Task Complexity, Peer Interaction and Learner Autonomy: A Case Study

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Abstract

This paper investigates practices that support student autonomy in an ESL lab. Adopting a mixed methods, case study approach and drawing on observations, surveys and interviews with 46 ninth grade students and teachers in an interventionist language learning program in a semi-urban, government high school in Mizoram, India, we argue that language learning spaces that support peer collaboration to accomplish production tasks of increasing complexity lead ESL learners towards autonomy. Recent studies in language learning have shown that task complexity pushes learners towards language production. Paired interaction in task completion supports the process. This paper draws on observations of students' behaviour in the language lab designed by the Connected Learning Initiative, a collaborative project between the Tata Institute of Social Sciences, Mumbai, Massachusetts Institute of Technology, Boston and the Tata Trust that aims to provide course content focusing on listening and speaking skills in English to students in government schools in India. The study tried to capture student behaviour at a moment of transition from a simple to a complex task. We observed that peer interaction creates a safe learning space by enabling learners to negotiate progressively complex language tasks through risk taking that leads to self-reflexivity and learner autonomy.

Keywords: TELL, Task Complexity, Peer Interaction, Autonomy.

Introduction

This paper reports a work-in-progress of a pilot study (of 5 months duration) on language learning practices implemented at scale that can promote autonomy in English as Second Language (ESL) learners. The researchers analyse a phase of transition in one English lab where students in a semi-urban, government high school in Aizawl, Mizoram, progressed from language tasks of lower to higher complexity. Based on the analysis of the students' behaviour in the lab, we propose that engaging ESL learners in paired activities over a series of lessons that gradually increase in cognitive complexity can promote autonomy in language learning.

This case study draws on the experience of developing and implementing a student-led, blended language learning module through the Connected Learning Initiative (CLIx) project, which is a collaborative intervention in higher secondary school education in India between the Tata Institute of Social Sciences, Mumbai, the Massachusetts Institute of Technology, Boston and the Tata Trusts, India. CLIx has developed course content in English, Science and Mathematics to students in government schools in four Indian states - Rajasthan, Chhattisgarh, Mizoram and Telangana. The project aims to provide a safe learning space for students to learn from their mistakes, promote peer collaboration and enable autonomy by inculcating lifelong learning practices. CLIx is, therefore, a process-oriented education project that supplements the

structuralist, grammar-oriented approach to language learning adopted by the schools where the CLIx intervention is happening.

Observations of English classrooms across randomly selected schools in Aizawl showed a predominance of teacher-talk and a near absence of student participation in classroom activities. The reasons for these were several. Large student numbers (ranging from 50-85 students per class), inadequate resources for individualised feedback, constraints on time in completing the syllabus and an examination driven learning system contributed to a passive classroom. It was observed that the language pedagogy adopted in these classrooms was primarily structuralist, with a focus on grammar. Also noticeable in these schools was an absence of a functional language lab, although each school had a lab with several working computers in it. These factors seemed to sideline learner autonomy and lifelong learning practices.

The CLIx English domain created twenty hours of content in communicative English, of which ten were administered in a Beginners' course (English Beginners or EB) and ten, in an Elementary course (English Elementary or EE) in select schools across the four Indian states. The two levels of courses were developed after a baseline study in listening and speaking skills of 256 students spread across the states. The study revealed variations in English language competence and necessitated different levels within the program. The EB and EE are student-led, process-oriented courses that focus on listening and speaking skills. They are designed to intervene in the gaps in learning English in the classroom by tapping into the individualized, equalizing prospects of a Technology Enabled Language Learning (TELL) platform. One of the aims of these courses is to promote learner autonomy. The gradual increase in complexity levels of the lessons from EB to EE triggers peer interaction by making students seek each other's help in completing the tasks. The EB and EE also provide audio-visual scaffolds on an offline TELL platform and requires students to attempt the tasks without always seeking a teacher's aid.

Research Methodology

The objective of this paper is to consider ways in which autonomous language learning practices can be enabled within a teacher-centric pedagogical culture. To this end, we describe and interpret our observations of student collaborations in the CLIx lab within the theoretical context of studies in learner autonomy and language learning practices. The significance of this study derives from the creation of an interactive language lab that encourages students to discuss and learn collaboratively, and the redefinition of the role of the teacher as a facilitator. In this regard, the CLIx English lab reconfigures conventional learning spaces in schools that are dominated by teacher-talk. Further, it intervenes in the formulaic perception of language labs as individualised learning spaces by encouraging peer interaction in the language learning process. This study is, therefore, based on the positive hypothesis that administering language tasks that increase gradually in complexity and that require students to produce language through paired collaborative work in a blended learning environment enables learner autonomy.

This study adopts a mixed-method, case study approach to investigate processes through which ESL learners attempt language tasks to gain autonomy. The analysis of the observations is qualitative, descriptive and interpretive. The researchers captured a phase of transition as 46 ninth grade students in a semi-urban, government high school in Aizawl moved from the EB to the EE course and encountered tasks that were cognitively challenging.

Task Design

Language tasks in the EB and EE modules that increased in complexity gradually over a sequence of lessons were administered to the students. The EB (Beginners) lessons comprised two short audio stories in a session of one hour, which provided additional language input to learners in the early stages of language learning. Typical activities in EB involved moving word blocks to form sentence responses to questions, re/ordering jumbled images from the story to test students' understanding of the plot, and speaking activities where students recorded their answers to audio questions on a TELL platform. The EE (Elementary) lesson, on the contrary, consisted of one audio story with a related multiple-choice comprehension activity, and an open-ended production task (role play) that required students to script and record dialogues for one out of two given situations. Hints and scaffolds, in the form of word clouds, model conversations and transcripts of the model conversation, were provided to guide the students in writing these dialogues. Use of new words and phrases were also encouraged. Students were to work in pairs to complete the lesson within the class hour, though no explicit time limit was provided. This was done to encourage self-pacing and promote confidence in attempting the tasks independently, without emphasizing assessment.

Triangulation of Data

Four types of data were collected and analyzed in this study:

a) survey questionnaire
b) CLIx English lab observations
c) semi-structured interviews with students and teachers in the selected school
d) students' artefacts extracted as audio recordings and transcribed by the researchers

A *pre-course survey* was conducted in September 2016 in Aizawl with 112 students from different schools in different parts of the district. The survey sought to gauge students' attitudes to language learning practices, motivation to learn English, their affinity to technology and a self-evaluation of their language skills. English classes were observed across different schools. Subsequently, after the language module was introduced and the students engaged with it for a few months, a *post-course survey* of 46 ninth grade students was administered at a government high school in Aizawl in the last week of their classes.

Simultaneous *observations* of one pair and the whole class of students transacting the CLIx lessons were made in a 40 minute lesson over five minute slots. The observations were then transcribed and coded based on criteria adapted from Malamah-Thomas' *Classroom Interaction* (1987) and Brown and Rodgers' *Doing Second Language Research* (2002). The codes were modified to suit the specific requirements of this study on learner autonomy, covering the number of instances of students' interactions in pairs and groups and their use of their mother-tongue. Also covered were instances of progression, regression and distractions among students while doing the tasks and the teacher's intervention in the learning process. A *retrospective study* was conducted with pairs and groups of students immediately after the lesson through *semi-structured interviews*. The questions gauged the way the students attempted the activities, the nature of discussions they had with their partners and the types of aid they sought to overcome difficulties. *Interviews* were also conducted with the English teachers and the Headmaster of the school on the impact of the CLIx intervention on students. Finally, students'

recordings from the computers were extracted and transcribed for analysis.

Review of Literature

An increasing number of studies in the last two decades have considered the effect of Complexity, Accuracy and Fluency (CAF) on Second Language Acquisition (SLA) and language learning practice. While there have been independent studies on learner autonomy and task complexity, these have been a) principally quantitative studies and b) outcome based research measuring fluency and accuracy of speech. There is a gap in research that relates task complexity to learner autonomy from a qualitative perspective.

Task Complexity and Language Learning

H. Douglas Brown identifies extroversion, risk-taking, anxiety, inhibition and motivation as psychological, "personality factors" that influence language learning. For Brown, "impulsivity" and the ability to make "intelligent guesses" characterise good language learners. Learners must be able to "gamble a bit, to be willing to try out hunches about the language and take the risk of being wrong". In this context, the complexity of a language task has the potential to sustain learners' engagement with a language course (Brown, 2000).

Norris and Ortega state that the predominant works on CAF among language practitioners has been to measure, in frequencies, ratios or through formulae, the complexity of task structures and their impact on language production (Norris and Ortega, 2009). These works are, therefore, principally outcome based, quantitative studies. Among recent debates, Peter Robinson's and Paul Skehan's studies consider the way task complexity, in particular, can aid language learning. For Skehan, focus on complexity leads to a trade-off between fluency and accuracy, where the teacher must choose what it is they want to achieve in the classroom – accuracy of language production or fluency of speech (Skehan, 1998).

Robinson has, however, challenged Skehan's position in his "Cognition Hypothesis" by suggesting that a considered increase in complexity levels of tasks will a) push learners towards accuracy and fluency in order to meet the communicative and functional demands of the set task, b) heighten attention to language inputs and thereby aid learning, c) enable longer retention of input, and d) promote automaticity and enable strategizing. Of equal significance is his suggestion that tasks of increasing complexity promote dialogue and increase spontaneous interaction that supports language learning (Robinson, 2001, 2003, 2005, 2007).

Peer Interaction and Learner Autonomy in Language Learning

How can language learners negotiate tasks of increasing complexity productively to achieve autonomy? Stephen Krashen's "Input Hypothesis" argues for a comprehensible audio-visual support in second language acquisition. For Krashen, learners must be given a K+1 language input of a level slightly higher than their own to enable them to imbibe the target language more effectively. Great variations in levels, either high or low, will not achieve effective learning. A low level may not stimulate the interest of the learner enough to continue learning, while a level several steps higher than the learners' may be too intimidating. For Krashen, choosing the appropriate level of language input is critical for sustaining learners' interest in, and motivation to, learn the language (Krashen, 1982, 1984).

Is language input, however, sufficient to ensure that learners speak the language confidently? In her "Output Hypothesis", Merrill Swain advances Krashen's Input hypothesis by stating that language output within a framework of "collaborative dialogue", a process where learners are engaged in "problem solving and knowledge building", will lead learners to effective

language learning. Swain argues that "it is dialogue that constructs linguistic knowledge" by allowing "performance to outstrip competence" (Swain, 2000). For Swain, conscious language output in an interactive, dialogic environment enables learners to notice gaps, correct mistakes effectively and enhance accuracy in language learning.

Drawing together the studies on CAF and language acquisition, it is possible to argue that allowing students to engage in language tasks of increasing complexity through paired interaction promotes "collaborative dialogue" for the purpose of task completion. Language learning occurs as a consequence of this process. In what way can this model facilitate learner autonomy?

For Jeremy Harmer, students become autonomous language learners when they take initiatives to learn outside the classroom since the variations and complexities within a language cannot be captured through classroom learning alone. Self-directed learners, Harmer reports, have higher self-esteem and greater confidence in continuing to learn a language. He summarizes Sarah Cotterell's approach, stating that a language program that seeks to promote autonomy should a) reflect the learners' goals in its language, tasks and strategies, b) link the task to an explicitly simplified language learning process, c) replicate real world contexts in the course and tasks and d) promote self-reflexivity in some form through the tasks. These factors will enable learners to become active learning agents (Harmer, 2007).

Significantly, recent studies in learner autonomy reinforce Harmer's claims by indicating the need for dynamism in the learning process. Maria Tassinari, for instance, proposes a model where an action oriented language learning approach that requires task completion leading to cognitive knowledge can signpost a path to independent learning. Tassinari's model is an iterative tool comprising a) a cognitive and metacognitive component that gauges the awareness levels, knowledge and beliefs of learners, b) an action-oriented component that focuses on skills and language behaviour, c) an affective component that determines the learner's motivation, emotions and feelings, and d) a social component that looks at the learner's engagement with their advisors and peers. Tassinari argues that these four components influence each other dialogically and promote autonomy by increasing the self-reflexivity, awareness and decision making capacity of learners (Tassinari, 2012).

Accordingly, in this paper, we define *task complexity* as a sequence of open-ended activities of gradually increasing difficulty levels, which provide audio-visual and textual scaffolds to help learners accomplish the task. *Peer interaction* refers to collaborative dialogue between pairs of students that leads them towards completion of a language task, preferably within the allotted time. *Autonomy*, in this study, refers to a state where learners imbibe practices that enable them to become independent, self-reflexive, confident and motivated language learners. Tassinari's model of autonomy was validated through the observations made in the CLIx lab where tasks of gradually increasing complexity levels were administered to ninth grade students. The findings, discussed in the next section, suggest that allowing students to collaborate with their peers to complete strategically sequenced language tasks can signpost a path to autonomy.

Observations and Findings

This section reports the findings from classroom observations, surveys and interviews with students and teachers of a transition phase in the CLIx English lab where the students moved from EB to EE. It was observed that open-ended, speaking tasks with gradually increasing degrees of complexity in the early learning stages mobilised learner autonomy. Task

complexity in the context of the CLIx lab emphasised learning process and language production, without focusing on fluency and accuracy. It was observed that in the transition phase, the task completion process a) led to enhanced discussions and collaborative dialogues between and across pairs of students, b) motivated the learners to take risks and c) led to self-directed learning where the learners voluntarily attempted challenging K+1 tasks with enthusiasm, with the help of critical feedback from peers.

The Transition Phase: Complexity in Task Design and Student Artefacts

It was observed that simple tasks in the initial phases of language learning (EB) prepared the students for the complex tasks that followed in EE by offering them vocabulary support and initiating them into a language learning process.

The EB lessons comprised language tasks relating to audio stories in English that were accompanied by English subtitles. At least one of these questions related to the plot while the other was open-ended. Students could choose one of the two to answer. To cite an instance, the first audio story of EB Lesson 1 titled "'My Fish!" "No, My Fish!'" describes the way a little girl Munia does not want her two friends Kichu and Choru to go fishing. The accompanying speaking activity asked the students what the fish did and what Munia thought about fishing. An open-ended question was also asked about the students' best friend. Model answers were provided on the screen for each of the questions that the students could listen to before they answer. The second language activity involved students ordering jumbled images of the story to recreate the story correctly. This was followed by a second audio story "Under My Bed", and a brief speaking activity similar to the earlier one, the first pertaining to the story and the other eliciting students' opinions about why we fear the dark. Subsequent lessons were structured similarly with short audio stories accompanied by brief production activities, but with gradually increasing complexity levels, leading to the EE.

Recordings and artefacts show most students choosing to answer the question relating to the story they heard. So, for instance, "A: The fish had tied up both the string" (00:05), "B: Little Munia told sometimes, please don't do that, she said, without water the fish will die" (00:12) and "C: Muna (*sic*) think about fishing is not good" (00:03) are students' responses to the questions "What did the fish do?" and "What does Munia think about fishing?". The model answers provided with the questions were "The fish tied up the strings.", "The fish tied the strings and made the boys fall. So the fish was the clever one.", "Munia does not like fishing." and "Munia does not want the boys to fish.". The first and third responses by students (A and C) replicate the model answers. The second response (B) is, however, innovative and shows the student's initiative in drawing on the plot of the story to frame her individual answer.

In contrast, EE Lesson 1, which had social introduction as its language function and that the students attempted at the time of observation, began with an Introduction and Warm-Up activity that introduced the students to different forms of social greetings. This was followed by a story titled "The First Meeting", which narrated the first encounter between Kanasu, Zo and Sahir, three fifteen year olds who live in a fictional village called Chotapur. "CLIx Time", a multiple-choice activity, tested students' comprehension of the story. Each false attempt was accompanied by an audio scaffold that provided clues to guide the students towards the correct answer. The speaking activities were open-ended and related to everyday use of language. They required students to introduce themselves and talk either to a new student in their school or to a stranger in their village. The model dialogue, titled "A New Student in School", provided clues for students to write their own dialogues. Similarly, the second option that asked students to talk

to a stranger in the village, had a model dialogue titled “New villager in the vegetable market” as the scaffold.

These speaking tasks were, however, not related directly to the audio story in the manner of the EB lessons. While EB required straightforward responses and provided images as scaffolds, EE had fewer accompanying images and required students to script lines for a situation that was immediate to their experience. It was, hence, positioned at a level cognitively higher than EB.

In EE, the students’ audio artefacts reveal replication of the model dialogues with minor variations. The following transcripts of students’ recordings indicate this trend.

Transcript 1 (00:34)

G1: Hi, <*sound unclear*>, are you new to this school? / G2: Hi Tete, nice to meet you, I’m Moimoi, I’ve just joined this school today. / G1: Oh you must miss … your school <*sound unclear*> Which class are you in? / G2: I’m in class 9. What about you? / G1: I’m class 10. <*sound unclear*> like this school. Can I help you in anything? / G2: Mmmm, I’m trying to find my classroom. Can you help me find it? / G1: Of course, come, let’s meet <*sound unclear*> you.

Model conversation 1 from EE Lesson 1: A: Hi, I’m Alka. Are you new to this school? / B: Hi Alka! Nice to meet you! I’m Jenil. I’ve just joined this school today. / A: Oh, nice to meet you too. Which class are you in? / B: I’m in class 9. What about you? / A: I’m in class 10. I’m sure you will like this school. Can I help you with anything? / B: Ummm...I’m trying to find my classroom. Can you help me find it? / A: Of course, come let me show you the way.

Transcript 2 (00:47)

G1: Hello, I’m Moimoi… / G2: Hi Moimoi, this is <*name unclear*> / G1: Hello Tete, I’ve come here to sell my vegetables after school. I’ve not seen you before. Where are you from? / G2: I’m from the village, Dharna. / G1: Oh, what are you do here, in Banjar <*name indistinct, as though reading from a screen*>? / G2: I come to see my uncle. I <*words indistinct*> gave this for him. / G1: What is your uncle name? / G2: His name is Raju. He is a postman. / G1: Oh, I know Raju uncle. I hope you like your stay here. / G2: Thanks <*voice indistinct*> Moimoi. / G1: Bye!

Model conversation 2 from EE lesson 1: A: Hello, I’m Aditya. / B: Hi. My name is Padmini. / A: Hello, Padmini. I come here to sell vegetables after school. I’ve not seen you before. Where are you from? / B: I’m from the village Dharna. / A: Oh, what are you doing in Panchgar? / B: I’ve come to see my uncle. I’m buying vegetable for him. / A: What is your uncle’s name? / B: His name is Raju. He is a postman. / A: Oh! I know Raju uncle. I hope you like your stay here. / B: Thanks, Aditya. See you. / A: Bye.

Both the scripts replicate the model dialogues accompanying the tasks, indicating that the students have practiced the lines before recording them. What is noteworthy further is a) the difference in the duration of recordings in EB and EE and b) the students’ having attempted both options, though they were required to record dialogues for only one. While the recordings for EB were short (less than 00:15 seconds), the EE dialogues were longer and situational (upto 00:47 seconds). Within a learning context where resources are scarce and speaking opportunities few, voluntary recording of lines for longer durations indicates a growing familiarity with the target

language. One reason can be the simple to complex sequencing of tasks in the EB and EE courses, whereby the simpler tasks gave students confidence to attempt the more difficult ones that followed.

The paired collaborative work implicit in the scripting of dialogues for introductions underscores, further, the merits of encouraging students to work with their peers in a language classroom. This is substantiated by the instances of discussions seen during classroom observations.

Peer Interaction: Pre-course and Post-course Classroom Observation

Collaborative dialogue, according to Swain, increases language output, sensitises learners to the gaps in knowledge, makes them notice language rules and expedites language learning. Classroom observations of pair interactions in the CLIx lab confirmed Swain's output hypothesis. The observations also showed that working with partners increased students' confidence levels, provided motivation to attempt K+1 tasks and take risks to make, and learn from, their mistakes.

Pre-intervention observations of literature and grammar classes in two government high schools in Aizawl revealed a) the predominance of teacher talk and b) minimal student initiatives in the classroom. While the students in the prose classroom did a choral reading of a story by Edgar Allan Poe, the grammar class was a dictation lesson. In the literature classroom, the teacher's elicitation of responses from students was frequent (12-15 instances in a class duration of 45 minutes). Student responses were, however, few. In the grammar classroom, the teacher dictated a 1000 word text on Shimla, a hill-station in India, and the students wrote down the passage in their notebooks. This activity took about 25 minutes. The remaining lesson (20 minutes) involved students writing individually about their favourite holiday destination. The two classrooms were comparable in their absence of student-talk and the predominance of teacher-talk. The CLIx lab, in contrast, was interactive, with student discussions predominating classroom transaction. Teacher-talk was nearly absent (with about 7 recorded instances in a class duration of 40 minutes) and restricted to clarifying doubts relating to technology and task instructions.

Observations in the CLIx lab of students engaging with the activities in EE lesson 1 confirm this practice. "CLIx Time", the activity with multiple choice of answers, saw intense discussions between and across pairs. Students were seen revisiting the audio story and reading the transcripts before returning to answer the questions. "Let's Talk", the speaking activity, also saw students moving back and forth between activities in the lesson, listening to model dialogues, reading the word clouds and helping each other practise their lines before recording them.

Table 1 illustrates the number of instances of whole class discussions (WCD), pair discussions that were progressive (PDp), non-verbal interactions that were progressive (NDp), instances of teacher intervention in the mother-tongue and English (TT-M, TT-E) and instances of regression (R), in a class duration of 40 minutes. Instances of progression (PDp, NDp) were calculated based on students reflecting silently on the activities, discussing with their partners, choosing the correct options and recording their dialogues. Regression was calculated based on wrong answers, confusion or no recordings.

Table 1: Classroom observations for a single pair and the whole class - number of instances recorded for a class duration of 40 minutes over 5 minute slots

Observation	WCD	PDp	NDp	R	TT-E	TT-M
Pair of students	1	23	14	5	4	3
Whole class	0	16	7	7	3	3

Since EE made higher demands on students' production skills than EB, some duration of the lesson was spent browsing the activities (NDn) in preparation for the speaking activities. Observations of students' behaviour in the classroom revealed that frequent peer interactions involved noticing gaps in linguistic knowledge, suggesting corrections to their partners and strategising on the best methods to complete the set task.

An instructive instance of peer interaction supporting language learning and autonomy can be located in the following transcript of a student pair collaborating to complete a task in an EB lesson.

> G3: "That is a … spectacle… / G4: (*prompting in the background*) "black" / G3: "black, ... circles, … glass" / G4: (*prompting in the background*) glasses".

This recording captures the voice of G3 clearly, while the voice of G4 is faint in the background. G4, it appears from the audio, helps G3 who is not very fluent in English record the answer. G4's first prompt, "black", acts as a content hint. Her second prompt, "glasses", functions as a critical feedback and a correction of G3's recording. It is also significant that teacher intervention in this collaborative task completion process is absent. The peers, in this case, support and instruct each other, providing the necessary K+1 input to achieve the Swainian language "output". The transcript shows the way a) collaborative learning practices have been present in the CLIx lab from the early lessons and b) these paired interactions have aided students in attempting language activities of higher levels with greater confidence.

Learner Autonomy

Combining a sequential increase in task complexity with peer interactions in language learning practices, we can argue, can signpost the way to learner autonomy by providing footholds for self-directed learning.

Minimal teacher intervention in the CLIx lab and students working independently with their partners were two broad observable indicators of learner autonomy within a learning culture that is teacher-centric. While attempting CLIx Time, the comprehension activity, students explored the activities in Lesson 1, moved constantly between Story Time and the multiple choice questions, read the transcripts and attempted answers with their peers. The pair of students observed closely registered 23 instances of progression wherein they selected correct answers after mutual discussions. In reception-oriented activities that involved listening to stories and reading transcripts, the students worked intently and silently. Students were also observed revisiting the story, on their own initiative, to draw on vocabulary support while scripting their lines for the speaking activity, "Let's Talk".

Students recording their dialogues independently, without seeking the aid of their teacher, is another indication of emerging autonomy. While the girls (G1 and G2) in the instance cited above replicated the model dialogue for introductions, it should be noted that practicing the lines and speaking out aloud are significant steps in language learning for these students since comparable activities are nearly absent in their regular classroom. Students were observed recording their lines in English though most of the peer interactions were in Mizo, their mother-tongue. In many instances, they replayed their recordings and re-recorded their lines. Several pairs browsed through the activities before attempting a chosen task, demonstrating initial instances of self-directed learning. Equally significant is the students' mutual support in learning. The instance of G4 correcting G3, discussed above, underscores practices in self-directed learning, risk taking and collaborative dialogue leading to language production, all of which contribute to learner autonomy.

Responses of these students to the post-course survey support these observations. The survey questionnaire had four sections with statements, which students had to mark on a four point Likert scale, pertaining to motivations to learn language, language learning practices, interests in technology and a self-evaluation column where students mark the language skill that they consider they are most adept at. Table 2 presents the percentage of students' responses to the scales for select items in the survey administered before and after the course intervention.

Table 2: Student percentages for responses to survey on learner autonomy

Sl. No	**Items**	**Always/ Very much**	**Sometimes / Not very much**	**Rarely/ Very little**	**Never/ Not at all**
1	I learn better when I study by myself.	**Pre**: 35% **Post**: 10.86%	**Pre**: 61% **Post**: 47.82%	**Pre**: 0% **Post**: 15.21%	**Pre**: 4% **Post**: 26.09%
2	I learn better when I study with my friends.	**Pre**: 6.45% **Post**: 65.22%	**Pre**: 75% **Post**: 26.09%	**Pre**: 6.45% **Post**: 4.34%	**Pre**: 12.9% **Post**: 4.34%
3	I need my teacher when I study.	**Pre**: 6.45% **Post**: 32.61%	**Pre**: 83.87% **Post**: 56.52%	**Pre**: 9.67% **Post**: 8.69%	**Pre**: 0% **Post**: 2.17%
4	I learn better from my mistakes.	**Pre**: 29% **Post**: 47.83%	**Pre**: 64.5% **Post**: 36.96%	**Pre**: 1.65% **Post**: 15.22%	**Pre**: 1.65% **Post**: 0%
5	I use a dictionary when I come across difficult words.	**Pre**: 54.83% **Post**: 30.43%	**Pre**: 32.25% **Post**: 50%	**Pre**: 12.9% **Post**: 13.04%	**Pre**: 0% **Post**: 6.52%
6	I can read and understand a story without knowing all the words.	**Pre**: 0% **Post**:	**Pre**: 51.69%	**Pre**: 19.3%	**Pre**: 16.1%

		10.87%	**Post**: 69.56%	**Post**: 17.39%	**Post**: 2.17%
7	I like my (CLIx) English classes.	**Pre**: 54.84% **Post**: 84.78%	**Pre**: 25.8% **Post**: 4.34%	**Pre**: 12.9% **Post**: 6.52%	**Pre**: 3.2% **Post**: 2.17%
8	I like my English books (pre-course) / I like doing CLIx English activities (post-course)	**Pre**: 61.29% **Post**: 80.43%	**Pre**: 22.58% **Post**: 8.69%	**Pre**: 9.68% **Post**: 8.69%	**Pre**: 6.45% **Post**: 2.17%
9	Tick the skill you are best at. (post-course)	Reading: 34.78%	Writing: 32.61%	Listening: 58.69%	Speaking: 23.91%

In the post-course responses, items about students taking initiatives to find answers, make mistakes and seek help show a leaning towards the positive Likert, indicating that challenging tasks for which they do not know solutions can signpost to students the path to autonomy more easily when they work with peers. In paired work, students share ideas and strategies that comprise incidental learning and support risk-taking. This is apparent, as well, in the change in trend of students' responses to the first two items "I learn better when I study by myself" and "I learn better when I study with friends". In the first case, the pre-course responses registered a very low negative but in the post-course survey, a distinctively higher percentage of students indicated that they 'Never' learn better when they study by themselves. This strong leaning towards the negative for individualised learning registered after the students had worked on the modules indicates a considered change in attitude to learning styles. The percentage distribution for the second item supports this when a distinctly higher percentage of students indicate that they 'Always' learn better when they study with friends. This trend can be linked directly to the impact of the CLIx English module that was the only intervention in the school that encouraged peer collaboration and autonomous learning practices, at the time of this study. The positive response to the item "I learn better from my mistake" indicates motivation to seek answers, while the strong positives for items 5 and 6, of using a dictionary and understanding stories without knowing the meaning of all the words, signpost independent learning practices. These can again be related to the students' exposure to a process-oriented course that scaffolds learning. Interestingly, it was confirmed by the English teacher in an interview that a student had indeed requested that he be allowed to bring a personal dictionary to the regular English classroom.

Discussions: Analysis and Interpretation of Data

To briefly recapitulate the inferences from the findings: the data suggest that one way to promote learner autonomy is by requiring students to attempt completion of sequenced language tasks of increasing complexity in pairs. Observations in the lab reveal that autonomy can be located in a) active expressions of opinions by students during peer discussions and dialogues in accomplishing a language task. This can range from seeking clarifications, offering suggestions and instructions to peers, to a critical appraisal of the work done and noticing gaps in knowledge; b) discussions on strategies to complete the set task; c) self-reflexivity and (meta)cognitive practices arising as a consequence of attempting open-ended tasks; d) voluntarily taking risks and displaying motivation to complete a challenging activity, despite inadequate command over

the language.

In a context where pedagogical resources are scarce, self-directed learning is nearly absent and students inhabit passive, teacher-centric learning cultures, these are significant changes in observable student behavior.

A complex task is a useful trigger for autonomy because it compels learners to find ways to look for answers, thereby establishing the process-oriented nature of language learning. It should be noted, at the same time, that tasks of lesser complexity are necessary to prepare students for this process. The EB provided confidence and motivation for students to attempt the higher level of the EE lesson. A student remarked in the interview that she found the EB course "too easy". The EE was "difficult" and "challenging", but "exciting". When probed further, another student remarked that she found it "difficult to write". She said that while the EB required them to write about a story, the EE required of the students, language production on an open-ended topic pertaining to everyday use of language. The students' processing of this difference in the two modules is, in itself, a milestone in self-reflexivity, since they comment critically on the way producing language in a non-academic context becomes a challenge due to its spontaneous nature. At the same time, motivation and risk taking in these instances appears strong, accompanied by the need to test their caliber. It reinforces Harmer's observations on the merits of self-directed learning in motivating learners to take risks in the learning process. The students' comments also reinforce Robinson's cognition hypothesis where he argues in favor of sequencing tasks to achieve language learning. Our experience in the Aizawl classroom suggests that a similar sequencing accompanied by peer interaction can make inroads into autonomy in language learning practices since it assimilates Tassinari's (meta)cognitive element of self-reflexivity, action-based learning, task completion as goal and affective elements into the classroom procedure. Brown's and Harmer's indicators of learner autonomy that rest on risk-taking, self-motivation and self-reflexivity are also reinforced, signaling possibilities that the students can learn how to learn through the pedagogical principles deployed in the CLIx English lab.

It was remarked in interviews with the Headmaster and the English teacher at the school that the "hands-on" experience of speaking and interacting in pairs to complete tasks has created significant change in learning attitudes in students. The English teacher stated that while the conventional classrooms were earlier "quiet", "boring" and "dull", students have become more motivated, active and engaged after the CLIx lab sessions, more confident in expressing points of view and asking questions. The CLIx learning culture had brought "fun" back into learning.

The post-course survey results reinforce these views. Most of the items pertaining to students' motivation and preferences in language learning gravitate towards the positive Likert. A significant indicator of autonomy, self-reflexivity, is evident in the students' response to the survey item that asks them to mark the skill they are best at. The percentage distribution leans towards listening (58.69%) with reading, writing and speaking taking lesser weightage (34.78%, 32.61% and 23.91%, respectively). The evaluation indicates honest self-appraisal and a preference of reception over production skills in language learning. Interestingly, the percentages also suggest that some students have ticked more than one skill. The exercise of rating their proficiency is simultaneously an act of self-assessment and self-reflexivity, the (meta)cognitive element that supports learner autonomy according to Tassinari's dynamic model.

Limitations

This study, however, works with some constraints. First, the lab sessions over the weeks were sometimes disrupted due to extraneous factors such as holidays and examinations. As a work-in-progress of observations of students who have engaged with at least ten hours of the English module, it is difficult to offer pedagogical recommendations or provide conclusive answers to the research question, yet. The survey results and observations of students' progress, despite these disruptions, is, however, heartening. A sustained and longer cycle of intervention survey and observations is planned over the forthcoming academic years to establish the findings with greater academic rigor. Second, since the aim of this research is to identify processes and practices leading to learner autonomy, emphasis has not been laid on the analyses of accuracy or fluency of the speech produced. These may, however, be considered sub-criteria in future studies to gauge learner progress on a formative basis. Finally, this study does not have a control group for comparison due to the broader purpose of the CLIx project that involves disseminating language modules to maximum number of students in rural schools in the four selected states in India. Establishing a control group would have implied denying some students the opportunity to engage with the English modules. It was decided to priorities saturation on the field by providing language learning opportunities to the maximum number of students, which resulted in a gap in data. It should, however, be noted that a pedagogical comparison of classroom teaching and the CLIx lab has been done herein. The data and findings discussed above suggest that the change in learning practice and attitudes of students can be linked to the CLIx English modules since it was the only intervention program running in the selected schools during the period of study.

Conclusion: Pedagogical Implications

Interpretations of student artefacts, the survey items, students' and teacher responses in interviews and focus group discussions, and classroom observations, indicate that students were motivated to attempt open-ended tasks of increasing complexity that involved spontaneous language production, when they worked with their peers. Active collaborative dialogues were observed between student pairs, albeit mostly in their mother-tongue, which resulted in students recording sentences in English. Students also displayed confidence in navigating the CLIx English platform, exploring activities and reflecting silently before attempting tasks. Self-reflection and self-directed learning emerged as a consequence of this exercise, where students spent time contemplating their mistakes and taking initiatives to look for answers. Paired activities appear to motivate students to take risks and step beyond their comfort levels. While these are not yet conclusive proofs, it can be said that one of the processes of enabling learner autonomy is by engaging pairs of students in completing language tasks of sequentially increasing levels in cognitive complexity.

Future work comprises verifying these findings by replicating the process from April 2017–March 2018, with a new batch of ninth grade students in the same school.

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