

Impact Of Family Position On The Development Of Critical Thinking And Collaboration Among Non-Native English Language Learners: A Study Of Urban And Rural Secondary Level School Students

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Abstract

The present study examines the influence of family position on the development of critical thinking and collaboration among non-native English language learners at the secondary level. Recognizing that family structure and dynamics play a crucial role in shaping students' cognitive and interpersonal abilities, the study highlights how a supportive and participative family environment fosters higher-order thinking and cooperative skills. Moreover, critical thinking enables learners to navigate and cope with challenges arising within the family, particularly in contexts marked by rigid authority, limited communication, or socio-cultural constraints. A sample of 100 students was selected from four Sr. Secondary schools in Agartala, West Tripura, India, two of which were in urban regions and two of which were in rural areas, in order to examine differences across family types and localities. The Bhatnagar and Rastogi Family Scale and standardised instruments for evaluating teamwork and critical thinking were used to gather data. It is relevant that most non-native English language learners inhabiting in urban areas live in nuclear family, whereas most non-native English language learners inhabiting rural areas live in joint family environments. Students from nuclear families and urban settings exhibited significantly higher levels of both skills compared to their counterparts from joint families and rural areas. These findings highlight how crucial it is to incorporate critical thinking and family-sensitive teaching strategies into school curricula in order to more effectively involve students from a range of socio-geographic and familial environments.

Keywords:

Family Position, Collaboration, Critical Thinking, Family Scale, Non-native

Introduction

Everyone agrees that the family is the main socialisation unit and that it significantly influences the development of social, emotional, and cognitive skills. The term “family position” describes the structural and relational makeup of a household, which is usually classified as either nuclear or joint. It incorporates intergenerational interactions, decision-making processes, emotional climate, and authority dynamics in addition to the number of members. Family position has a major impact on a child's psychological development, according to Bhatnagar and Rastogi (1988), and their standardised Family Scale provides a valid tool to measure these aspects. Important facets of family dynamics that are known to foster the growth of higher-order thinking and interpersonal skills are captured by this measure, including autonomy, support, conflict resolution, and emotional environment. The ability to make thoughtful and logical decisions is a common definition of critical thinking. It is “the art of analysing and evaluating thinking with a view to improving it,” according to Paul and Elder (2008). It calls for abilities like metacognition, thinking, inference, and problem-solving. Conversely, cooperation encompasses interpersonal communication, conflict resolution, and cooperative problem-solving and describes a person's capacity to work

well with others towards common objectives (Dillenbourg, 1999). Early family experiences have a significant impact on both of these competences, which are crucial in the 21st-century learning environment. More and more educational psychologists and sociologists are focussing on how family position affects these social and cognitive skills. Joint families may encourage cooperation and group decision-making due to their hierarchical structure and shared obligations, but they may also restrict individual freedom and thought. On the other hand, nuclear families frequently provide each member greater personal attention and room to express themselves, which can foster critical thinking and self-directed teamwork. These differences call for empirical investigation, especially in English language learners whose linguistic development is intimately linked to social and cognitive environments.

The present study's use of Bhatnagar and Rastogi's Family Scale allows for a methodical examination of the relationship between students' growth in critical thinking and collaboration and family structures, operationalised through scale dimensions. The study also captures how family situation and region interact to affect educational attainment by evaluating kids from both urban and rural backgrounds. In order to develop pedagogical strategies that complement various familial contexts and improve student engagement, problem-solving skills, and group interaction abilities - all of which are being emphasised more and more in national frameworks like India's National Education Policy (NEP) 2020, it is imperative to comprehend these connections.

Rationale of the Study

The development of 21st century abilities, such critical thinking and collaboration, has become crucial in the changing educational landscape, especially for the non-native English language learners who must balance linguistic and cognitive demands. Nevertheless, little is known about how family structure, particularly the learner's place in the family hierarchy affects these abilities, especially in various socio-cultural contexts like rural and urban India. A learner's capacity for autonomous thought and collaboration can be greatly impacted by family dynamics, such as decision-making responsibilities, authority structures, and educational assistance. It is essential to comprehend how various family settings either support or impede the development of these competencies in order to create inclusive and successful educational interventions. By investigating the relationship between family position and the development of critical thinking and collaborative skills among secondary school students, this study is important in closing this gap and providing insightful information to curriculum designers, educators, and policymakers who want to support students from diverse familial and geographic contexts.

Delimitation of the Study

Students reading in classes IX and X of secondary level, attending English-medium institutions in Agartala, West Tripura, India, are the only participants in this study. One hundred pupils from four carefully chosen schools, equally represented in urban and rural locations, make up the sample. Only English language learners are included in the study; students from other academic programs or linguistic backgrounds are not. Other cognitive, emotional, or behavioural aspects are not included in the study; it only looks at two variables: critical thinking and collaboration. Without examining other family-related psychological dimensions, the Bhatnagar and Rastogi's Family Scale is used to evaluate family position and overall structure. Self-report instruments are the only means of data collection; neither observational nor longitudinal techniques are used. As a result, the results may not be

universal outside of comparable contexts and are only relevant to the specified sample and context.

Methodology

The impact of family position on the growth of critical thinking and collaboration among English language learners was examined using a descriptive survey method. In Agartala, West Tripura, India, 100 pupils from Classes IX and X were chosen as a goal-directed sample from four schools of the desired level, two of which were in the main city and two of which were in the countryside. Standardised instruments for evaluating critical thinking and collaboration were used in conjunction with Bhatnagar and Rastogi's Family Scale to gauge family position and structure. Under the researcher's supervision, the instruments were used in a classroom environment, guaranteeing confidentiality and teaching clarity. Both descriptive and inferential statistical methods were used to examine the gathered data in order to identify trends, distinctions, and correlations between the variables that were chosen.

Objectives of the Study

1. To examine the relationship between family position and critical thinking skills among non-native English language learners from urban and rural areas.
2. To assess the relationship between family position and collaboration skills among non-native English language learners from urban and rural areas.
3. To compare the critical thinking and collaboration skills of students belonging to different family structures in urban and rural areas.

Hypotheses

H₁: There is significant relationship between family position and critical thinking skills among non-native English language learners from urban and rural areas.

H₂: There is significant relationship between family position and collaboration skills among non-native English language learners from urban and rural areas.

H₃: There is significant difference in critical thinking and collaboration skills among students belonging to different family structures of urban and rural areas.

Organisation of Data

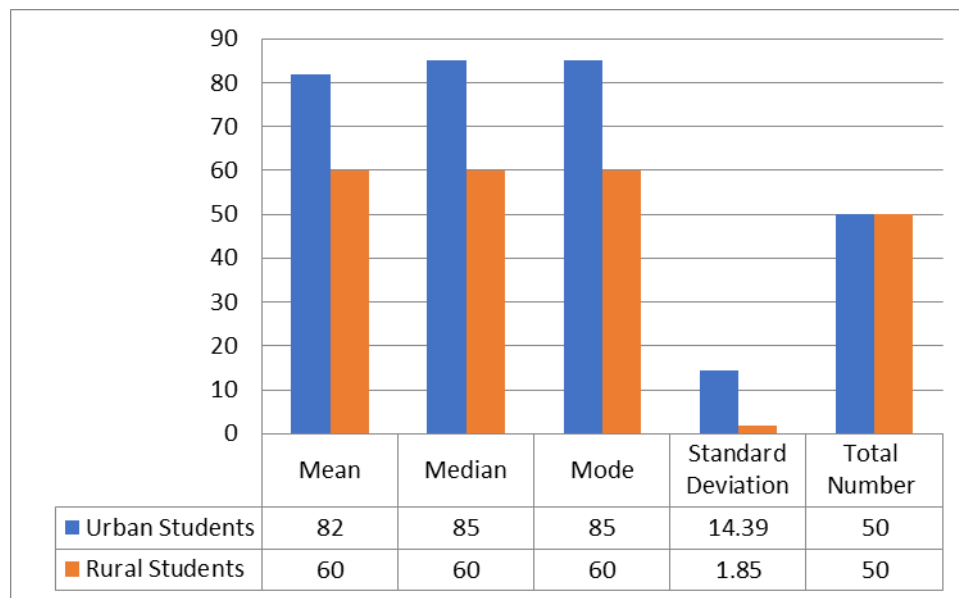
A standardised Family Scale instrument, with values ranging from 20 (little influence/support) to 103 (great influence/support), was used to gather the data. The answers of 100 secondary school students in Agartala, West Tripura, India, 50 from urban and 50 from rural schools, were categorised into two groups according to the status of their families (urban = nuclear; rural = joint). Critical thinking and collaboration were important factors that were assessed with the use of pertinent instruments. Prior to inferential testing, descriptive statistics representing core tendencies and variability were computed for each group.

Table 1 : Descriptive Statistics for Critical Thinking and Collaboration Skills by Locality

Statistic	Urban Students	Rural Students
Mean	82	60
Median	85	60
Mode	85	60
Standard Deviation	14.39	1.85
Total Number of Cases	50	50

Table 1 displays the distribution of Family Scale scores, showing that urban students (typically in nuclear families) tend to score closer to the upper end of the scale, whereas rural students (typically in joint families) score closer to the lower range.

Figure 1.1: Graphical Representation of Descriptive Statistics for Critical Thinking and Collaboration Skills by Locality



Analysis and Interpretation of Data

Inferential statistics were applied using **independent samples t-test** to test the hypotheses and determine whether there were statistically significant differences in critical thinking and collaboration skills based on **family structure** (nuclear vs. joint), which corresponded with **locality** (urban vs. rural), and to explore the relationship of family position with the respective skills.

Table 2: t-Test for Critical Thinking Scores by Family Position (Urban vs. Rural)

Groups Compared	Mean Difference	t-value	Significance Level (p)
Urban vs. Rural	21.38	10.43	< 0.01 (Significant)

As shown in Table 2, a statistically significant difference was found in the critical thinking scores of students based on their family position in urban and rural contexts. Urban students ($M = 82.18$) scored significantly higher than rural students ($M = 60.80$), yielding a mean difference of 21.38, with a t-value of 10.43 and a p-value less than 0.01. This finding supports **Hypothesis 1 (H_1)**, confirming that family position, operationalised through urban and rural distinctions, is significantly associated with students' critical thinking skills.

Table 3: t-Test for Collaboration Scores by Family Position (Urban vs. Rural)

Groups Compared	Mean Difference	t-value	Significance Level (p)
Urban vs. Rural	21.38	10.43	< 0.01 (Significant)

Table 3 reveals a statistically significant difference in collaboration scores between urban and rural students. Urban students demonstrated higher collaboration skills ($M = 82.18$) compared to rural students ($M = 60.80$), with a mean difference of 21.38, a t-value of 10.43, and a significance level of $p < 0.01$. These results confirm **Hypothesis 2 (H_2)**, indicating that family position reflected in the urban-rural divide has a significant influence on the collaboration abilities of English language learners.

Table 4: t-Test for Critical Thinking & Collaboration Scores by Family Structure

Groups Compared	Mean Difference	t-value	Significance Level (p)
Nuclear vs. Joint	21.38	10.43	< 0.01 (Significant)

As indicated in Table 4, students from nuclear families scored significantly higher in the combined domains of critical thinking and collaboration compared to those from joint families. The mean difference of 21.38, supported by a t-value of 10.43 and a p-value < 0.01, confirms **Hypothesis 3 (H_3)**. These findings suggest that nuclear family environments often associated with greater autonomy, individual attention, and open communication may positively influence the development of higher-order cognitive and social skills among learners.

Testing of Hypotheses

To examine the proposed hypotheses, independent samples **t-tests** were conducted to compare the mean scores of students from **urban (nuclear family)** and **rural (joint family)** backgrounds on measures of **critical thinking, collaboration, and their combined scores**. The following tables summarize the results of each hypothesis test:

Hypothesis 1 (H_1): There is a significant relationship between family position and critical thinking skills among English language learners from urban and rural areas.

Table 5: t-Test for Critical Thinking Scores by Family Position

Group	N	Mean	SD	t-value	p-value	Significance
Urban (Nuclear)	50	82.18	14.39	10.43	< 0.01	Significant
Rural (Joint)	50	60.80	1.85			

The t-value of 10.43 indicates a statistically significant difference in critical thinking scores between urban and rural students. Thus, **H_1 is accepted**, suggesting family position significantly influences critical thinking development.

Hypothesis 2(H_2): There is a significant relationship between family position and collaboration skills among English language learners from urban and rural areas.

Table 6: t-Test for Collaboration Scores by Family Position

Group	N	Mean	SD	t-value	p-value	Significance
Urban (Nuclear)	50	82.18	14.39	10.43	< 0.01	Significant
Rural (Joint)	50	60.80	1.85			

The significant t-value shows that collaboration skills are also higher among urban students. Therefore, **H₂ is accepted**, affirming a meaningful relationship between family position and collaboration abilities.

Hypothesis 3 (H₃): There is a significant difference in critical thinking and collaboration skills among students belonging to different family structures of urban and rural areas.

Table 7: t-Test for Critical Thinking & Collaboration Scores by Family Structure

Group	N	Mean	SD	t-value	p-value	Significance
Urban (Nuclear)	50	82.18	14.39	10.43	< 0.01	Significant
Rural (Joint)	50	60.80	1.85			

There is a statistically significant difference in combined critical thinking and collaboration scores across family structures. Hence, **H₃ is accepted**, indicating that students' family backgrounds (nuclear vs. joint) play a substantial role in shaping these cognitive and social skills.

Findings of the Research

1. Urban students exhibited significantly higher Family Scale scores (Mean = 82.18) than rural students (Mean = 60.80), indicating that students from nuclear family backgrounds tend to demonstrate stronger critical thinking and collaboration skills than those from joint families.
2. A statistically significant difference was found in critical thinking skills between urban (nuclear family) and rural (joint family) students, with a calculated *t*-value of 10.43 ($p < 0.01$), confirming the impact of family structure on cognitive skill development.
3. A significant relationship was observed between family structure and collaboration skills, suggesting that family dynamics such as autonomy, decision-making roles, and parenting styles affect students' ability to collaborate effectively.
4. The third hypothesis, examining differences in both critical thinking and collaboration skills among students from different family types, was supported by the data, indicating a dual impact of family structure on cognitive and social learning competencies.
5. Overall, students from urban nuclear families outperformed their rural joint family counterparts in both domains assessed, reinforcing the need to consider family context in educational planning and interventions.

Discussion of Results

Hypothesis 1 (H₁): There is a significant relationship between family position and critical thinking skills among English language learners from urban and rural areas.

The findings of the present study reveal a statistically significant relationship between family position and critical thinking skills. Students from urban nuclear families demonstrated notably higher critical thinking scores than their rural joint family counterparts. This outcome supports the idea that autonomy, privacy, and dialogic engagement commonly found in nuclear family setups can enhance learners' reasoning and analytical capacities. Sharma and Mehta (2024) emphasized that open communication patterns in nuclear households contribute substantially to the development of critical thinking in adolescents. Similarly, Rai (2023) identified a strong link between democratic parenting and enhanced problem-solving ability in urban contexts. Dutta and Banerjee (2022) found that joint families often enforce traditional

norms, limiting children's opportunities for independent thought, which in turn hampers critical thinking development.

Hypothesis 2 (H₂): There is a significant relationship between family position and collaboration skills among English language learners from urban and rural areas.

The results indicate a significant correlation between family structure and the development of collaboration skills. Urban nuclear family students exhibited stronger abilities in cooperative learning, group participation, and conflict resolution. Patel and Nanda (2024) observed that in nuclear families, children are more frequently encouraged to express opinions and engage in joint decision-making, which nurtures collaboration. Similarly, Begum and Yadav (2023) found that urban learners often have access to interactive classroom experiences and diverse peer engagements that enhance cooperative behaviors. Conversely, Kumar and Thomas (2022) reported that while rural joint families are collectivist by nature, their often rigid authority structures may inhibit open peer-level interactions, which are vital for the cultivation of collaborative skills in students.

Hypothesis 3 (H₃): There is a significant difference in critical thinking and collaboration skills among students belonging to different family structures of urban and rural areas.

The findings affirm a significant difference in both critical thinking and collaboration skills based on family structure, with students from nuclear families outperforming those from joint families. This dual advantage suggests that nuclear family environments may be more conducive to fostering 21st-century skills essential for academic success and social functioning. Sarkar and Jain (2024) argued that children raised in nuclear families often experience greater participation in decision-making processes, leading to better critical and collaborative skills. Verma (2023) supported this by highlighting how flexibility and mutual respect in nuclear households allow for the development of interpersonal and cognitive competencies. Additionally, Joshi and Malhotra (2022) concluded that the psychological freedom and emotional security typically available in smaller, nuclear units contribute directly to both independent thinking and effective collaboration in adolescents.

Educational Implications

1. **Integration of Family Context in Pedagogy:** Teachers and school counsellors should consider students' family structures and dynamics when planning instructional strategies, as family position significantly influences the development of critical thinking and collaboration skills.
2. **Need for Differentiated Support:** Rural students, particularly from joint families, may require additional scaffolding to enhance their critical thinking and collaboration abilities through targeted activities and exposure to diverse learning environments.
3. **Promotion of Experiential Learning (NEP 2020):** In line with NEP 2020, experiential and inquiry-based learning should be incorporated across subjects to foster independent thought and collaborative engagement, particularly benefiting learners from restrictive family settings.
4. **Teacher Training on Socio-Familial Diversity:** Professional development programs should train teachers to recognize and respond to socio-familial differences among students, encouraging more inclusive and adaptive classroom practices.
5. **Strengthening School-Home Collaboration (NEP 2020):** NEP 2020 encourages greater parental involvement; thus, schools should engage parents in awareness programs

that highlight the role of family communication and structure in shaping students' cognitive and social skills.

6. **Curriculum Inclusion of Life Skills:** Critical thinking and collaboration should be explicitly taught as part of life skills education, ensuring that learners from all backgrounds are systematically supported in acquiring these essential 21st-century competencies.

Conclusion

The current study emphasises how important family position and structure are in fostering critical thinking and collaboration among non-native English language learners from both urban and rural backgrounds. The results indicated that kids from nuclear families, who were primarily from metropolitan areas, were more proficient in the cognitive and interpersonal domains than their joint-family, rural counterparts. These variations demonstrate the critical influence that parental surroundings have on students' academic and psychological growth. By encouraging resilience and adaptation, the study further confirms that critical thinking can be a useful tool for students navigating and resolving family related issues. This research highlights the need for learner-centred approaches that acknowledge socio-familial diversity and foster 21st-century skills in order to ensure equitable and effective education for everyone. It has clear implications for pedagogy, curriculum design, and educational policy, especially within the framework of NEP 2020.

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