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# Exploring Socio-Variational Patterns in Indian Adolescents' Lexical Diversity: Insights for Education

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**Abstract.** Following the COVID-19 pandemic, vast data emerged regarding the plummeting literacy and readability levels among Indian adolescents, posing a challenge to address in its present condition of a vastly heterogeneous socio-demographic environment. This study is grounded in Bourdieu and Passeron's (1977) theory, which acknowledges schools as places with societal relevance that perpetuate social inequality. This implies the need to formulate robust policies to address educational inequalities. To this extent, the researchers used an exploratory design to evaluate lexical diversity by purposively sampling 100 volunteer teenagers across three schools. In addition to the data received from school officials, survey questionnaires collected socio-economic information (age, gender, area of stay, socio-economic scale [SES], and school type). The authors used the Kuppuswamy SES scale (2022) to determine socio-economic scale measures, as well as the calculation of Lexical Diversity scores through the computational open-source software TextElixir. The findings reveal that age and gender do not affect lexical diversity. However, school type, SES, and area of stay significantly affect adolescents from the lower social class, who need targeted interventions to bridge gaps of educational inequity. This study addresses the limitations of previous correlational studies by offering educational insights to ensure educational equity amidst prevalent social class inequalities.

**Keywords:** lexical diversity, social class, adolescents, socio-variationist research

## 1. Introduction

The present study is grounded in the theoretical perspective put forward by Bourdieu and Passeron (1977), which argues that the educational spaces, although vital elements of society, perpetuate social inequality by reproducing the dominant cultural values and practices of the ruling class. Literature is awash

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with evidence of inequalities caused by educational institutions' lack of preparedness, which results in educational disparities (Asadullah et al., 2023; Donnelly & Patrinos, 2022), as well as the learning losses suffered by students all over the world while attempting to navigate COVID-19 (Bartholo et al., 2023; Blaskó et al., 2022; Darmody et al., 2021). The United Nations' Sustainable Development Goals list (United Nations Development Programme, 1965) has long featured quality education and reduced inequalities. Education, as one of the definitive predictors of a growing economy, is of particular concern in India, the most populous country globally (United Nations, 2022). India's adolescent population stands at 253 million (UNICEF, 2022), out of which 47 million adolescents (Gohain, 2016) are mainly from lower socio-economic backgrounds, with more girls than boys (Jayachandran, 2007; Ministry of Education, 2021) accounting for the dropout share of the country, necessitating an inquiry on literacy concerning this particular age-group.

Adding to the trail of educational inequalities in the country is the problem of English education (see La Dousa, 2014; Ramanathan, 2005, 2007). The English language has developed a reputation as a social marker of vertical mobility in a multilingual nation such as India that strives for economic growth in its postcolonial reality (Faust & Nagar, 2001). The core of disparities across gender, caste, and other factors in India are the English language and English-medium education (Hickey & Stratton, 2007). The primary cause of this is the spread of education through impassable regulations that may have been publicly announced on paper but need to consider regional reality (Ramanathan, 2005). Researchers have always looked at the state's role to understand better social inequalities in the educational system (Majumdar & Mooij, 2012). However, according to Velaskar (2010), Indian educational policy has never addressed the systematic nature of social inequalities in education. According to La Dousa (2014), language disparities and inequality impact education, making schools potential linguistic and social-class research settings.

Having established the inequalities that COVID-19 has brought about in educational spaces, understanding the perspectives of other imminent socio-variationists is essential. Drummond and Schlee (2016) posit that language and society work together to create meaning since the latter aids in giving the former structure, thereby allowing individuals to make sense of their surroundings (Romaine, 2000). Studying language and society helps educators comprehend the more significant circumstances surrounding power and identity, giving them a consultative role in formulating language policy (Mesthrie, 2008). According to Bucholtz and Hall (2010), language variance appears in speech. Rampton (2010) emphasizes the connection between social class and linguistic variety with dynamic identities such as class, gender, and age, all of which become muddled and intertwined with a wide range of institutional and intersectional identities. As a result of their overlapping boundaries, gender, social class, and ethnicity should be researched simultaneously (Richardson et al., 2020).

Applied linguistics and sociolinguistics are intimately related to the interaction between language and social class (Snell, 2014). The computational measure of

lexical diversity (LD) is well suited for researching language variation in practical linguistics. The present study operationalizes LD as a multifaceted concept that incorporates metrics of lexical variety, variation, and originality (Li & Zhang, 2021). Since it evaluates vocabulary size, LD can be used to estimate one's potential as a language learner (Laufer & Nation, 2020; Vermeer, 2004). Owing to its objectivity, LD is an accurate predictor of vocabulary (Daller & Xue, 2007; Tweedie & Baayen, 1998), which in turn is a predictor of literacy (Lee, 2011). According to Laufer and Nation (1995), LD is the difference in percentage between the number of words in a text and the total number of words that occur. In other words, the lexical diversity grows as a person's speech or written text lengthens (Daller et al., 2007; Tweedie & Baayen, 1998).

Although type-to-token ratio (TTR) measurement is the most straightforward indicator of lexical diversity (Ishikawa, 2015), the equations employed by various scholars rely on the length of the text (McCarthy & Jarvis, 2007; Shi & Lei, 2021). Researchers (Covington & McFall, 2010; Kubát & Milička, 2013; Kyle, 2019) have found a solution and recommend using the moving-average type-to-token ratio (MATTR) as it is the least dependent on text length. Since its inception, research on LD has revealed linguistic variation between native and non-native speakers (Douglas, 2010; Nation & Coxhead, 2021; Skehan, 2009), variation in authorship and stylistics (Smith & Kelly, 2002; Tweedie & Baayen, 1998; Van Gijssel et al., 2006; Zhang, 2016) and variation in lexical choice across gender as well as its social implications (Freed, 2003; 2015). Operationalized as an unofficial classification, social class ranks members of a society based on their socio-economic, occupational, educational, and professional standings (Vandrick, 2014). "Property, money, occupation, location of residence, education, social connections, spending habits, symbolic behavior, geographical interconnections, mobility, and life chances are the main components of social class" (Block, 2015, p. 3). It is a crucial mediating component of educational achievement (Block, 2017), while academic institutions significantly impact the emergence of class distinctions (Vandrick, 2014).

Educational spaces in India continue to operate on old frameworks, not considering the fresh lease of inequalities brought about by the COVID-19 pandemic. Therefore, there is an immediate need for a deliberate investigation of adolescents' socio-variational patterns in their LD, an objective measure of literacy, so that education can offset the inequalities revealed during the closure of schools for 22 months. The sole aim of the present study is to consider socio-demographic variables of age, gender, area of stay, type of school, and the socio-economic index of adolescents across three types of schools (government-aided, quasi-government, and privately aided) to determine how these variables influence adolescents' LD. This undertaking is carried out to propose practical suggestions for restructuring policies that will enable Indian academia to facilitate better education in the post-pandemic classroom set-up of secondary education. Socio-variational studies have attempted to identify trends; however, these are subject to correlational fallacies (Snell, 2014). To the best of our knowledge, an inquiry on adolescents' LD, which provides educational insights suited for the post-pandemic classroom, still needs to be undertaken. The

following sections present a review of related literature, followed by the research methodology used, the results and discussion, and the conclusion.

## 2. Review of Literature

After establishing the need for research into the socio-variational patterns of adolescents, it is necessary to examine the relevant literature in this field. This section's flow is organized by reporting research undertaken at the global, continental, and local fronts. Thus far, research in variational sociolinguistics has shed light on its interplay with gender, race, phonemic variations, education, and identity, among other themes. At the outset, it is essential to mention the seminal work of Labov (1964), who studied the variation in five phonological variables of people from the lower east side of Manhattan. He observed that there are significant linguistic changes among social groups of African descent, working, and affluent backgrounds. He also posits ground rules for socio-variational studies by underscoring the significance of language as the most sensitive indicator of social variation. Inquiring about the Anglo-Cornish dialect in Cornwall, Sadow (2020; 2022) posits that when speakers pay attention to their dialect, a target and desired identity is framed. Rodriguez-Ordoñez et al. (2022) finds that new speakers of minoritized communities navigate sociolinguistic change as mobile bilinguals and co-exist as heritage speakers. In Asia, the pivotal studies on social class disparities in educational settings are from China (Sheng, 2014) and Japan (Kariya, 2012). Sheng (2014) establishes the inter-class distinctions in China, the gendered nature of higher education choices generally, and how a mother's education affects students' choices based on research on social class and education. Kariya (2012) has criticized Japan's educational systems, arguing that they have exacerbated socio-economic inequality.

Regarding inequalities in educational spaces, researchers claim that the prevalence of the digital divide accounts for students' migration background and gender (Van de Werfhorst et al., 2022). Digital inequality at home and school also arises owing to socio-economic status (SES), according to González-Betancor et al. (2021). Shi and Lei (2021) found that upper-middle-class speakers exhibit more lexical richness than middle-class speakers, using quantitative lexical richness measures as part of their research on lexical indices to explore disparities in social class. In a study inquiring about the underlying factors of dropping out of secondary-level schools in Bangladesh, researchers identified parental negligence, financial crises, and no access to tuition among families of lower-class backgrounds (Sheikh et al., 2022). According to Black et al. (2008), because adolescence is the first time that lexical usage gains public significance, there are no discernible distinctions between class and lexical use among pre-schoolers.

In studies concerning India, Singh (2001) found that male speech is more affluent than female speech in his pilot study using the type-to-token ratio (TTR). In a study on semiotics in Varanasi, India, LaDousa (2014) demonstrates how English schools have a more extraordinary reputation than Hindi schools using a vernacular medium. In examining inequality between Indian public and private schools during COVID-19, Bairagya et al. (2020) found that students in public schools needed the wherewithal to access classes transacted online, prompting a

need to inquire about other sources that caused inequalities in education. The study by Kumar et al. (2023) has revealed that demographic factors, including gender, marital status, caste, money, and religion, have an impact on dropout rates and literacy, identifying the likelihood of female students, mainly married students, dropping out of education compared to male students. The superficial examination of social class, education, and lexical diversity is a matter of criticism in the work of Block (2017), especially when the pandemic has typified learning losses exponentially.

Research on the relationship between disparities and education in India is outdated and restricted to basic education (Kamat, 2008), analysis of vernacular versus English mediums (LaDousa, 2014; Ramanathan, 2005, 2007), and policy considerations (Bhatty, 2014; Kochar, 2002; Tilak, 2016). The study of socio-economic class and education in tandem, particularly in a diverse and multilingual India, can aid in formulating applicable solutions to work around prevailing disparities and promote fairness in education at the grassroots level, that is, in the post-pandemic set-up of a classroom. From the review of studies mentioned above, it becomes clear that socio-variational studies have been scant in India, with even less after the inevitable inequalities and losses symbolized by COVID-19.

The current study seeks to close research gaps by shedding light on the potential for ensuring equity in education despite pervasive inequalities in educational spaces and by doing more than simply reflecting social inequalities within Indian educational systems. It also avoids basing the findings on the correlational fallacy that the interaction of such data can entail. In order to illustrate the socio-variational distribution of lexical richness with variables of age, gender, school type, area of residence, and socio-economic status (SES) level, descriptive and inferential analyses are utilized. To the best of our knowledge, this exploratory study, albeit done on an intentionally small scale, using the socio-variational paradigm to inquire into and discuss educational inequalities, has yet to be undertaken in India. The results could create a firm language-in-education policy in a broader sense. In a limited sense, this can enable the comprehension of the socio-variational trends found within schools. The research design, findings, a discussion of the statistical analyses and their implications, and conclusion are presented in the following parts.

### **3. Research Method**

#### **3.1 Design**

Research on the interaction of language and socio-variational factors can yield varied results because of the heterogeneous student population. Moreover, research on the above topics has been quantitative and inductive. Therefore, the present study deploys an exploratory research method where researchers explore a particular phenomenon and generate hypotheses rather than testing hypotheses (Stebbins, 2001; Swedberg, 2020). Among the four types of exploratory studies, this study employs the Standard Exploratory Type 1 Design (Swedberg, 2020) which intends to gain new insight into something less known (Brink, 1998). The researchers chose to explore the phenomenon of language variation from a socio-

variationist paradigm, which considers the use of demographic variables such as age, gender, area of stay, school type, and socio-economic status to shed light on variation in language, as undertaken in studies by Shi and Lei (2021) and Singh (2001).

### **3.2 Research Context and Sampling Technique**

This research was conducted soon after the reopening of schools in June 2022. In reviewing the literature on literacy and COVID-19-related problems, it came to light from readings of extant literature and school authorities that adolescent literacy is a grave concern. Therefore, educational spaces, especially for adolescent students, are considered the study area and population, respectively. Further, an inquiry in existing literature on adolescent literacy and interviews with teacher informants reveal the concerns of low readability and classroom engagement levels (Appendix 2). For this study, three types of schools were chosen: i) government-aided schools, ii) quasi-government schools, and iii) privately-aided schools. The study comprised 69 boys and 31 girls ( $n = 100$ ), aged between 12.5 and 15.6 years. Only the students who consented to participate in this study were included out of 270 students. Hence, the sampling is purposive. Further, purposive sampling involves recruiting participants based on judgment and quota representation (Sibona et al., 2020). The research participants included those with no speaking difficulties, who represented all social classes, and who consented to provide demographic information willingly.

### **3.3 Research Flow**

The researchers first interacted with educators from three different types of schools by means of one-on-one interviews. Then, demographic details were obtained with consent from the students (Appendix 1), teachers (Appendix 2), and the school authorities through survey questionnaires and official documents (Appendix 3). The consenting students were then shown a narrative story performance. They were required to watch the story performance up to three times and retell the story in their own words. The manual transcription of their retellings follows the recording of the students' narratives. The text output was fed into the computational software to derive the score of each student's LD. This measure was calculated in a narrative retelling task since narrative tasks accurately predict students' comprehension (Reed & Vaughn, 2012), especially in circumstances where students have been underperforming in standardized tests. Narrative tasks give students a certain level of linguistic competence (Alt et al., 2016). The same story genre was shown to all students across different language aptitudes since previous studies have found that such variables may affect lexical output (Sadeghi & Dilmaghani, 2013; Smith & Kelley, 2002).

### **3.4 Research Question/s**

The present study inquires about the variation in linguistic diversity of Indian adolescent students using the socio-demographic variables of age, gender, area of stay, school type, and socio-economic status so that some insights

for education in the post-pandemic scenario can be studied. Broadly, this study aims to provide measures to offset the inequalities furthered by COVID-19.

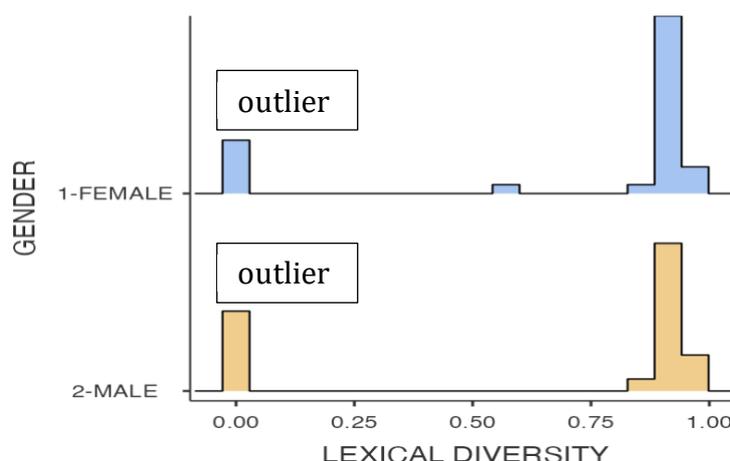
### **3.5 Research Tools**

A collar microphone recorded the participants' narrative retelling tasks. The instruction given to them was to watch and retell, in their own words, a story performed by a professional hand puppeteer on YouTube (Kathpalia, 2020). Permission was sought from the content creator to use the performance video for research (Appendix 4). Students' speech outputs were manually transcribed, and the data was fed into the open-source and standardized computational software called TextElixir (Vincent & Wilde, 2023) to calculate LD. Given the issues with credibility, reliability, and validity of the type-to-token measure used to calculate LD (Hout & Vermeer, 2007; McCarthy & Jarvis, 2007; Vermeer, 2000), the researchers used the moving-average-type-to-token (MATTR) ratio to arrive at LD as it has proven to be independent of text length (Covington & McFall, 2010; Kubát & Milička, 2013; Kyle, 2019; Molden, 2007). The researchers mentioned above have validated the MATTR formula, making it a standardized tool for further research. A reliability analysis of the lexical diversity measures procured on Jamovi Software reveals McDonald's  $\omega$  (100 items,  $\omega = 0.739$ ). This measure indicates a high level of reliability. The researchers collected the student demographic data using a survey questionnaire and school data sheets (Appendix 5). The questionnaire for students was both open ended to acquire demographic information, while the second part involved an inquiry into their attitudes towards English. Though the second part of the questionnaire is for a larger study of thesis, the findings do shed light on the trends of the current study (Appendix 1). The questionnaire for educators was semi-structured and open-ended. Subject-matter experts validated both self-designed questionnaires (Appendix 2). Calculations for the socio-economic scale (SES) level are according to the revised Kuppaswamy SES (Appendix 6) scale (Gunjan Kumar et al., 2022). This scale is a multi-composite indicator of SES level with the help of the educational background of the head of the family (HOF), the profession of the HOF, and the annual income of the HOF (Appendix 6). Jamovi Software (2022) was used for statistical data analysis.

## **4. Results and Discussion**

The first line of investigation is to inquire whether the primary data collected are distributed normally.

**Figure 1: Histogram for normality distribution of primary data collected**



Source: Primary Data Collection

Figure 1 shows that the data is heavily skewed to the left, with outliers at point 0.00. Since the data distribution of LD against gender is skewed to the left for both genders, it was concluded that the data are not normally distributed. Therefore, non-parametric tests were used for the subsequent analyses.

#### 4.1 Language Variation in Gender

**Table 1: Variation in lexical diversity across female and male students**

Lexical Diversity	Group	N	Mean	Median	SD	SE
	Female	31	0.733	0.92	0.371	0.0667
Male	69	0.657	0.92	0.423	0.0510	
<b>Inferential Statistics – Independent Samples T-Test</b>					<b>Statistic</b>	<b>P</b>
Lexical Diversity			Mann-Whitney U		1057	0.925
Note. $H_a \mu_{1-FEMALE} \neq \mu_{2-MALE}$						

Source: Primary Data Collection

The descriptive and inferential analyses of the variation in LD between male and female groups of adolescents are depicted in Table 1. The female group comprises 31 participants ( $M = 0.733$ ,  $Mdn = 0.92$ ,  $SD = 0.371$ ). The LD distribution scores within the female group indicate moderate variability. In contrast, the male group consists of 69 participants, exhibiting ( $M = 0.657$ ,  $Mdn = 0.92$ ,  $SD = 0.423$ ). This result indicates that, on average, female students exhibit higher lexical diversity than male students. The findings contradict previous findings of similar research that suggest that female students have less LD than male students (Hilte et al., 2020; Newman et al., 2008; Singh, 2001) owing to stylistic and linguistic differences related to word length, use of pronouns, social words, and psychological process references. The scores within the male group exhibit a higher standard deviation (SD) than the female group, suggesting significant variability. The slightly higher mean score has the either of the following three implications:

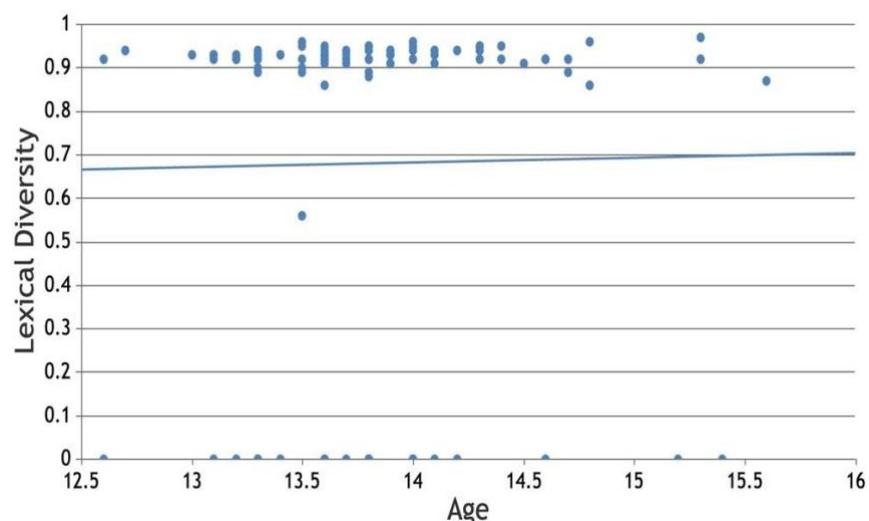
- a) Female students employ a higher lexical diversity in their speech, indicating relatively higher literacy.
- b) Extralinguistic factors include a higher motivation to excel in language among girls than boys.
- c) The type of school may have a significant bearing on the lexical diversity of male students.

However, these results do not indicate whether both groups are significantly different from one another. Therefore, inferential statistics are presented in the second half of Table 1. A Mann-Whitney U test was performed to evaluate whether there is a significant difference between female and male students' LD. The results indicate no significant difference in the groups ( $U = 1057, p = 0.925$ ). The p-value is more significant than the significance level of 0.05; therefore, the difference in LD between male and female students is not statistically significant.

This result contradicts the results of other researchers who have found that the LD of girls is lower than that of boys, owing to less agency given to the former (Ekawati & Permata, 2022; Singh, 2001). This result shows that in educational spaces, gender does not influence LD and is not a primary concern when planning educational policies and learning objectives. This result is significant to give education the essence of inclusiveness. At present, the Indian Government focuses on macro-issues of increasing enrolment, especially for girl children. As of today, the Indian Government has brought out an array of schemes and initiatives that focus on macro-issues of increasing enrolment, especially for girl children. Some of them include Beti Bachao, Beti Padhao [Save the girl child, educate the girl child], Sukanya Samridhi Yojana [Girl Child Prosperity Plan], Balika Samridhi Yojana [Young Girl Prosperity Plan], the National Scheme of Incentives to Girls for Secondary Education, and the CBSE Udaan [Soar High] Scheme among many other local financial incentives and drives. Therefore, this study recommends a direction of finances into inclusive initiatives that will benefit boys and girls alike. Individualized teaching, especially for underperforming students and collaborative learning for average students, is one method of taking care of the minimal differences between the two groups of students. On another note, awareness and implications of LD scores with parents and the various stakeholders in academia can help change stereotypes and encourage support for an increase in the enrolment of students into schools, while also helping in building a gender-inclusive education in the long run. Additionally, the study recommends redirecting initiatives based on socio-economic status rather than on gender.

## 4.2 Language Variation in Age

Figure 2: Extent of association of age and lexical diversity of students



Source: Primary Data Collection

Figure 2 shows the extent of the linear association between LD and age. It shows 15 outliers (below the trendline) with zero LD between 12.5 and 15.4 years. The trend line appearing between 0.6 and 0.7 is indicative of the mean score of the sample. This study conforms to the other language-specific study undertaken by Zhang (2014), who claimed that lexical diversity increases up to a certain age, after which the curve flattens or is negatively correlated with age. Therefore, from Figure 2, one can conclude that in the Indian scenario, LD grows up to adolescence, after which it evidently becomes flat. The above results do not indicate a negative correlation. Moreover, the dispersed scatter plot that moves horizontally from the lowest age group (12.6 years to 15.7 years) depicts that LD is not dependent on age. At present, the National Education Policy (NEP) (Ministry of Human Resource Development, 2020) recommends the design of school curricula to be across four stages which is grade and age-based in the 5+4+3+4 model (Ministry of Human Resource Development, 2020), with five years (preparatory stage), four years of primary stage, three years of middle stage, and four years split into two years each of the secondary and higher secondary stage. This design bears semblance to Piaget's cognitive development theory (Piaget, 1964), which posits that learning development occurs as a function of age. Critics of this theory point out the uneven development phases of a child (Lefa, 2014), overestimating the capacity of adolescents and underestimating the potential of infants (Babakr et al., 2019).

Table 2: Variation in lexical diversity across student age

Descriptive Statistics for age and lexical diversity of the chosen sample			
Particulars	N	Age	Lexical Diversity
Female	31	Min – 12.6 yrs Max – 14.8 yrs	0.733

Male	69	Min – 12.6 yrs Max – 15.6 yrs	0.657
<b>Inferential Statistics – Correlation Matrix</b>			
<b>Lexical Diversity</b>			<b>Age</b>
		Spearman's rho	0.044
		df	98
		p-value	0.665

Source: Primary Data Collection

Furthermore, Table 2 depicts the investigation of the strength of the association between LD and age. The result of Spearman's correlation test shows a weak correlation ( $r = 0.044$ ,  $p = 0.655$ ). Spearman's rho ( $r$ ) being closer to 0 indicates a weak correlation between LD and age, and the p-value ( $p = 0.665$ ) indicates that the probability of obtaining a correlation is as extreme as 0.044 by chance alone, assuming no actual correlation in the population. A p-value greater than 0.05 (the chosen significance level for this study) suggests that the correlation is not statistically significant. Therefore, this weak correlation between LD and age may likely be due to other factors not observed in this study. The present findings again contradict previous literature from similar studies that posit a positive linear association between LD and the age of students (Gharibi & Boers, 2019; Verheijen & Spooren, 2021).

On the other hand, Zhang (2014) suggests that the linearity of age and lexical richness occur only up to a certain age, after which they hit a plateau, flattens, or become negatively correlated. The present study's results align with Zhang's (2014) findings. Educational boards such as the Indian Council for School Certificate Examination (CISCE, 2021) and the Central Board for Secondary Education (CBSE, 2021) have language objectives according to the age and grade of the students. The authors suggest that the results of the present study must nudge language-in-education policymakers and educators to shift their focus from age-specific to skill-specific language learning that emphasizes the dissemination of engaging content and learning from it rather than framing age-specific learning objectives as is currently practised in India. Furthermore, the above results suggest the need for emphasis on broader language competencies such as contextual understanding, word nuances, and assessment strategies for the same.

### 4.3 Language Variation in School Type

**Table 3: Descriptive and inferential statistics on variational distribution of lexical diversity across type of school**

<b>Descriptive Statistics</b>			
<b>School Type</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
A – Private school	30	0.896	0.17
C – Government school	28	0.581	0.447
B – Quasi-government school	42	0.593	0.448
<b>Inferential Statistics</b>			

Kruskal-Wallis One-way ANOVA (non-parametric)	$\chi^2$	df	p
Lexical diversity	8.05	2	0.018
Dwass-Steel-Critchlow Fligner pairwise comparisons		W	p
C – A	-	3.465	0.038
C – B	-	3.524	0.034
A – B		0.201	0.989

Source: Primary Data Collection

Table 3 reveals the descriptive and inferential statistics concerning the variational distribution of LD among students across types of schools. The mean LD of students in government schools is the least ( $M = 0.581$ ,  $SD = 0.447$ ), followed by quasi-government schools ( $M = 0.593$ ,  $SD = 0.448$ ), while the highest mean LD is shown in students in private schools ( $M = 0.896$ ,  $SD = 0.17$ ). However, more analysis than this data is needed to conclude whether there are statistically significant differences among the three types of schools. The Kruskal-Wallis one-way ANOVA (analysis of variance) is a non-parametric test that reveals the significant difference among the groups regarding the dependent variable studied. Table 3 confirms significant differences in LD among types of schools ( $p = 0.018$ ), indicating that the observed differences are unlikely to be due to chance alone.

Furthermore, pairwise comparisons show the differences in school types in every combination. Combinations of Schools C and A (private and government-aided) ( $p = 0.038$ ) and Schools C and B (private and quasi-government) ( $p = 0.034$ ) show statistically significant differences in LD since the p-values are below the significance level of 0.05. However, the LD of students in Schools A and B (government-aided and quasi-government) is similar, with ( $p = 0.9890$ ), above the significance level and implies no significant difference between government-aided and quasi-government schools. This statistic also implies that school type has a significant bearing on the LD of students. An observation of the school resources revealed that fewer infrastructural facilities exist in Schools A and B compared to School C.

The finding of this inquiry is in line with previous studies, which state that private schools have enjoyed more status in the public system (Kingdon, 2019; Kingdon, 2020), while studies on school choice indicate poverty as the chief determinant for children enrolling in low-fee schools (Härmä, 2011). Moreover, studies also depict higher achievement levels (Azam et al., 2016), agency, and self-efficacy (Singh, 2015) among privately-funded educational institution students. Researchers of this study recommend that government should prioritize aided schools (government and quasi-government) and improve the infrastructure facilities of the schools, teacher recruitment, as well as providing better resources in terms of library facilities, exposure to English, and other curricular activities.

The differences across various types of schools also emphasize the need for research on awareness programmes under the government-initiated Right to Free

and Compulsory Education Act of India (RTE 2009), where each school is mandated to provide education free of charge for disadvantaged students. Research is rife with studies on the rural populace (Mehendale et al., 2015; Tripathi & Kamath, 2015), tribal areas (Mishra, 2019), and parents and teachers (Ramachandran & Subramonium, 2015) from rural, lower SES backgrounds, or minority communities (Sofi, 2017) who are unaware or inadequately aware of all the facilities of the RTE Act. The researchers of this study recommend empowering parents, teachers, and students about their rights to good-quality education. Other recommendations for this line of inquiry are to share teachers, libraries, or digital resources by organizing hand-holding activities between private and public schools.

#### 4.4 Language Variation in Area of Stay

**Table 4: Descriptive and inferential statistics on variational distribution of lexical diversity across area of stay**

Descriptive Statistics						
Lexical Diversity	Group	N	Mean	Median	SD	SE
	Non-Slum	32	0.898	0.925	0.165	0.0292
	Slum	68	0.578	0.910	0.447	0.0542
Inferential Statistics – Independent Sample T – Test						
Lexical Diversity				Mann-Whitney U	Statistic	P
					669	0.002
Note. $H_a \mu_{NON-SLUM} \neq \mu_{SLUM}$						

Source: Primary Data Collection

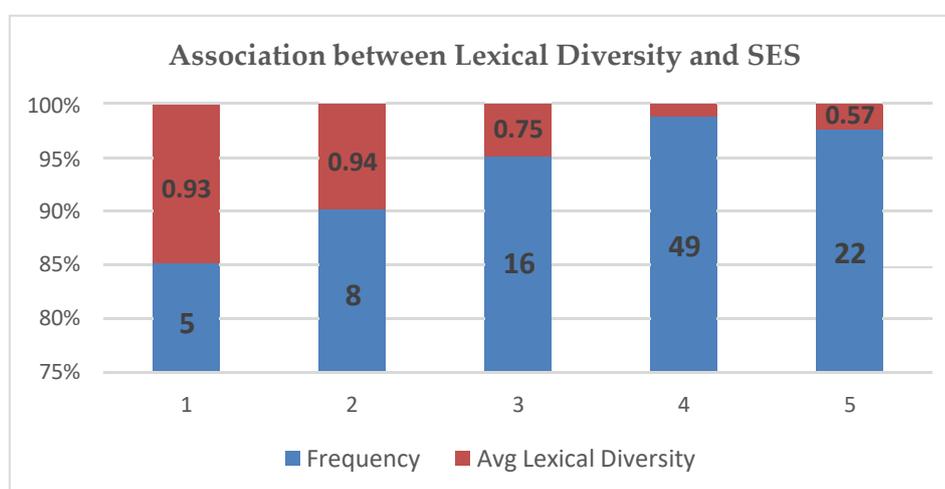
Table 4 depicts the variational distribution of LD between those students residing in non-slum and those in slum areas. The descriptive statistics reveal higher LD among non-slum students ( $M = 0.898$ ,  $SD = 0.165$ ) than among slum students ( $M = 0.578$ ,  $SD = 0.447$ ). The inferential non-parametric independent samples t-test confirms the scores of slum and non-slum students to be statistically significant ( $U = 669$ ,  $p = 0.002$ ). The Mann-Whitney U statistic implies the sum of ranks assigned to the two groups being compared (students residing in slums and non-slum areas). The negation of this evident educational disparity is possible with the help of targeted interventions in schools or residential areas, such as support centres established in slum areas, which could serve as centres where students can access educational support at nominal or free cost. Though there are no previous studies that have specifically focused on slum versus non-slum dwellers, results of this line of inquiry adhere to the studies on disadvantaged students who struggle with coping with regular school without any additional support (Kumar et al., 2023).

These results also reinforce the need for after-school support programmes such as foundational language speaking and writing classes. Volunteer-based NGOs such as U&I NGO (Manchikanti & Sivaram, 2011) and student-led initiatives such as Seekh (Nilesh Bam, 2020) offer private tutoring classes in Bangalore City for students placed at high-risk. However, these are privately funded and small in

scale. Large-scale funding can be made possible by government interventions. The Government has introduced e-platforms for massive open online courses (MOOC) such as Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) (2016) and training platforms for educators such as DIKSHA (2017). MOOC currently offers courses for higher education, and aided-school educators need to be made aware of DIKSHA; it is optional for aided-school teachers to take courses on this platform. Another recommendation of the authors is access to libraries for students, especially those residing in slum areas. The state of Karnataka has taken a step in this direction by digitizing 277 libraries (Joshi, 2022). However, less is known about this initiative, and it is yet to be used by students.

#### 4.5 Language Variation in SES

**Figure 3: Descriptive statistics of the association between LD of students and SES level**



*Source: Primary Data Collection*

According to the Kuppaswamy socio-economic status (SES) scale (Gunjan Kumar et al., 2022), there are five SES levels: (i) upper class, (ii) upper-middle, (iii) lower middle, (iv) upper lower, and (v) lower class. The present data is not evenly distributed among all five SES levels, a pertinent issue in research related to social class. Davis (1985) has suggested that in the event of unequal distribution of subjects under each category, a correlational test of the dependent variable with the computed rank assigned to the SES level can decipher the extent of association. However, the problem with this is evident in Figure 3, which indicates a redundant correlation between class and LD. To further tackle the problem of unequal sample distribution, the upper, upper middle, and lower middle classes have been categorized as Class 1, and the upper, lower, and lower classes as Class 2 in order to inquire about the extent of variance in LD between the two re-named classes.

**Table 5: Descriptive and inferential statistics on variational distribution of LD across SES levels**

Descriptive Statistics						
Lexical Diversity	Group	N	Mean	Median	SD	SE
	1 - Upper and Middle	28	0.863	0.93	0.244	0.0462
	2 - Lower	72	0.610	0.915	0.437	0.0515
Inferential Statistics – Independent Samples T-Test						
				Statistic	p	
Lexical Diversity		Mann-Whitney U		646	0.005	

Source: Primary Data Collection

Table 5 depicts that the upper and middle classes (1) (M=0.863, SD = 0.244) are higher than the lower class (2) group (M= 0.610, SD=0.437). The non-parametric independent samples t-test reveals (U = 646 and p<0.05). The p-value is less than the conventional significance level of 0.05, thus indicating a statistically significant difference between the two re-named social classes. Similar to school type and area of stay, the findings of this study reveal that socioeconomic status is one of the significant factors that impact students' LD. Students from upper- and middle-class backgrounds may have additional exposure to language-rich environments, whereas 72 of the hundred students belong to lower classes, for whom the school is the only place for exposure to language-rich environments (Majumdar, 2010; Meganathan, 2015).

Educators and policymakers must consider structuring plans reinforcing educational spaces by working on community-related incentives. Collaborations among schools, families, and communities can create a supportive environment for students from lower-class backgrounds. The affordability of the targeted inventions must be implicit in organizing initiatives, while the greater focus must be on practical implementation. Since external factors such as SES also play a role in the LD of students, taking into consideration the educational qualifications and profession of the head of the family (usually male in Indian families, unless deceased) helps frame incentives. Table 6 depicts the distribution of heads of families in their educational qualifications and professions between Classes 1 and 2.

**Table 6: Comparison of parents' educational qualification and professions of SES Class 1 & 2.**

Educational Qualification			Profession		
Particulars	SES – CLASS 1	SES – CLASS 2	Profession	SES – CLASS 1	SES – CLASS 2
Profession with Honours degrees	8	-	Legislators, Senior officials and Managers	1	-
Graduate	9	3	Professionals	1	-
Intermediate Diploma			Clerks	1	-

Higher Secondary Certificate	26	9	Skilled workers, Shop/market sales	1	2
Middle School Certificate	-	11	Agricultural workers	-	-
Primary School Certificate	-	3	Craft and related trade workers	8	14
Illiterate	-	28	Plant and Machine operators	3	15
			Elementary occupation	11	38
			Unemployed	-	2

The above information is part of the compilation of SES score according to the norms of the Kuppaswamy SES scale. The intention of including Table 6 is to illustrate how the LD of students has a generational impact. At least 28% of parents are illiterate, while 38% are in elementary occupations such as housekeeping, ironing clothes, auto-rickshaw drivers, and office filing assistants. This data suggests the need for a community-based approach by way of initiating hand-holding programmes whereby parents can complete their schooling despite a break of many years. Alternative schools for such parents, or 'Study with your child' programmes, can uplift communities from illiteracy and improve the overall LD of a particular section of the populace.

## 5. Conclusion

The purpose of the present study was to investigate the sociovariational distribution of LD among Indian adolescents across three categories of schools commonly found in India in order to identify potential policy-related solutions for addressing school inequality. In terms of their LD scores, students from lower socioeconomic backgrounds have much territory to make up in order to reach their upper- and middle-class counterparts. Sociovariational studies that rely on correlational fallacies are criticized by Snell (2014). However, this exploratory study encourages greater scholarly consideration of the following novel hypotheses proposed by the study's researchers: (i) LD does not depend on intrinsic factors such as age and gender, but rather on extrinsic demographic variables such as area of residence, school type, and socioeconomic status; and (ii) literacy has a generational impact.

Future research could therefore concentrate on reorganizing educational policies and development programmes from a sociovariational perspective, with a particular emphasis on adolescents from lower SES backgrounds. For the RTE Act (2009) to be effective in its true essence, state-sponsored, targeted interventions are required to raise education stakeholders' awareness. 'Back to school' initiatives for parents, collaboration of resources between private and public schools, and the establishment of study centres in slum areas are among this study's essential

recommendations. In addition, there is a need for state-sponsored financial incentives to produce more visible results among their intended beneficiaries in the form of free access to tutoring facilities, cellular data, and digital knowledge resources. The researchers also contend that it is essential to contextualize language and education policies, and that a one-size-fits-all approach is not feasible in multilingual nations. This study is limited by not accounting for extralinguistic characteristics such as the motivation and aptitude of adolescents. Language development and educational sociolinguistics, in particular, are expansive fields.

Additionally, this study is not without its limitations. In a multilingual, multicultural, and densely populated country such as India, drafting language-in-education regulations could be arduous. Owing to the difficulties posed by obtaining consent, excluding students without cognitive disabilities, and excluding those who were unable to sit through all assessments, this data is limited to only 100 students. Owing to the study's intended use of a limited sample size, its findings cannot be generalized to the Indian adolescent population as a whole.

However, this study serves as a model for future sociovariationist education research. The results of this study not only demonstrate the importance of conducting an exploratory study on the sociovariational distribution of LD prior to engaging in a policy-formulation exercise, but they also demonstrate the importance of external factors over intrinsic ones, such as gender and age, which are beyond the control of the student. A nation can strengthen its economy by addressing equity-related issues in the education sector. In addition to a meticulously crafted large-scale government plan to achieve educational equity, the authors of this paper recommend the collaboration of synergies among privately funded tutorial applications, education tech forums, and initiatives financed by multinational corporations.

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## Appendix 1

### Questionnaire for Students

#### Demographic Profile – Students

1. Full name as per School records: \_\_\_\_\_
2. DOB (DD/MM/YYYY) \_\_\_\_\_
3. Class: \_\_\_\_\_ Sec: \_\_\_\_\_ Roll. No: \_\_\_\_\_
4. Area of residence: \_\_\_\_\_
5. Mother Tongue: \_\_\_\_\_
6. Type of Home: Own/Rented \_\_\_\_\_
7. Father's name: \_\_\_\_\_ -
8. Father's Educational Qualification: \_\_\_\_\_
9. Father's occupation: \_\_\_\_\_
10. Mother's name: \_\_\_\_\_
11. Mother's Educational Occupation: \_\_\_\_\_
12. No. of people in the Family: \_\_\_\_\_
13. No. of working people in the Family: \_\_\_\_\_
14. Monthly income: Rs. \_\_\_\_\_ /-
15. Other languages known to speak: \_\_\_\_\_.
16. Other languages known to write: \_\_\_\_\_.
17. How many years have you studied in English? \_\_\_\_\_.
18. Which language are you most comfortable speaking? \_\_\_\_\_
19. How much do you like English as a subject on a scale of (1 to 5) (5 being the most)?  
\_\_\_\_\_
20. What is/are the reasons for rating the subject this? \_\_\_\_\_

**ATTITUDES TOWARDS ENGLISH QUESTIONNAIRE**

NAME: Carmel A. Kinash P. | STD & SEC: 8<sup>th</sup> A | SCHOOL: St. Peter's High School  
 Tick the most appropriate answer

SL.No	Question	YES	NEUTRAL	NO
1	Do you think <del>ing</del> English will help in getting better and more academic opportunities?	<input checked="" type="checkbox"/>		
2	Do you think learning to speak and write better English will help you understand about varieties of jobs?	<input checked="" type="checkbox"/>		
3	Do you think knowing English will help in getting a better job?	<input checked="" type="checkbox"/>		
4	Do you think your family wealth will increase if you know English?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
5	Do you think you will be happier with yourself if you get better in English?			
6	Do you think you will be more famous among your friends if you learn to speak and write better English?	<input checked="" type="checkbox"/>		
7	Do you think English is more relevant in the world compared to your mother tongue?			<input checked="" type="checkbox"/>
8	Does knowing English make you more aware of the world and the events happening across the globe?	<input checked="" type="checkbox"/>		
9	Do you think knowing to speak and write English will make you feel confident in society?	<input checked="" type="checkbox"/>		
10	Do you think knowing to speak and write English will improve the overall quality of your life?			<input checked="" type="checkbox"/>

Write the number according to what extent of the following problems you have faced related to English:

1=0%, 2=Upto 25%, 3=Upto 50%, 4=Upto75%, 5= Upto100%

Sl.No	Title	Number
1	How tough is it for you to speak English?	2
2.	How tough is it for you to write English?	3
3.	How tough is it for you to understand English?	2
4.	To what extent do you face the following problems? a) Guidance in English at School. b) Guidance in English at home. c) Resources in English at School. d) Resources in English at <del>School</del> home.	A 75% B 75% C 25% D 100%
5.	How much do you fear making errors in English?	5
6.	Do you have any unpleasant memories while learning English? If yes, please write briefly about at least 1 episode. Preferably in the recent past.	Yes My Friends will Tise

## Appendix 2

### Questionnaire for Teachers

#### Questionnaire for Teachers

**Teacher No: 1**

**School No: 1**

1. This year the students came back to school after two years. Did you notice any change in their learning styles?

*Ans. After two years they have completely lost interest in studies and their language is poor because of their family background.*

2. Was there any bridge course to improve their skills? If yes, what was it?

*Ans. If I have to take bridge course, I must take in the evening time after school hours. Not all were present.*

3. What is the important given to speaking skills?

*Ans. We have to conduct different kinds of activities like speech and debate. Right now, we have only written activities. Till now only few activities because we have a lot of portions to complete. Because of lack of time, we are hurrying with portions. After we finish that we will conduct activities.*

4. Other than DSCERT textbook prescribed from the government, what else do you use for Grammar skills?

*Ans. There are many story books to study to improve their grammar skills. I don't want to say any particular books. There are many stories.*

5. What type of books do you recommend for them?

*Ans. I don't know. When I did B.Ed I used to study many stories, I improved through the stories. There are many stories.*

6. How do you make your classes interesting? What are your best practices?

*Ans. First I want to check the mentality of students. If they are not showing interest regarding the class, I will make jokes regarding the particular topic, if they answer, then I will continue. If students answer, then I will consider it is interesting. Then I will continue.*

7. Any other resource you want to take to class that you want to take to class?

*Ans. There are no restrictions to conduct any activities. Till now I have not conducted*

---

7. Any other resource you want to take to class that you want to take to class?

*Ans. There are no restrictions to conduct any activities. Till now I have not conducted any activities. This is my first year here. I came in July. At present I am uncomfortable here. I don't know the present situations here.*

8. What are the minimum qualifications for teaching?

*Ans. Minimum qualification is BA (Bachelor of Arts), B.Ed. (Bachelor of Education).*

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9. How do you/teachers decide the learning objectives?

*Ans. It is all mentioned in the textbook. Chapter wise they have mentioned objectives.*

10. Do you refer to National Education Policy for objectives?

*Ans. No madam, we follow textbooks.*

11. What is given more emphasis in English skills? Writing or Reading skills?

*Ans. All four skills are important.*

12. What is the Testing pattern in this school.

*Ans. Here, for 8<sup>th</sup>, we are giving for 15 marks, Test for 15 marks – Total 30 marks. It will be reduced to a Grade. FA 1, FA2, SA1 (40 marks test), FA 3, FA 4, SA 2. Totally it will add up to 100 marks.*

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9. How do you/teachers decide the learning objectives?  
*Ans. It is all mentioned in the textbook. Chapter wise they have mentioned objectives.*
10. Do you refer to National Education Policy for objectives?  
*Ans. No madam, we follow textbooks.*
11. What is given more emphasis in English skills? Writing or Reading skills?  
*Ans. All four skills are important.*
12. What is the Testing pattern in this school.  
*Ans. Here, for 8<sup>th</sup>, we are giving for 15 marks, Test for 15 marks – Total 30 marks. It will be reduced to a Grade. FA 1, FA2, SA1 (40 marks test), FA 3, FA 4, SA 2. Totally it will add up to 100 marks.*
13. What kind of activities are you giving the students?  
*Ans: I had given a few questions to know the language skills for writing.*
14. What are some challenges you faced other than behavioral issues.  
*Ans. Some students are not able to read and write.*
15. What are some common errors students make?  
*Ans. I don't know how to say. Common errors in tenses.*
16. For the students who struggle to read. Is there a way to given them different assignments?  
*Ans. According to the list of those students who are unable to read, there are oral activities. For SA 1 and SA 2 – They have to write, they have no option. If they fail, we conduct examination thrice, until he scores passing marks.*
17. What are the other challenges you face in teaching? Why do students show less interest in English.  
*Ans. Not only in English, in all subjects they show less interest. The parents do not show interest. Parents are not at all strict. Per day minimum five to six students are absent.*

## Appendix 3

## Official Documents of SES Data Collection

Christha Vidyalaya High School - Demographic Details of Std 8										
Sl. No	Name of Student	Gender	DOB	Father's Profession	Mother's Profession	Residence	Annual Income	Religion	Caste	Phone Number
1	Jeevan S	Boy	29-12-08	Coolie	House keeping	SG Palva	40000	Hindu	Dhobi	Kan9868471671
2	Mahantesh B	Boy	12-10-09	Auto Driver	Garments	SG Palva	40000	Hindu	Kuruba	Kan9721389769
3	Manjunatha SN	Boy	19-02-10	Fireman	Home-maker	BG Road	60000	Hindu	Kumbhara	Kan9845669856
4	Sandhya M	Girl	05-09-09	Electrician	House keeping	SG Palva	35000	Hindu	Bhovi SC	Tel: -
5	Preethi V	Girl	04-04-09	-	Beautician	Balaji Nagar	40000	Hindu	Kurubina Shetty	Kan9972314188
6	Thejaswini	Girl	22-09-09	House keeping	Helper	SG Palva	40000	Hindu	Kuruba	Kan7204517441
7	Jayanth Kumar RK	Boy	04-07-10	Auto Driver	Security guard	Thavarekere	50000	Hindu	Kurubina Shetty	Kan8618007596
8	Hemashri B	Girl	07-03-09	-	-	-	-	-	-	-
9	Apoorva G	Girl	24-05-09	Garments	Garments	SG Palva	50000	Hindu	Adi-Karnataka SC	Kan988611667
10	Namitha S	Girl	10-08-08	Car Driver	Day-care	Balaji Nagar	50000	Hindu	Thigala	Kan900805560
11	Keerthana S	Girl	07-11-09	Garments	Garments	Thavarekere	40000	Hindu	Devanga	Kan9741562252
12	Mohan KK	Boy	29-03-09	Auto Driver	Garments	SG Palva	50000	Hindu	Reddy	Kan8431717521
13	Tejas M	Boy	27-02-08	Auto Driver	Garments	SG Palva	40000	Hindu	Vakkaliga	Kan8616576162
14	Manya P	Girl	08-06-08	Mechanic	Printing Press	Thavarekere	40000	Hindu	Mudaliyar	Tan7795349614
15	Sushma E	Girl	20-02-09	House keeping	House keeping	SG Palva	35000	Hindu	Golla	Kan9632793570
16	Mounika	Girl	14-01-20	Driver	House keeping	SG Palva	35000	Hindu	Reddy	Tel:7091327724
17	Ramkeshth Das	Boy	27-11-09	Supervisor St.Job	Supervisor St.John	SG Palva	50000	Hindu	Adi-Karnataka SC	Tel:8861162123
18	Arjun BV	Boy	25-06-09	Garments	Garments	SG Palva	50000	Hindu	Golla	Kan8105997272
19	Vidyashri S	Girl	27-02-10	Driver	Garments	Balaji Nagar	30000	Hindu	Adi-Karnataka SC	Kan8073502938
20	Dhanalakshmi E	Girl	25-11-09	-	House keeping	Bhovi Colony	20000	Hindu	Bhovi SC	Tel:6361105528
21	Manjunatha M	Boy	16-11-07	Mason	House keeping	SG Palva	40000	Hindu	Kuruba	Kan9868630906
22	Priyanka PM	Girl	12-03-09	Coolie	Garments	Balaji Nagar	40000	Hindu	Kuruba	Kan7795852712
23	Nancy H	Girl	26-06-08	-	House keeping	Thavarekere	30000	Christian	RC	Tan8431137051
24	Chaitanya	Girl	05-01-09	Iron Shop	Home-maker	Balaji Nagar	35000	Hindu	Madhvala	Kan7892377452
25	Kushal HS	Boy	13-09-09	Car Driver	Garments	SG Palva	35000	Hindu	Adi-Karnataka SC	Kan9900086044
26	Santhosh K	Boy	30-03-09	Security	House keeping	Bhovi Colony	35000	Hindu	Bhovi SC	Tel:9741995711
27	Rohith R	Boy	08-05-09	JSC Supervisor	Garments	Chikkadugodi	80000	Hindu	Bhovi SC	Kan8197695998
28	Anupam Dolui	Boy	16-10-08	Security	Cook	SG Palva	40000	Hindu	-	Ban8376955821
29	Sanjay M	Boy	21-04-09	Coolie	Garments	SG Palva	50000	Hindu	Devanga	Kan8123708790
30	Pradeep M	Boy	30-09-07	Car Driver	House keeping	BTM layout	40000	Hindu	Lambani SC	Kan9686599675
31	Dewika BP	Girl	08-09-09	House keeping	House keeping	Bhovi Colony	50000	Hindu	Bhovi SC	Tel:7337714460
32	Sanjay G	Boy	22-04-08	Driver	House keeping	Balaji Nagar	50000	Hindu	Adi-Dravida SC	Tan8861456851
33	Sharath HR	Boy	30-08-07	Garments	Garments	SG Palva	40000	Hindu	Madhvala	Kan97213863812

S. G. Palya  
Head Mistress  
CHRISTHA VIDYALAYA  
PRIMARY SCHOOL  
S. G. Palya, BENGALURU - 29

Government of Karnataka  
Commissioner of Public Instruction, Karnataka.

Academic 2022-2023

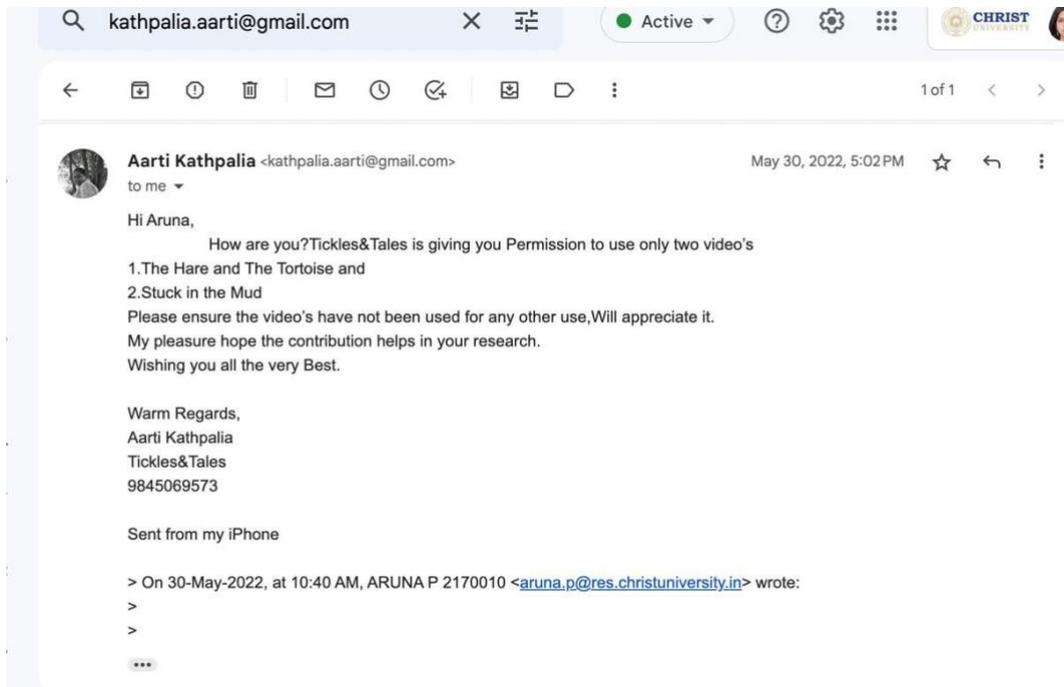
29200912709- ST PATRICK HIGH SCHOOL MG ROAD, 2920090009 Cluster, 292009 Block, 2920 District

Sr. No.	1. Student Name 2. Father Name	3. Student Id 4. Mother Name	5. Habitation 6. Aadhaar uid No	7. DOA 8. DOB	9. Sex/ 10. Caste/Sub Caste)	11. Minority 12. BPL No.	13. Disadvantage (Bhagyalakshmi Bond No.)	14. Admin. RTE 15. Class Studying	16. Previous Class 17. Status if	19. Medium and Syllabus 20. Disability	Current
1	A LEVIN HARRY AMBROSE A	045 459 248 METILDA R	N/A XXXXXXXX4687	10/06/2022 16/01/2010	1- BOY 1- General (N/A)	2- Christian M- Ed- PUC S-	N/A N/A	N Class-8	0 AI- 12000/-	English N/A 99- Not Applicable	
2	A RINESH ANAND RAJ	045 455 345 LAKSHMI	N/A XXXXXXXX2299	15/06/2022 25/08/2009	1- BOY 1- General (N/A)	8- Hindu M- H-K Ed- 7th S- 8000/-	N/A N/A	N Class-8	0 AI- 24000/-	English N/A 99- Not Applicable	
3	ABDUL RAHIM SALLAD AHMED	105 387 092 NAZIYA	2 XXXXXXXX0000	06/06/2022 17/11/2009	1- BOY 4- OBC (Category 2B) (N/A)	1- Isian M- House wife Ed (PUC)	N/A N/A	N Class-8	0 Annual-1 - 18000/-	English N/A 99- Not Applicable	
4	ABHIJITH A ANTHONY	133 432 337 ANTHONI	N/A N/A	08/07/2022 20/11/2008	1- BOY 4- OBC (Category 3B) (N/A)	2- Christian M- Housekeeping Ed- 5th std (4500)	N/A N/A	N Class-8	0 AI- 138000/-	English N/A 99- Not Applicable	
5	ABHILASH D DOMINIC	099 896 557 LILLI	N/A XXXXXXXX6995	06/07/2022 29/01/2009	1- BOY 4- OBC (Category 3B) (N/A)	2- Christian M- House wife Ed- NIL	N/A N/A	N Class-8	0 AI- 180,000/-	English N/A 99- Not Applicable	
6	ABISHAK A A ANAND	045 451 256 A INCUMATHI	N/A XXXXXXXX2373	08/06/2022 03/04/2009	1- BOY 2- SC (N/A)	8- Hindu M- H-K Ed- 5th std	N/A N/A	N Class-8	0 AI- 120,000/-	English N/A 99- Not Applicable	
7	ABRAHAM VISHAL ANTHONY	101 019 987 MYTHILU R	N/A XXXXXXXX5751	15/06/2022 19/11/2009	1- BOY 1- General (N/A)	2- Christian M- H-W Ed- B.Com	N/A N/A	N Class-8	0 AI- 14000/- Nil-check	English N/A 99- Not Applicable	

HEADMISTRESS  
ST. PATRICK'S HIGH SCHOOL  
15-K, BRIGADE ROAD  
BANGALORE-560 025

## Appendix 4

### Consent from Content Creator



## Appendix 5

### McDonald's $\omega$ score for Lexical Diversity Measurements on TextElixir

Scale Reliability Statistics

	<b>Cronbach's <math>\alpha</math></b>	<b>McDonald's <math>\omega</math></b>
scale	0.0330	0.739

## Appendix 6

### Kuppuswamy Socio-Economic Scale Calculation

Kuppuswamy SES Scale is compiled after adding the scores for educational qualification of the head of the family, profession of the head of the family, and income of the head of the family.

Sl.No	Educational Qualification of the Head	Score
1.	Profession or Honors	7
2.	Graduate	6
3.	Intermediate or diploma	5
4.	High School Certificate	4
5.	Middle School Certificate	3
6.	Primary School Certificate	2
7.	Illiterate	1

Sl.No	Occupation of the Head of the Family	Scores
1	Legislators, Senior Officials and Managers	10
2	Professionals	9
3	Technicians and Associate Professionals	8
4	Clerks	7
5	Skilled Workers and Shop and Market Sales	6
6	Skilled Agricultural & Fishery Workers	5
7	Craft and Related Trade Workers	4
8	Plant and Machine Operators and Assemblers	3
9	Elementary Occupation	2
10	Unemployed	1

Sl.No	Updated Monthly Family Income in Rupees (2022)	Scores
1	Less than or equal to 184376	12
2	Between 92191 to 184370	10
3	Between 68967 to 92185	6
4	Between 46095 to 68961	4
5	Between 27654 to 46089	3
6	Between 9232 to 27648	2
7	Less than or Equal to 9226	1

#### Total SES Score Compilation

Sl.No	Score	Socioeconomic Class
1	26 to 29	Upper (I)
2	16 to 25	Upper Middle (II)
3	11 to 15	Lower Middle (III)
4	5 to 10	Upper Lower (IV)
5	Less than 5	Lower (V)