their technological superiority to teachers. The EG learners compared the academic/testing tasks in other subjects with MI-RBT tasks in English. The fixed structure of academic/testing tasks, instead of encouraging independent logical thinking, ensured that learners obey instructions exactly. The more open-ended technology-based MI-RBT language tasks, however, allowed logical thinking, peer collaboration, decision-making and feedback, while dealing with content from other subjects. The wave of technological innovation in MI-RBT English tasks therefore, extended across the curriculum, eroding initial teacher doubts about learner ability to handle digital presentations, online blogging, computer-game creation, etc. The result was online text-creation by learners visiting websites and blogs that allowed them to post their own writing

and respond to posts by other learners from all over the world, in international school forums. The excitement of EG learners at becoming part of the global learning community impelled MI-RBT tasks to spread to other subjects.

The exchange of ideas through online reading and writing motivated older EG learners to research and discuss serious issues like politics, higher education and careers in India and elsewhere. Language use for knowledge acquisition, which had earlier been limited to tests and assignments gained in fluidity and flexibility to suit different domains with governing rules beyond the classroom. Digital MI-RBT tasks thus, enabled language use as a tool controlled by learners for acquiring and constructing knowledge from varied sources in different subject areas. It was mentioned earlier (p. 263) that learners found NCERT/CBSE content-subject textbooks from the elementary to the secondary level to be higher in linguistic complexity than the corresponding Communicative English course-books. It is therefore, necessary for the CLT approach in CBSE English to be modified to equip learners with reading and writing proficiency levels required in content-subjects. Judging by the outcomes of MI-RBT-TBLT in the present study, integrating learning of English with content-subjects through teacher-collaboration across the curriculum would ensure language proficiency alongside learner motivation and task-engagement.

In English medium CBSE schools in India, students from the elementary to the secondary level learn Communicative English as well as content subjects through immersion. This situation can be considered as ready ground for Content and Language Integrated Learning (CLIL), discussed earlier in Chapter Two (p. 66). English as a global-library language forms the foundation of the CLIL approach. CLIL also being compatible with prevailing parental belief that learning all subjects in English provides a better

preparation for professional life, would make it viable in India. CLIL may thus become the operational context of MI-RBT-TBLT.

It should be noted that in theory, CLT, focusing mainly on language, is different from CLIL which focuses more on content, or from Content Based Instruction (CBI) and English Across the Curriculum (EAC), which have specific learning objectives and differing degrees of focus on language or content. In the present study, however, coterminous reference to CLIL, CBI or EAC may be permitted, in view of the emergent nature of this approach, focussing on optimal learning outcomes in contexts where language learning and use are correlated. A significant outcome of the present study was teacher belief that ensuring language proficiency in all subjects is not the sole responsibility of English teachers. Teacher collaboration across the curriculum in the present study enabled the sharing of this responsibility in practice. Teacher feedback, moreover, indicated that MI-RBT tasks led to improved use of language in content subjects as well. In this context therefore, MI-RBT-TBLT can be considered compatible with CLIL, CBI and EAC.

5.3.3 CLIL as Language Pedagogy

Studies on the relationship between language learning and content learning interest both teachers and researchers as language teacher roles expand across academic disciplines like science, technology and other subject areas (Wesche and Skehan, 2002; Pica, 2002, 2005; Stoller, 2004). Numerous studies revealing that content subjects provide good resources for language comprehension and spoken expression (Swain, 1985, 1991; Harley, 1989, 1993; Swain and Lapkin, 2001), the earlier prerogative of first teaching learners a new language and then teaching them content in that language was overshadowed by the

demand for activities and approaches that promoted parallel instruction and ongoing integration of language and content (Pica, 2007).

CLIL methodology focused on developing content knowledge, language skills and cognitive abilities in all subjects interactively through scaffolding devices like speaking and writing frames and word glossaries needed for a particular purpose, similar to English for Specific/Academic Purposes (ESP/EAP). The content of CLIL lessons centred on the facts, information and skills of the subject, the subject-related concepts, and the cognitive, academic and thinking skills required to learn these concepts. The CLIL (Spratt, 2011, p. 4) characteristics below are thus, compatible with the cognitive domain of RBT:

- Predominance of subject-related vocabulary
- Language for exploring, discussing and writing about the subject matter
- Language for employing cognitive skills (defining, giving reasons for opinions, evaluating, hypothesising, drawing conclusions, exemplifying)
- Language for learning skills (locating, interpreting and classifying information)

In CLT, graded grammar functions, skills or vocabulary relevant to pedagogical tasks or real-life situations form the basis of learning. The language taught in CLIL is meant to develop Cognitive Academic Language Proficiency or CALP (Cummins, 1979). Language is hence, not graded across a CLIL syllabus, but structural and grammatical patterns are introduced through scaffolding as determined by particular academic functions, for example: the use of passive voice to report on a scientific experiment, or the use of the past tense to narrate a historical event. FoF approaches complementing CLIL help learners to acquire lexical items and grammatical forms needed for content learning in integrated pedagogy (Lyster, 2007).

Form-focused and content-focused teaching approaches in CLT were made compatible by incorporating complex L2 forms with communicative tasks (Ellis, Basturkmen and Leon, 2001b; Swain and Lapkin, 2001). In CLIL, however, linguistic forms with infrequent yet significant appearance in content input (Harley, 1993; Long, 1996), lacking perceptual prominence and communicative significance (Pally, 2000), or too complex in function to be mastered independently (Brinton, Snow and Wesche, 1989) have to be learnt by integrating L2 skills, strategies and literacy across the curriculum (Cantoni-Harvey, 1987; Chamot and O'Malley, 1994). Researchers emphasised the direct connection between the cognitive process of noticing and the learner's readiness to internalise forms (Mackey and Philp, 1998). Such forms are therefore, visually highlighted for identification in content texts (Day and Shapson, 1991), emphasised by recasting erroneous forms in content-focused exchanges (Doughty and Varela, 1998; Mackey and Philp, 1998; Iwashita, 2003), or by negotiating errors of form through peer collaboration (Lyster and Ranta 1997; Mackey, 1999, Macdonough and Mackey, 2000). Information-gap tasks focussing on subject content alongside form are considered ideal for drawing learner attention to difficult L2 forms (Pica, 2007). Pre-task teacher instructions promote Focus on Form (FoF) while planning and processing information (Parks, 2010).

Crucial concerns of FoF methodology are deciding when and how to redirect communication from a content-focus to a form-focus, selecting appropriate forms in the light of learners' developmental readiness (Krashen, 1981), and implementing form-focused activities to promote their retention over time (Pica, 2007). Designing and implementing FoF activities is thus more time-consuming than meaning-focused language games and content-based problem-solving activities in CLIL classrooms (DeKeyser and Juffs, 2005).

Assessment in CLIL focuses on subject knowledge and language. CLIL is taught by a subject teacher or a language teacher. Occasionally, language and subject teachers cooperate through team teaching. An ideal though unrealistic CLIL teacher profile includes content subject specialism, L2 proficiency, a grounding in ELT and CLIL pedagogy, familiarity with CLIL task design and the urge for professional development. In actuality, however, CLIL involves either subject teachers with limited proficiency in English and little knowledge of ELT methodology, or ESL teachers unfamiliar with the content subject matter. Due to this paucity of teachers fitting the ideal CLIL teaching profile, SLTE programmes with content-language integration are required to foster collaboration between content and language teachers (Tan, 2011). Instances of cross-curricular teacher-collaboration in the present study shows the practical feasibility of CLIL in this context.

There are two cautionary notes to be kept in mind, however, in considering CLIL pedagogy for CBSE learners. First, unlike CLT advising reduced teacher-talk time, CLIL advocates more teacher-talk time to deal with the increased complexity and volume of information input (Spratt, 2011). The introduction of MI-RBT-TBLT in CLIL lessons, however, can counteract difficulties in language or subject content, by balancing the required teacher-talk time with high learner activity levels. The key features of CLT are controlled input and the practice of language points. For beginners in CLIL, therefore, teacher-talk should emphasise receptive over productive skills only to provide young learners with the required comprehensible input. The subject-dictated language methodology of CLIL should begin with teacher analysis of the language demands of a given lesson, followed by collaboratively framed MI-RBT tasks providing learners with the required support in lexis, cognitive functions and specific subject skills to deal with content (Gardner et al., 2001).

Secondly, CLIL favouring the much criticised Immersion over the Bilingual method, may reduce first-language (L1) learning, especially at the primary level, thereby putting weaker learners at a disadvantage. Criticism of CLIL is based on the bilingual theory stating that better content learning takes place in L1, with greater learner self-perception and self-esteem, better classroom participation and greater cognitive development, than in second-language (L2) (Cummins, 1984; Mohanty, 1994; Arkoudis, 2006). MI-RBT-TBLT tasks enabled learners to include either L1 or a common regional language in bilingual task-planning (p. 223). This would help in bridging the transition from L1 to L2 without cognitive diminution (Creese, 2002, 2006) in the task-presentation phase. It would be difficult to determine the longterm role and outcomes of MI-RBT-TBLT in content subjects taught in English, at this time, as it falls outside the scope of the present study. It would, however, constitute an adequate basis for a study in CLIL research.

5.4 Scope for Further Research

Very little systematic research exists in the area of MI-RBT applications in language teaching across the curriculum and the implications for ELT teacher education and pedagogical innovation in cross-curricular or inter-disciplinary context. The application of research findings in these areas, should be interesting as well as relevant for curriculum development. In fact, rigid boundaries confining the research domain of English teacher education to ELT alone is anachronistic, not only in the wider global context of an interdisciplinary approach, but specifically, in the Indian context of interdisciplinary relevance of ELT in secondary education. Research in interdisciplinary ELT is currently confined to studies in Education, without justice to the significant and specific contributory potential of ELT in this regard. This leads to critical reflection on the classroom as a whole

and examination of the institutional and cultural context in which English teaching occurs. An article in the TOI, Ahmedabad, 26 December 2012, voiced concern over declining standards of English with wider consequences, voiced in a speech by the Indian President as "disappointment over Indian Universities failing to figure among top institutes globally", and stating that "...a lot needs to be done to expand research and innovation activities as India still lagging behind many other countries like China." Teacher education was one of the areas of research and innovation cited.

Research in ELT could play a significant role in contributing legitimate findings in the context of teacher collaboration across the curriculum, which space, as discussed earlier in this chapter, has been usurped by commercial agencies with different motives. To prevent commercial exploitation of a scenario that holds potential for action research and teacher development, ELT research in teacher education needs to extend its boundaries into CLIL to find common ground with subjects that use English as teaching medium. Dimensions of future research possibilities opening from this study would include:

1) The structure and role of testing tasks in MI-RBT-TBLT for summative assessment
2) MI-RBT-TBLT applications for developing a holistic approach to language learning through a more evolved task design for English in specific subject contexts
3) Systematic study also needs to be made as to how and why translations between stronger and weaker intelligences favour individual differences during group work
4) Analysis of how MI profiles of individual teachers affect their task structures would make an interesting study
5) Possible parameters of task-framing evolved by individual teachers out of the MI-RBT framework

6) The study of MI-RBT applications in early language learning should also be an interesting area of study, as these parameters favour bilingual considerations.

The research findings of the studies suggested above could lead to innovative practice in ELT teacher education, thus extending the practical applications of theoretical knowledge in the classroom.

5.5 Conclusion

Action research during the present study was the collective decision of teachers, learners, parents and the management. This integrated the planning framework of MI-RBT-TBLT with teacher development and the learning curriculum. The ensuing language learning proved to be an effective anxiety-reducing quotient for learners, in contrast with exam-focused and performance oriented teaching and evaluation. MI-RBT tasks in all subjects enabled multiple learning through collaboration, promoted solidarity through tolerance of differences, motivated reflection and self-management, and led to learner autonomy and teacher empowerment. This culminating outcome of MI-RBT-TBLT outweighed initial procedural constraints faced by the researcher during the study, which appeared in retrospect, minimal though inevitable.

It is difficult to 'conclusively conclude' at this point, because even at the time of writing, there is continual feedback, including suggestions and modifications from teachers, learners and parents on possibilities of expanding cross-curricular language-learning and use in school and community resources, opening further dimensions of MI-RBT-TBLT. Ongoing planning and projecting for the future makes it difficult for the researcher to conceive of a definite conclusion for this study. Instead of achieving closure, the present study has revealed itself as an overture to future possibilities. The EG learners,

even more than their teachers, showed creativity in researching and framing new, interesting and challenging digital tasks involving language use in different subjects and opening a whole new dimension of dialogic teaching-learning.

Administrative duties, usually repetitive and onerous, gained new interest for the researcher during the academic year of the present study. Critically observing the MI profiles manifested by individual teachers and learners, their ability to reach higher order cognition over time with MI-RBT tasks, their collaborative problem-solving and innovative thinking was a novel learning experience. Action research is as yet an unexplored dimension of teacher development in the broader Indian context. Aggressive marketing of ready-made teaching packages that minimise teacher roles to mechanical functions could severely impede the freedom of teachers for action research at the grassroots. Education policies that in practice, emphasise exam outcomes rather than learning processes, could also hinder action research for teacher education.

The present study enabled the researcher to realise firsthand, the important role played by autonomy in teacher education as well as in classroom learning. Autonomy, emerging under suitable conditions, enables teachers as well as learners to engage in sustained learning, accepting responsibility for their own development. This is the beginning of empowerment within the classroom for teachers as well as learners. Empowerment is fostered, paradoxically, in a cooperative and supportive rather than a competitive learning environment. Framing MI-RBT tasks in the present study enabled teachers to understand TBLT in practice. The MI component in the framework enabled individual teachers and learners to contribute from their strengths, peer-collaboration helped them to build up their weak areas, while RBT challenged them to develop their higher-order thinking skills. The resulting self-motivated learning provided humility-

inducing insight into how a study conducted as academic research must come to terms with real-life learning outside its own narrow objective, in order to gain validity.

The contribution made by EG teachers and learners in implementing the theoretical framework of this study led to the various modifications in its structure, during the pilot study, as discussed in Chapters Three and Four. Existing knowledge metamorphosing to create new knowledge, this thesis thus, was collaboratively created in the classroom rather than being thought out by a single researcher. This organic connectivity between the thesis and the process of its origin, or the deeper significance of the term 'action research' once experienced, is understood to be an ongoing cycle. Holistic action research, morphing the individual teacher into a participant observer within the learning system, validates the teacher-researcher as an objective agent of change in the system. Keeping this thought in mind, this researcher hopes that the present study will motivate colleagues who read this thesis to undertake their own action research and to renew the organic learning system within which we function, janus-faced, as teachers as well as learners.