ABSTRACT: This paper examines the effect of L1 mediation on L2 writing performance. 34 Grade 7 Bengali students of English were assessed on writing in two picture description tasks: one an English-only task, and the other a L1 mediated task. The students were placed in four groups according to teacher-ratings: good in L1 and L2 (GG), good in L1 but poor in L2 (GP), poor in L1 but good in L2 (PG) and poor in L1 and L2 (PP). Measures of linguistic complexity (mean length of t-units) and text cohesiveness showed that performance was better in the L1 mediated task for all the groups, indicating a transfer of academic skills in all groups. However, the benefit was significantly higher for GG and GP groups, given their higher academic skills in L1. A pedagogical implication of this study is that L1 academic skills, if used as a resource in a principled manner, can be a determinant of enhanced L2 writing skills.

KEYWORDS: common underlying proficiency, L2 writing performance, L1 mediated task, transfer hypothesis

0. INTRODUCTION

Using the first language of students in second language (L2) classrooms has been a contentious issue. One camp strongly believes that L2 should be exclusively used (Howatt 1984; Cook 2001). Those who support the use of L1 do so mainly for the following reasons: lowering students’ memory constraints (Harbord 1992; Kern 1994); facilitating communication (Pennington 1995); lowering their affective filters (Meyer 2008); for task management (Swain & Lapkin 2001); and as a means of social equality (Adendorff 1996; Auerbach 1993). These reasons are mainly socio-

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1This study was part of my M Phil dissertation (Mukhopadhyay 2003). It is presented here augmented with some new data analysis to support the original claims.

The EFL Journal 6:1 January 2015
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psychological rather than grounded in a sound cognitive-linguistic theoretical framework.

Immersion language programmes in Canada in the 1960s (Peal & Lambert 1962) followed a dual medium of instruction for developing bilingual proficiency in English and French speaking children. Previously, in the Indian context, the role of L1 as resource to learn L2 (English) was acknowledged and practised (West 1962; Sastri 1967, 1970; Murty 1967-68; and Nagarajan 1969-70 as cited in Tickoo 2003: pp.9, 350-52, 357). We must at the outset distinguish dual-medium programmes from bilingual programmes in the sense meant in this paper. For though dual-medium programmes sometimes did acknowledge the benefits of a bilingual mode of instruction, they on the whole kept the two languages separate in the curriculum.

Theoretical support for the idea that the L1 can be used as a scaffolding device for the L2 came only in 1986, with Jim Cummins’ concept of a ‘common underlying proficiency’ (CUP). This term refers to a set of higher order academic skills (e.g., reading, inferential skills, summarizing skills), and an implicit metalinguistic knowledge that is required for academic success. These skills, Cummins argues, once acquired through one language, are open for transfer. So, they can be drawn upon from the stronger to the weaker language. I argue that this theorization can be applied to writing in second language classrooms and students can be made to use L1 in a systematic manner for developing a range of cognitive academic language skills (CALP) in L2 writing.

1. USING L1 AS A RESOURCE

In the L2 classroom, if a teacher invokes the L1 in a principled manner then students can get comprehensible input, experience a low affective filter and get more involved in the learning process. Cummins (2007) reviews several instructional strategies for using L1 in a systematic manner, such as vocabulary development through word-level translation and use of cognate terms, creation of multilingual books and materials, and use of technology to make sister class exchanges.
The advantages of using L1 for L2 are manifold and have been widely researched. One such positive impact has been found in using L1 literacy and academic skills to develop L2 writing skills. A common belief is that L2 proficiency is a primary determinant of success in acquiring L2 academic skills such as writing skills. But studies that have tested the Cumminsian transfer hypothesis have shown that L1 academic skills can be a determinant of success in L2 writing. For example Lanauze and Snow (1989) measured the language performance of 38 fourth and fifth graders enrolled in a Spanish-English bilingual program. Based on teacher ratings the students were divided into three groups: good in both languages (GG), good in Spanish but poor in English (GP) and poor in both languages (PP). Two picture description tasks, one done in English and the second in Spanish, were used. Performance measured on (i) linguistic complexity (mean length of t-unit), (ii) language variety (frequency and types of nouns, verbs and adjectives) and (iii) semantic content (use of specific vs. general description statements, and action vs. stative sentences) revealed a growth in all three measures adopted. Balanced bilinguals, i.e. students from the GG group, were found to benefit the most. The researchers hypothesized that L1 academic and literacy skills were used as a shortcut to perform better in L2 (1989: 324) and that this was an instance of a Cumminsian transfer of higher order language skills from L1 to L2 writing. Woodall (2002) examined the extent of L1 use to plan and write in L2. He found that when L1 knowledge is employed to plan for writing in L2, text quality increases; and students’ levels of proficiency are inversely linked to the frequency, duration, and purpose of L1 use. Friedlander (1990) found that L1 use in planning ESL writing has a positive impact on the L2 writing quality of adult students. The benefits were found when L1 was used to develop metacognitive awareness by writing a text in L1, analyzing the style of writing, strengths and weaknesses in the L1 composition, and then writing the text in L2. He concluded that when students perceive similarities in composing in L1 and L2, they write with more confidence and sophistication.

In this paper, we report findings from a study that looks at the effects of a principled use of L1 academic skills on L2 writing. The study was conducted to test Cummins’ hypothesis of transfer of higher order academic language skills from a stronger to a weaker language.
2. THE STUDY

The present study assesses the writing performance of a group of Bengali students of English using two picture description tasks. In the first task a picture had to be described in English (L2) only. In the second task another picture had to be described first in Bangla (L1), and then in English (L2). This is an instance of L1 mediated L2 writing. Our objective was to find out whether L2 writing showed any improvement in the L1 mediated condition. Differences between L2 and L1 mediated L2 writing were determined on two measures – linguistic complexity (mean length of t-unit) and text cohesiveness (links between t-units and paragraphs). It was hypothesized that:

i. *Learners’ writing performance in L2 would improve in complexity and cohesiveness in the mediated condition.*

ii. *Balanced bilinguals would benefit the most in the mediated condition.*

3. METHODOLOGY

3.1 Participants
The participants of the study were thirty-four children (19 female; 15 male) studying in a state government school named *Patha Bhavan* in Kolkata, West Bengal, India. Though no background data were collected from the children directly, we got to know from the school authorities that they were all from middle-income group families with at least one working parent, and came from literate homes. Socio-economic status and exposure to print were therefore considered comparable for this group.

At the time when their writing samples were collected, the children were in Grade 7 and between 10 to 12 years of age\(^2\). These children had had a minimum of seven years of exposure to English (the L2) at school. Instruction

\(^2\)The mean age of this group was 11.2 years with standard deviation =1.08.
in all subjects was provided in Bangla, which is the official language of the state of West Bengal, and English was taught as a subject. The English classes were traditional teacher-centered classes in which reading, grammar, and vocabulary were taught through course books and associated workbooks. The students were not used to doing any independent writing apart from filling in workbook tasks and writing answers to short questions and essay type questions, the answers of which were generally dictated by teachers for reproduction by students at the end of the term tests. Though all the students had grade appropriate literacy and academic skills in Bangla and the language teachers were proficient users of Bangla and English, there was no encouragement or attempt to use L1 in any form in the L2 classroom.

3.2 Tasks
The two pictures – picture A and picture B – used in the study are given in Figures 1 and 2. The pictures were in full-page colour illustrations. In picture A two boys are in their bedroom getting ready to go to bed; in picture B a balloon vendor is leaning against a tree trunk and holding a bunch of balloons and some children are approaching him.

Students were instructed to describe each picture in about ten sentences and include the following details in their descriptions:

- names of objects, their location and colour
- description of human figures (types and colour of dresses)
- actions of human figures

The instruction was left a bit vague so that students could interpret it as requiring either a description or as a narrative. Thirty minutes were given to complete each task. Though it was presented as an academic activity, the students viewed the task as a pleasant diversion from their regular teacher-centered, structured lessons. The researcher provided the students support with vocabulary and spelling, as required, in the class. The English teacher was present in the class while this activity was done but did not intervene or provide any help.

The study was conducted on three days spread over two weeks. Each student had to write three descriptions. On the first day, the students were instructed to write about picture A in English, to provide baseline data for L2 writing. On the next day, they wrote about picture B in Bangla (L1). Then, after a
week’s interval, they described picture B in English (L2). Before the learners described picture B in English, their writing in Bangla had been taken away from them and a week’s gap had been given. This was to ensure that there was no literal or direct effect on L2 writing from L1 writing. The researcher had gone through the writing based on pictures A and B (in English and Bangla respectively) and made a note of points as feedback on student’s writing style. So, on the third day, before the students started to work on task three (describing picture B in English), they were given a group feedback commenting on their performance in English and Bangla descriptions, specially on the strengths and weaknesses in their writing styles such as, the inclusion of details and organization of ideas. The researcher urged them to improve their writing in English for picture B based on this feedback.

Two language teachers, who both knew both Bangla and English and were familiar with the students, were asked to informally assess the students’ levels of bilingual proficiency. For this, they assessed the English only script and the Bangla script. The assessors were asked to evaluate the scripts out of 10 marks and on three measures (content, language and organization) weighted at 4:3:3.

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3 The correlation of the evaluation of both the assessors was at r=0.64*, p<.05, which showed that the scoring pattern had an inter-rater reliability at a moderate and acceptable level.
The students who got between 6 and above were considered to have good proficiency in a language, while those who got 5 and below were considered to have poor proficiency in a language. Thus, on the basis of the teachers’ ratings, the students were grouped into four levels of language proficiency in L1 and L2:

<table>
<thead>
<tr>
<th>Group</th>
<th>Level of proficiency (L1 &amp; L2)</th>
<th>Number of subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>GG</td>
<td>Good in Bangla and English</td>
<td>14</td>
</tr>
<tr>
<td>GP</td>
<td>Good in Bangla but poor in English</td>
<td>9</td>
</tr>
<tr>
<td>PP</td>
<td>Poor in both Bangla and English</td>
<td>5</td>
</tr>
<tr>
<td>PG</td>
<td>Poor in Bangla and good in English</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 1: Language proficiency levels of student subgroups

3.3 Method of data analysis
The two English writing tasks were analyzed and comparatively evaluated for the purposes of this study. We shall refer, in what follows, to the English-only writing task as the “picture A task” and the L1-mediated English writing task as the “picture B task.” The two tasks were measured on two indicators of language sophistication: (i) a quantitative measure of linguistic complexity and (ii) a qualitative measure of text cohesiveness.

Linguistic complexity
Linguistic complexity was measured in terms of the length of t-units. A t-unit is a sentence along with all its subordinate clauses. Coordinate clauses are counted as separate t-units. Hunt (1977) argues that that length of t-units is a reliable indicator of a child’s linguistic growth; longer and more complex sentences indicate development as more ideas are embedded through subordination. We illustrate this measure with examples from our data:

<table>
<thead>
<tr>
<th>Example</th>
<th>t-unit count</th>
<th>t-unit length in words</th>
<th>clause type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This picture is of a bedroom.</td>
<td>1</td>
<td>6</td>
<td>simple</td>
</tr>
<tr>
<td>2. There is a window [of which the glass is blue.]</td>
<td>1</td>
<td>10</td>
<td>complex (relative clause)</td>
</tr>
<tr>
<td>3. [The balloon seller is standing under a bamboo tree] and [he is looking after his balloon.]</td>
<td>2</td>
<td>9 and 7</td>
<td>coordinate</td>
</tr>
</tbody>
</table>

Table 2: Examples of t-units

The students in this group had a home language other than Bangla (e.g. Hindi, Tamil etc.). Their parents had migrated to West Bengal for jobs. As these students were studying in a government-run regional medium school, they had to acquire literacy and academic skills in Bangla (an L2 for them) as well as English. So their academic skills in Bangla were not grade appropriate.

A limitation of this measure is that coordinated phrases with and (as in a list) add to the length of a t-unit.
Text cohesiveness
We adapted Watson-Todd et al.’s model (2004) and examined text cohesiveness at two levels:

(i) *global*, or the arrangement of topics in the picture descriptions into an introduction, a body and a conclusion.

(ii) *local*, or links between t-units through use of cohesive devices like referential markers (use of pronouns), additive (*and*), causal (*so, because*), temporal (*now, then*) and adversative (*yet, but*) markers.

4. RESULTS

We illustrate changes in sophistication in language use in the mediated condition, indicated through a growth in linguistic complexity, which in turn increases cohesiveness of the texts. Below we compare performances on the picture A and picture B tasks on the measures described above.

4.1 Linguistic complexity: the Picture A task versus the Picture B task

In Table 3 we present the mean t-unit length (MTUL) for picture A and picture B tasks. The table gives the mean t-unit lengths (with standard deviations in parenthesis) for the whole group as well as the subgroups according to their proficiency in English and Bangla.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Picture A task</th>
<th>Picture B task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole group</td>
<td>9.92 (1.72)</td>
<td>10.15 (1.68)</td>
</tr>
<tr>
<td>Subgroup GG</td>
<td>10.01 (1.59)</td>
<td>12.07* (1.88)</td>
</tr>
<tr>
<td>Subgroup GP</td>
<td>9.16 (1.83)</td>
<td>10.05* (1.23)</td>
</tr>
<tr>
<td>Subgroup PP</td>
<td>8.88 (0.66)</td>
<td>9.33 (0.83)</td>
</tr>
<tr>
<td>Subgroup PG</td>
<td>9.59 (1.61)</td>
<td>9.03 (1.21)</td>
</tr>
</tbody>
</table>

* indicates significance at *p* ≤ 0.05

Table 3: Mean t-unit length: picture A and picture B tasks

Table 3 shows a growth in mean t-unit length in the picture B task. We see that for the GG and GP subgroups, the growth in t-unit length is significant: GG (*df*= 13; *U*=59*, p* ≤ .05) and GP (*df*= 8; *U*=17*, p* ≤ .05).\(^6\) We can thus conclude that overall, L1 mediation has a positive impact on linguistic complexity.

Comparing the subgroups, we see that the PG group shows no positive effect of L1 mediation. Indeed, the performances between the 4 subgroups are significantly different in the picture B task.

\(^6\) For measuring significance the Mann Whitney *U* test was used.
task (on a one-way unequal ANOVA test: \(df=3, 33, F=3.01^*\)). This finding shows that students with better L1 academic skills (GG and GP groups) benefit more.

4.2 Text cohesiveness: the Picture A task versus the Picture B task

In this section, we compare text cohesiveness in the picture A and picture B tasks, taking representative random samples from the GG, GP and PP groups.

Comparing global text cohesiveness on the picture A and picture B tasks, we may note the following points:

S1: GG organizes the Picture A task into an *introduction* (the first two sentences) and a *body* (a detailed description of all the objects with their colour and location) but the text lacks a conclusion. In the picture B task, there is an *introduction* (a description of the setting in the first three sentences and the first half of the fourth sentence), a *body* (a description of the balloon vendor, who is introduced in the fourth sentence, and the children), and significantly, a *concluding* sentence. So, although this student attempts global cohesion in the picture A task, he is more successful in the picture B task.

S10: GP has simply listed the ideas in the picture A task. He attempts global cohesion in the picture B task, which has two clear parts – the description of the human characters and the description of the landscape. A similar organization was found to be present in this student’s L1 writing.

S3: PP has problems in global cohesion in both the picture A and picture B tasks, as there are frequent topic shifts: in picture A, from boys to windows to boys to other objects; in picture B, from the balloon seller to balloons to children to landscape to (again) the balloon seller. However, in the picture B task there is an attempt to build a tripartite structure with an *introduction* about a balloon seller, a *body* with a description of the balloon seller, children and landscape and a *concluding* sentence about the effect the picture creates in his mind. We found that the L1 writing of this student demonstrated a similar transition of ideas.

Comparing local text cohesiveness on the picture A and picture B tasks, we noted that the frequency and variety of use of cohesive devices was greater in the picture B task:

S1: GG uses referential markers (definite article, pronoun and quantifier) and lexical substitution (*children* and *kids* in place of *boys*) in the picture A task. In addition, in the picture B task she has used a variety of conjunctions (*because* in sentences 1 and 4 to suggest a reason; *so* to sum up her observations in sentences 5 and 8); exemplification marker (*like* in sentence 5) and a conditional marker (*whether* in sentence 13).

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7 The concept of a representative presentation of examples exists in both western and Indian traditions (“sahipulakanyakanya”, or the test of one grain of rice to ascertain whether a pot of rice is cooked).

8 Referential markers (definite articles, pronouns, quantifiers) are italicized. Conjunction markers are underlined.
S10: GP in the picture A task has used definite articles as a type of referential markers and one instance of an additive marker (and); this student has also used quantifiers (each and everyone, no one) as another kind of referential marker in the picture B task.

S3: PP has used referential markers (definite article, quantifier and pronoun) and lexical substitution (the two fellows for two boys) in the picture A task and additionally used some conjunctive markers - exemplification (like), and summing up (so) in the picture B task.  

To sum up, we observe that text cohesiveness improves in the picture B task.

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*We also note that the GG subgroup uses a greater variety of cohesive devices (referential, additive, temporal and conjunctive markers and lexical substitutions) whereas the GP and PP subgroups use mainly referential markers and some additive and conjunctive markers.*
This picture tells us it is night time.

The picture is of a bedroom. There are two boys.

One boy is putting off his slippers and another boy is trying to wear the slippers.

The two children are wearing orange nightsuits.

There are two teddy bears on the two cots.

It is black and white in colour.

There are two pictures beside the big window.

The pictures are of cats.

There is a drawer which is yellow in colour.

Over the drawer there is a pink jar with two orange flowers.

There is a chair which is yellow in colour.

On the chair there is a brown pillow.

Over it there is one pair of orange mittens.

Two white towels are hanging from the chair.

The towels have red borders.

Front of the chair there are two mattresses.

There are one pair of green and white coloured sneakers and two balls for each kid.

Two pair of brown, yellow and white bordered socks.

The window has yellow borders and white.

In this picture we can see that it is afternoon time because children are playing.

There is green grassland with some water on some patches.

The land is not plain land, it is hilly.

There are trees all around and a man is leaning by a big tree which has many colours.

The man is a balloon vendor because he is selling many kinds of balloons like blue stripe, purple, orange, red, spotted purple, spotted yellow, green design, purple flower, and stripe dark pink. So, total there are eighteen balloons which are tied together with strings of rope.

The man has a walking stick in his hand. For seeing the balloons children are rushing to come.

Some children dancing, some running, so total there are eighteen children.

They are dressed in frocks, skirts, half pants, pants and bermudas and some girls have tied ribbon in their hair.

The children are not wearing shoes.

The vendor is seeing whether there are so many balloons for all the kids.

This picture shows that this is picture of a village.

<table>
<thead>
<tr>
<th>Table 4: Representative random sample</th>
<th>Picture A task</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Picture B task</strong></td>
<td></td>
</tr>
</tbody>
</table>
5. DISCUSSION

The findings on the two indicators we adopted for language sophistication, namely linguistic complexity and text cohesiveness, attest to some growth in the mediated condition or the picture B task. Let us now try to account for this growth. Given that the gap between the picture A task and the picture B task was one week, it is difficult to imagine that the students’ knowledge of L2 had undergone a significant growth during this brief period. This suggests that it was their greater deployment of existing L2 linguistic knowledge in the picture B task that is reflected in our measures. For example, S1: GG shows knowledge of subordination in the picture A task, but deploys it more effectively in the picture B task. A comparison of the first seven consecutive t-units shows that subordination in the picture B task is used more and has more varied functions:\(^{10}\)

<table>
<thead>
<tr>
<th>Picture A task</th>
<th>Function</th>
<th>Picture B task</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This picture tells it is night time.</td>
<td>complex VP: <em>tells, (that), is</em></td>
<td>1. In this picture we can see [that it is afternoon time] [because children are playing.]</td>
<td>complex VP: <em>see, is; adverbial clause of reason</em></td>
</tr>
<tr>
<td>2. This picture is of a bedroom.</td>
<td></td>
<td>2. There is green grassland with some water on some patches.</td>
<td></td>
</tr>
<tr>
<td>3. There are two boys.</td>
<td></td>
<td>3. The land is not plain land,</td>
<td></td>
</tr>
<tr>
<td>4. One boy is putting off his slippers</td>
<td></td>
<td>4. it is hilly.</td>
<td></td>
</tr>
<tr>
<td>5. and another boy is trying [to wear the slippers.]</td>
<td>complex VP: <em>trying to wear</em></td>
<td>5. There are trees all around</td>
<td>relative clause: <em>modificati on adverbial clause of reason</em></td>
</tr>
<tr>
<td>6. The two children are wearing orange nightsuit.</td>
<td></td>
<td>6. and a man is leaning by a big tree [which has many colours.]</td>
<td></td>
</tr>
<tr>
<td>7. There are two teddy bears on the two cots.</td>
<td></td>
<td>7. The man is a balloon vendor [because he is selling many kinds of balloons like blue stripe, purple, orange, red, spotted purple, spotted yellow, green design, purple flower, and stripe dark pink.]</td>
<td></td>
</tr>
</tbody>
</table>

*Table 5: Sample T-units in writing of S1: GG*

In other words, the greater language sophistication of the writing in the picture B task may be attributed to the greater perceived authenticity and communicative value of this task. So, the

\(^{10}\) A square bracket [ ] indicates subordinated clauses/phrases. Markers of subordinated clauses are underlined.
students deploy writing skills in L2 to construct linguistically complex and coherent texts. To support this deployment we present some examples where students use t-units to convey a variety of communicative functions. Some unusual use of vocabulary is indicated in bold.

(i) Giving reasons

(1) The big tree is beautiful as the stem of the tree is **multicoloured** of brown, white, purple, pink and black. (S4: GG)

(2) The children attracted by the balloons are running through the **undulating landscape**. (S27: GG)

(ii) Adding locational details of objects

(3) A balloon seller is standing under the tree wearing blue coat and black pants. Within the blue coat there is a white shirt. (S2: GP)

(4) They are coming from where the sky has ended and the green **meadow** has started. (S25: GG)

(iii) Specifying object details: name, colour and number

(5) 18 children is running towards the man with dresses of colours pink, white, red, blue, yellow, brown etc. (S22: GP)

(6) The balloon seller is wearing a blue coat and black pants and holding a cane and also holding 17 balloons. There are balloons of different colours and different **designs**. There are balloons of red, violet, pink and green colours. (S33: PG)

(7) The **vendor** is wearing blue coat, white T-shirt, and black pant. (S8: PP)

6. CONCLUSION

In conclusion we may suggest that the students seem to have charted out their own standards of linguistic complexity and communicative content when given a chance to describe picture B in L1. Language sophistication in the picture B task is evident through their effective use of subordination to convey various communicative functions, adjuncts to add details, interesting use of vocabulary, and a variety of cohesive devices to express different kinds of links between ideas such as additives, adversatives, conjunctives and temporal markers. Although Bangla and English are genetically very different languages, there seems to be some cognitive features about writing that the students have been able to use while doing L1 writing. These features are put to better use in the mediated L2 writing and hence the increase in language sophistication. These cognitive-linguistic features might have been present in the mind as **common underlying proficiency**, and deployed better in the mediated condition task.
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