

Original Research Article

Using Sentence Translation to assess Bilinguality of Bhutanese ESL Learners

ABSTRACT

This study examined translation behaviours of adult Bhutanese learners of English as a second language (L2) to assess their degree of bilinguality. The study used a questionnaire on bilingual profile to first determine the participant's history, attitude, preferences and proficiency of both the participant's first language (Dzongkha) and their second language (English). First, a bilingual profile questionnaire was administered to determine the participants' history, attitudes, preferences, and proficiency in both their first language (Dzongkha) and second language (English). In the main task, the participants were presented with English active and passive sentences that were either plausible or implausible and asked to translate them into Dzongkha. In the second task, the direction of translation was reversed, and participants were asked to translate from Dzongkha to English. The results indicated a relatively equal performance in both translation tasks, suggesting a balanced bilingualism among the participants. Results of both tasks showed a high level of accuracy in terms of active plausible sentences and a low number for passive implausible sentences translation, implying that the participants found it challenging to translate sentences when syntactic input conflicted with semantic knowledge. The participant's tendency to perform literal translation of implausible sentences, rather than rejecting semantically implausible sentences indicated a moderate level of balanced bilinguality. Additionally, the participant's ability to translate implausible sentences with correct syntactic structure implies that, like native speakers, these adult second language learners have access to both syntactic as well as semantic routes during sentence processing.

Keywords: bilingualism, second language, bilingual, translation, language education

1. INTRODUCTION

Bilingual education is a broad term that encompasses a variety of educational programs that use two or more languages to varying degrees. Cummins (2008) defines it as the use of two or more languages for instructional purposes at some point in a student's educational journey, while Gracia (2009) refers to it as the use of two or more languages in the instruction and assessment of learners. Despite these definitional nuances, it is imperative to acknowledge that bilingual education is not a new concept within language pedagogy. Mackey's (1978) description of the unearthing of 16,000 tablets in Aleppo, Syria in 1977 offers substantive evidence indicating that bilingual schooling dates back approximately 4000 to 5000 years (as cited in Gracia, 2009). This history illustrates the longstanding use of multiple languages in education. However, bilingual education programs vary in goals, language use, and are shaped by the sociocultural and historical context. Bilingual classroom contexts are also diverse, with multiple models and structures implemented across global educational settings.

A discussion of bilingual education would be incomplete without a brief overview of the two contrasting attitudes towards bilingualism that emerged in the United States (US) and Canada. These attitudes have had a significant impact on the development of bilingual education policies and practices in these countries. Early research in the United States presented a negative view of bilingualism's impact on cognitive development, with early studies suggesting monolinguals were superior. Thompson's statement in an American textbook on child psychology reflects this negative attitude where he asserts that 'there can be no doubt that the child reared in a bilingual environment is handicapped in his language growth' (as cited in Hakuta, 1986). Initial research in the United States portrayed bilinguals as cognitively inferior based on psychometric tests, without consideration for test validity. For instance, H. H. Goddard's 1910 study, which administered the Binet test to assess the intelligence of recent immigrant groups, concluded that three-quarters of the subjects were feeble-minded and attributed these low intelligence to immigrants' exposure to two languages in the environment. This led to the belief that a second language (L2) should be acquired exclusively through L2 exposure, excluding the learner's first language (L1).

In contrast, research conducted in Canada found that bilingualism can have a positive impact on intelligence. For example, Peal and Lambert (1962) found that bilingual children's exposure to two cultures offers advantages which monolinguals do not have. They argued that a bilingual's experience with two language systems could lead to increased mental flexibility, better concept formation and a more diversified set of mental abilities, an argument also supported by Hakuta (1986). Their study of balanced bilinguals and monolingual children showed that bilingual children outperform monolinguals in both verbal and non-verbal measures. Subsequent research highlighted the positive effects of bilingualism on cognition development due to skill transfer from one language to another (Bain and Yu, 1982; Hakuta and Diaz, 1984). The positive effects of bilingualism on cognitive development led to a growing recognition of the value of bilingual education, and subsequently gave rise to pedagogies that encouraged the use of L2 in a L1 classroom.

Today, there are a variety of bilingual education programs available, ranging from immersion to dual language programs. These programs vary in their goals, language use, and the amount of time students spend learning each language. The decision of when and how to use L1 in bilingual education is a complex one that should be made on a case-by-case basis, taking into account the needs of the students, the goals of the program, and the sociocultural context. The aim of the study was to assess the bilingualism and proficiency levels of adult Bhutanese learners in their native language (L1 - Dzongkha) and second language (L2 - English) as well as gather evidence on their attitudes towards the two languages within Bhutan's multilingual educational context.

The next section provides an overview of bilingual education and the use of L1 in global instructions and specifically in Bhutan, where our present study is uniquely situated.

2 LITERATURE REVIEW

2.1 Bilingual Education

In the past century, language teaching methodologies have largely adopted a monolingual approach. This is evident in popular methods such as the Direct method, Audio-lingual method, and Communicative language teaching, which all advocate the predominant use of the target language in the classroom while discouraging the incorporation of the learner's L1.

This propensity to exclude the learner's L1 is rooted in concerns surrounding language compartmentalization. Traditional bilingual education has advocated for the rigid separation of languages in pedagogy, aiming to prevent what is often termed as "cross-contamination" thereby, making it easier to acquire L2 (Jacobson & Faltis, 1990). The Contrastive Analysis theory further bolsters this stance, contending that the exclusion of L1 minimises the risk of error transfer. This tendency to maintain language separation is based on the assumption that the two languages are compartmentalised in the learner's mind. Cummins' conceptualization of the Separate Underlying Proficiency Model of Bilingualism (SUP) encapsulates this view, asserting that the two languages function as two independent entities in the bilingual's mind. Education programs aligned with the monolingual principle advocate for exclusive use of L2 during instruction, effectively limiting the significance of the learner's L1. Cummins labels this approach as the "two solitudes" where each language exists in isolation.

Despite its limited empirical support, the SUP model of bilingualism continues to exert influence, particularly within contemporary bilingual programs such as L2 immersion programs in Canada and bilingual/dual language programs. In contrast, Cummins (1980) proposes the interdependence hypothesis, which advocates the concurrent use of both languages in the classroom. He argues that the linguistic skills and knowledge from the L1 can be harnessed to enhance L2 proficiency. In contrast to the SUP model, the Common Underlying Proficiency (CUP) model posits that the literacy-related skills of bilinguals are intertwined across languages. This suggests that bilingual individuals have a shared underlying proficiency, despite potential differences in the surface aspects of the two languages.

Cummins (1980) underscores the potential benefits inherent in bilingual instructional strategies that leverage the learner's bilingual linguistic resources. This entails integrating translation and allowing code-switching, both of which are natural abilities of bilinguals. Yet, both these practices have historically been discouraged in educational settings that rigidly segregate L1 and L2. This hampers the extensive linguistic proficiencies exhibited by bilingual individuals and restricts their communicative potential. Gracia's assertion (2009) further underscores the argument that a strict adhering to monolingual practices in education silences bilingual children's linguistic abilities and constrains their educational prospects. The insistence on the use of two separate languages fails to capitalise on the learner's bilingual practices and denies the complex multilingualism of the world (Gracia, 2009). Traditional models of bilingual education fall short in accommodating the intricate bilingual mind, necessitating a shift in educators' approaches. As such, educators must acknowledge translation and code-switching as an integral aspect of the distinctive linguistic adeptness exhibited by bilingual individuals that not only mirrors the intricate multilingual reality but also empowers bilingual learners with a more comprehensive linguistic arsenal.

2.2 Bilingual Research

Empirical research in bilingualism has often been conducted by investigating translation behaviour. The following section will discuss the use of translation as a tool for investigating bilingual behaviour, and the various studies that have been conducted on sentence processing using this method.

2.2.1 Translation as an Important Bilingual Behaviour

The role of translation in the second language classroom has engendered considerable debate. Some linguists and educators reject its use in the second language classroom due

to its historical alignment with the grammar-translation method. However, recent research underscores translation's efficacy as an instructional tool for L2 education.

Within the realm of bilingualism, translation assumes a significant role as a cognitive and linguistic process employed by L2 speakers to navigate two languages. It offers insights into the intricate cognitive and linguistic transformations occurring within the learner's cognition. Unfortunately, these nuances are often overlooked in discussions concerning the cognitive processing of syntax, morphology, and pragmatics within the learner's mind.

Experimental inquiries by Seleskovitch (1976), Danks and Griffin (1997), and Macizzo and Bajo (2004) delve into sentence-level translation and propose that translated output can serve as a diagnostic tool, revealing the learner's grasp of morphosyntactic intricacies and their capacity to decode and encode both languages. For instance, mis-translated elements provide evidence of lexical-level comprehension challenges, while accurately translated lexical items within inaccurately rendered syntactic structures indicate that the learner has difficulties at the syntactic level. Kroll and Steward (1994) suggest that translation from the learner's L1 to L2 capitalises on the stronger L1-concept linkage, potentially enhancing comprehension. The output is then affected only by the learner's command over L2 grammar and lexical knowledge. In contrast, if the input is in the learner's L2, comprehension of L2 input becomes pivotal. Thus, the accuracy of translation is contingent upon the comprehension of L2 morphosyntax and lexical items, particularly for intricate, uncommon, or non-canonical L2 inputs. Accurate translation of morphosyntactic structures from L2 to L1 indicates the learner's recognition and comprehension of L2 input, affirming translation's use as an appropriate tool to measure of learner's comprehension during sentence processing.

2.2.2 Research on sentence processing

Unlike first language (L1) acquisition, the acquisition of native-like fluency in a second language (L2) by adult learners is widely assumed to be challenging. This difficulty is often attributed to the belief that L2 learners employ a distinct underlying language processing system in comparison to native speakers. Nevertheless, the discourse is marked by conflicting viewpoints, wherein some assert that L2 processing deviates from L1 due to an alleged underutilization of syntactic information, while others suggest that native speakers and L2 learners process linguistic input similarly.

One way to understand how people process languages is to consider the Good-enough language processing (GE) framework. Within this framework, language processing involves two concurrent pathways: a syntactically-driven algorithmic route and a semantics-based heuristic route. While both pathways are assumed to be operational in tandem, the syntactic representation is fragile and can be overridden by the heuristic route, leading to interpretations that are not exactly faithful but are 'good-enough'. The GE framework posits that even when the syntactic route is accessible, misinterpretation may arise due to the inability to reconcile the outputs from the two routes, resulting in a 'good-enough' interpretation. Empirical investigations, such as Ferreira et al.'s (2002) study on implausible passive sentences, underscore the interplay between syntax and semantics in language processing. Participants were presented with mixed active (the man bit the dog) and passive implausible sentences (The dog was bitten by the man), subsequently judging their plausibility. While most participants correctly evaluated active sentences, passive sentences were deemed implausible approximately 25% of the time. Participants struggled to identify agents and patients in passive sentences, suggesting a reliance on world knowledge and content words over the sentence's compositional and syntactically driven meaning. This implies that a semantic heuristic, rather than syntactic algorithm, was invoked to

comprehend the passive implausible sentences. The participant's existing information from the schema interfered with the comprehension of implausible passive sentences, and led to less successful comprehension, resulting in a 'good-enough' interpretation. Ferreira et al. (2003) extended this perspective to misinterpretation in non-canonical sentences, emphasising the prevalence of a GE processing approach even among native speakers.

Another way to understand how learners process language is to consider the Shallow Structure Hypothesis (SSH). SSH, as proposed by Clahsen and Felser (2006), posits that non-native language processing predominantly relies on semantic cues over syntactic information. Consequently, L2 processing is less sensitive to syntactic constraints vis-à-vis native language (L1) processing. Some inquiries into L2 language processing have sought to ascertain whether L2 learners navigate language similarly to native speakers. Studies by Felser et al. (2003) and Martinis et al. (2005) suggest that L2 learners rely heavily on lexical-semantic information, implying limited capacity to process comprehensive grammatical structures. This notion underpins the SSH, contending that L2 learners develop 'less detailed' syntactic representations, leading to an underutilization of syntactic information. Notably, these conclusions are derived from null results, and it is crucial to recognize that native speakers also make similar errors to non-native speakers, potentially reflecting factors such as proficiency and task variations.

In contrast, other studies by French-Mestre (1997), Juffs (1998), Hopp (2006) suggest that native and non-native processing may, in fact, be identical. Lim and Christianson's (2013) research contributes to this discourse by investigating how Korean learners of English integrate syntactic and semantic information. Through two experiments, their research examined L2 learners' processing patterns in both L2-L1 and L1-L2 translation tasks, probing the influence of syntax and plausibility. Participants, native speakers of Korean learning English, produced incorrect translations more frequently for passive and implausible conditions, indicating challenges in these instances. The results also showed that as proficiency rose, the number of incorrect translations of passive-implausible sentences decreased, indicating that participants had a good grasp of English morphosyntactic knowledge. The tendency to misinterpret passive implausible sentences occurred due to conflict in semantic-syntactic processing. This outcome aligns with findings from monolingual studies and accentuates the parallelism between L2 and L1 processing (Christianson et al., 2010; Ferreira et al., 2002). Similarly, the second experiment, with Korean inputs, yielded accurate translations regardless of syntax or plausibility, underlining L2 learners' adeptness in accessing syntactic information. The results also showed that participants were not strongly affected by the plausibility information in L1-L2 translation, indicating that errors in the first experiment stemmed from semantic-syntactic clashes rather than a deficiency in English passive structures. These results support the contention that L2 processing mirrors native language processing, adhering to the 'good-enough' framework.

3 Aim of the Study

The present inquiry seeks to analyse the status of bilingual education in Bhutan, specifically focusing on the educational context of Bhutanese learners proficient in Dzongkha. Despite the predominant use of English as the medium of instruction in Bhutanese schools, juxtaposed with the prevalence of Dzongkha as the primary language among the majority of students, there is a dearth of comprehensive research in this domain. Within the Bhutanese educational framework, a clear demarcation can be seen between English and Dzongkha. While minimal translation from the learner's native language (L1 - Dzongkha) to the second language (L2 - English) is permissible at lower grade levels, this practice is rare and discouraged as students progress to higher grades. Additionally, students are encouraged to

speak either English or Dzongkha, and the use of code-switching and code-mixing is discouraged. Such practices are often viewed as indicative of a lack of competence in both languages. Teachers in Bhutan may even prohibit the use of Dzongkha in an English classroom or vice versa. This approach suggests that Bhutan has adopted the monolingual approach to language teaching based on Cummins' (1980) SUP model of bilingualism, which is often criticised for being unrealistic and for not taking into account the dynamic nature of bilingualism.

The research was conducted with the purpose of evaluating the levels of bilingualism and proficiency among adult Bhutanese learners of English in their native language (L1 - Dzongkha) and second language (L2 - English). It also sought to gather evidence on the functioning of Bhutanese adult learners' CUP, their relative proficiency in L1 and L2, and their attitudes towards the two languages. This assessment of the degree of learners' bilingualism serves as a valuable tool for classroom evaluation, providing teachers with important information about students' language abilities. Such information allows the teachers to tailor the curriculum, thereby fostering the concurrent acquisition of both languages within the classroom environment.

Recent research on bilingual sentence processing has strived to illuminate how bilinguals conceptualise, process, and decipher multiple languages in their mind. Building on the researchers such as Ferreira et al. (2003) and Lim and Christianson (2013), the present study sought to extend these insights by examining Bhutanese bilingual speakers proficient in both English and Dzongkha. The present study sought to determine if Bhutanese bilingual speakers process language in a way similar to monolingual speakers. To this end, the investigation delved into the participants' cognitive processing of active and passive sentence structures, exploring potential disparities between the two language processing frameworks. Moreover, the study aimed to decipher the influence of plausibility and implausibility on the participants' capacity to comprehend active and passive sentences. Drawing from contemporary bilingualism research, the primary focus of the study was to empirically test the hypothesis that bilingual learners process sentences in a manner similar to their monolingual counterparts, utilising both a heuristic and syntactic parsing mechanisms, within the good-enough framework.

4. METHODS

The use of translation exercises in a L2 classroom has the potential to elicit responses from learners that provide insights into their shared underlying proficiency. This study delves into the benefits of incorporating translation tasks to examine the degree of bilinguality in learners. The focus of this investigation centres on translation behaviour of adult Bhutanese ESL learners. The study design was adapted from Ferrira et al. (2003) and Lim and Christianson (2013).

Research Questions

In the study, we attempted to answer the following research questions:

1. Do ESL learners show equal accuracy in translating plausible and implausible sentences in active and passive voice?
2. Are their translation behaviours the same in L1 and L2?
3. Are their attitudes towards L1 and L2 similar?
4. Does performance on translation tasks help assess the degree of bilinguality of learners?

4.1 Participants

This study parallels the research conducted by Lim and Christianson (2013), but it focuses on a group of ten Bhutanese individuals proficient in both English and Dzongkha. These participants completed their secondary education in Bhutan and were granted government scholarships to pursue Bachelors of Science in Geology at Osmania University in Hyderabad. It is important to note that these participants have had at least thirteen years of education, providing them a solid foundation in both languages. The scholarships were awarded based on their performance in Grade 12 with marked weightage given to both English and Dzongkha marks, highlighting their strong language skills in comparison to other students in the country.

The study also considers the participants' native languages. Despite having various first languages, such as *Tsangla*, *Lhotsamkha*, and *Bumthangkha*, they are essentially multilingual rather than strictly bilingual. However, the research focuses solely on their ability to process sentences in English and Dzongkha. This focus stems from the pivotal role the two languages play in Bhutanese education. Dzongkha is the country's national language and the official language for official correspondence, while English is compulsory in Bhutanese schools from an early age and serves as the medium for most subjects. This means the participants can both read and write in both the languages. This contrasts with the participants' first languages, which remain spoken with no literacy. In light of these considerations, for the purpose of this study, Dzongkha is classified as the participants' first language (L1), while English assumes the role of their second language (L2).

4.2 Tools and Task used

In our study, we employed a bilingual profile questionnaire to assess participants' attitudes and relative usage of their two languages (L1 and L2), focusing on their degree of bilingualism. Additionally, we adapted a translation task from Ferreira (2003) for both Dzongkha (L1) and English (L2). Presented below are detailed descriptions of these two tools and tasks.

4.2.1 Bilingual Profile Questionnaire

The participants were required to complete a bilingual profile questionnaire. This questionnaire aimed to explore their language history, proficiency levels, language preferences, and overall perceptions of the two languages. Each question had corresponding versions in both L1 and L2. Responses were rated on a Likert scale ranging from 1 to 5. Participants were instructed to indicate their associatedness on each aspect using this scale. For illustration, a sample question used in the questionnaire is provided:

IV. Language Proficiency

In this action, we would like you to rate your language proficiency by giving marks from 0 to 5.
1=not well at all 5=very well

23. A. I feel like myself when I speak English.

1. 2. 3. 4. 5

B. I feel like myself when I speak Dzongkha.

1. 2. 3. 4. 5

4.2.2 Translation Tasks

In the main translation task, we employed sentences identical to those used in Ferreira's (2003) study. However, we divided the original sentences into two distinct sets: Set A and

Set B. Each set comprised 12 sentences. These sets were then randomised, ensuring that each set incorporated 12 sentences distributed across four categories: active-plausible, passive-plausible, active-implausible, and passive-implausible. The sentences were meticulously arranged so that every participant encountered three sets of both active and passive sentences, each in plausible and implausible scenarios. Notably, each participant was exposed to only one version of each sentence throughout the task. To maintain consistency, three short locative sentences (consisting of approximately 5-10 words) were included as fillers. A sample of the locative sentences employed in the task is provided for reference:

SET A

The car is in the garage.
The cups are in the cupboard.
The chair is near the door

In essence, each set encompassed a total of 15 sentences, comprising the original 12 sentences categorised across four different contexts and three filler sentences. These sets predominantly contained sentences featuring transitive verbs with direct objects. In Set A, participants were presented with sentences in their L2 (English). They were instructed to read the sentences in English and then translate them into their L1 (Dzongkha). Thus, Set A involved translating a total of 15 active and passive sentences from English (L2) into Dzongkha (L1), inclusive of the filler sentences. Given below is a set of sample sentences from the task:

Set A

- | | | |
|---------------------------------------|-----------------------|----------------------|
| a) The dog bit the man. | (active-plausible) | |
| b) The doctor was sued by the lawyer. | | (passive-plausible) |
| c) The student quizzed the teacher. | | (active-implausible) |
| d) The owner was fed by the cat. | (passive-implausible) | |

For the subsequent task, participants were assigned Set B, which consisted of a different group of 12 active and passive sentences presented in either plausible or implausible contexts, similar to the approach taken from Ferreira (2003). As with Set A, this set also incorporated three different filler sentences. The key distinction was that the inputs were now provided in participants' L1 (Dzongkha). Participants were required to read the sentences in Dzongkha and translate them into their L2 (English). Consequently, participants translated a total of 30 sentences: 15 sentences from English (L2) to Dzongkha (L1), and 15 sentences from Dzongkha (L1) to English (L2).

By employing these two distinct sets, each encompassing different input languages, we were able to delve into participants' translation behaviours in both the languages. This approach facilitated a comprehensive examination of how participants navigated translation between the two languages.

4.3 Task Administration

The participants were administered the profile questionnaire on the first day of data collection and allotted 30 minutes to provide their responses. Following a two-day interval, participants were assigned the translation task in one language, followed by the task in the

second language. Each participant individually engaged with the sentence translation task at their own pace and subsequently submitted their completed tasks to the researchers.

4.4 Method of Data Analyses

The questions in the bilingual profile questionnaire were subjected to analysis based on the percentage of affirmative responses. The mean score was computed for each learner and subsequently for the entire group. For the translation task, the sentences were evaluated according to the following criteria:

- a. active or passive plausible sentence translation: accurate = 2; acceptable with few changes = 1; and inaccurate = 0
- b. active or passive implausible sentence translation: no translation = 2; changed sentence to plausible in translation = 1; literal translation = 0

Accuracy scores were derived as the mean value per participant and then for the entire group. Additionally, Spearman's Rho was employed to establish correlations between profile scores and translation performance for the fourth research question.

5. RESULTS AND DISCUSSION

This following section will focus on the analysis and discussion of learners' bilingual profiles, encompassing their responses and performance in the translation tasks.

5.1 Participants' attitude towards L1 and L2

The table below shows the overall score indicated by the learners for each category:

Table 1: Learners' overall knowledge about the Languages

Categories	Dzongkha (L1)	English (L2)
Language History	76.92	63
Language Use	52.5	47
Language Proficiency	66	65
Language Preference	68.57	78.57
Language Attitudes	78	68
Total	58.43	52.47

The overall scores for each category presented in Table 1, depicts a range between 47% and 79% for the ten participants. In both English (L2) and Dzongkha (L1), the total scores across categories were comparable: 52.47% for English and 58.43% for Dzongkha. Notably, participants scored higher (76.92%) in their L1 concerning language history compared to their L2 (63%), indicating a stronger foundation in their L1. Despite this, language proficiency

scores (65 for English and 66 for Dzongkha) suggested balanced bilingualism, irrespective of their L1 background. An interesting divergence emerged in language preference, with participants showing a preference for their L2 (78.57%) over their L1 (68.57%), while displaying a more favourable attitude toward their L1. Additionally, participants favoured using their L1 slightly more (52.5%) than their L2 (47%) in their language usage.

5.2 Task Performance

This section delves into participants' performance in the two distinct sets of translation tasks.

5.2.1 Overall Performance in L1 and L2

The table below presents the overall performance in both L1 to L2 and L2 to L1 translation tasks:

Table 2: Overall performance in translation tasks

Total	L1 - L2 Translation	L2 - L1 Translation
Total (240)	70	65
Total in %	29.17	27.08

The data table illustrates that participants exhibited higher accuracy when translating from L1 (Dzongkha) to L2 (English). Specifically, the scores indicate 70 (29.17%) for L1-L2 translation and 65 (27.08%) for L2-L1 translation. This implies a slight proficiency advantage in L1-L2 translation.

Across both translation tasks, an average accuracy of 28% emerges, reflecting a relatively low performance level. This outcome prompts consideration of potential factors, including (i) task unfamiliarity or (ii) task difficulty. If unfamiliarity with the procedure contributed to the challenge faced by learners, it underscores a limitation in the study's design. However, it is important to acknowledge that the absence of direct feedback from participants on their task experience limits our assertion. Alternatively, task difficulty could explain the lower performance, yet an assessment of the chosen sentences' types, tokens, and structural complexity suggests that they should not have posed an undue challenge for the participants. For a comprehensive understanding of this lower task performance, an analysis of performance across the four sentence types is explored in the subsequent section.

5.2.2 Performance in translating plausible and implausible sentences in active and passive voice

Table 3: Performance in four task conditions

Condition	L1 - L2 Translation (% scores)	L2 - L1 Translation (% scores)
Active Plausible	60	46.67
Passive Plausible	45	45
Active - Implausible	3.3	5
Passive - Implausible	8.3	11.67

Table 3 provides scores for accurately translated sentences across four conditions: active-plausible, passive-plausible, active-implausible, and passive-implausible.

Notably, translation ease is found under L1 to L2 conditions, as indicated in Table 3. Moreover, the performance with plausible sentences stands at a relatively higher 50% accuracy, in contrast to a meagre 7% accuracy in the implausible sentence context — underscored by a disparity between plausible and implausible sentence translation behaviour. This discrepancy highlights the translation behaviour: plausible sentences attain 50% accuracy, surpassing the overall 28% accuracy in the tasks (refer to Table 2).

From the Table, it can be seen that the proportion of correct translation was far greater for active sentences than for passive sentences. In L2 active-plausible sentence translation, participants are 60% more accurate compared to 45% in passive-plausible sentence translations. Conversely, the translation of L2 to L1 active and passive sentences reveals minimal score differences—46.67% in active plausible and 45% in passive plausible sentences. This suggests participants encountered less difficulty translating active plausible sentences from L1 to L2 compared to L2 to L1. The stark contrast between active-plausible and active-implausible L2 sentences is striking, showcasing an almost 57% difference (60% and 3.3%). Similarly, a considerable disparity is evident between passive-plausible and passive-implausible sentences in both translation tasks. While passive-plausible sentences yield a 45% accuracy rate, passive-implausible sentences experience a notable drop to 8.3%.

The results highlight participants' challenges with implausible conditions in both translation tasks, revealing the influence of semantic implausibility on syntactic representation, thereby causing translation difficulty. This substantial contrast between plausible and implausible sentence translation behaviour aligns with findings by Ferreira (2003) and Lim and Christianson (2013), emphasising a propensity for mistranslating implausible sentences compared to straightforward plausible ones. Furthermore, the data indicates that Bhutanese learners exhibit slightly more ease translating from their L1 (Dzongkha) to L2 (English) than vice versa. This is congruent with Kroll and Stewart's (1994) proposition that comprehension is smoother when translating from the learner's L1 to L2, owing to stronger connections between L1 and concepts in the participant's mind. The findings corroborate this idea, indicating a stronger link between concepts and the learner's L1, facilitating comprehension and contributing to a slightly higher number of accurate L1-L2 translations. Any errors in L2 translations could be attributed to the participants' difficulties in L2 grammar or lexicon challenges. Conversely, translating from the learner's L2 (English) to their L1 (Dzongkha) presents difficulties, possibly due to comprehension challenges in their L2. Despite their L1

lexical and morphosyntax knowledge, participants encountered challenges in translating sentences from L2 to L1, resulting in slightly higher numbers of errors. However, the distinction between L1-L2 and L2-L1 translation is marginal, less than 2%, indicating a consistent level of difficulty across both directions. This suggests participants' balanced proficiency in both languages.

While participants' balance in both languages is evident, the degree of bilinguality is discerned through their performance in translating implausible sentences. The findings underscore a lower score for implausible sentence translation compared to plausible sentences, consistent across both languages. This is indicative of a moderate level of bilingualism among participants. Given the prevalence of literal translations for semantically improbable sentences (95% for L1-L2 and 92% for L2-L1), participants seem unable to reject sentences based on implausibility, suggesting a moderate level of bilinguality. This implies that the participants treated the task primarily as a translation exercise, without prioritising semantic plausibility. The performance of the learners on the translation task enables us to ascertain that the participants are moderately balanced bilinguals. With a higher degree of bilingualism, they would have been capable of rejecting implausible sentences.

Additionally, it is noteworthy that while most participants provided literal translations, they maintained the morphosyntactic structure of the original sentences. This observation offers explicit evidence of participants' access to the syntactic route during L2 sentence processing. Contrary to the Shallow Structure Hypothesis, which posits adult L2 learners underuse syntactic structures due to 'less detailed' syntactic representations, this study's findings align with Lim and Christianson (2013), suggesting that L2 processing is not inherently 'shallow' from a syntactic perspective. Furthermore, when translating passive sentences in both L2-L1 and L1-L2 contexts, participants typically maintained the sentence's meaning while opting to alter passive structures to canonical active forms. This pattern indicates that participants comprehended the input but exhibited less experience constructing passive sentences in both their L1 (Dzongkha) and L2 (English). Consequently, translated output predominantly featured active forms. This underscores potential limitations in participants' passive construction skills across both languages, suggesting a need for more focused classroom exercises to enhance their passive construction proficiency.

A limitation of this study is that it did not consider individual proficiency levels in the two languages. While the bilingual profile questionnaire included self-rated proficiency, no actual proficiency tests were conducted. Assessing learners' proficiency would have clarified how syntax and plausible information were influenced by proficiency during translation. A translation task between either L1-L1 or L2-L2 could have provided a more accurate measure of bilingualism. Further exploration could involve analysing learners' translated output errors, differentiating between lexical and morphosyntactic errors.

6. CONCLUSION

In conclusion, the study's findings reveal that participants exhibit a stronger affinity towards their L1 (Dzongkha) in terms of attitude, yet their preference leans towards L2 (English). Their enhanced ease in translating active plausible sentences relative to passive implausible ones aligns with prior bilingual research, indicating that adult second language learners possess access to both syntactic and semantic processing routes during sentence comprehension. The participants' comparable performance in translation tasks from L1 to L2 and vice versa corroborates their balanced bilingual profile, affirming a moderate level of bilingualism. While higher levels of bilinguality might provide richer insights into the impact of plausibility on translation behaviour, participants' inability to reject semantically implausible sentences show that the learners are yet to achieve it.

CONSENT

As per international standard or university standard, all participants' written consent was sought, collected and preserved by the author(s).

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