Graphic Organisers Vs. Traditional Methods: Enhancing Fifth-Grade Adjective Learning

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Abstract: Grammar instruction, particularly adjective learning, remains a critical component of language education in multilingual CBSE schools. Traditional teaching methods often fail to engage students effectively in creative language application. This action research study investigated the effectiveness of graphic organisers compared to traditional instructional methods in developing adjective learning skills among fifth-grade students in a CBSE school. Seventy-one students from two Grade 5 classes (5-C: n=35, 5-E: n=36) participated in a pre-test and post-test design during the 2024-25 academic year. Students received traditional adjective instruction followed by a graphic organiser-based intervention. Data collection included quantitative assessments and qualitative student feedback. Both sections demonstrated significant improvement, with Section 5-E showing an average score increase of 1.68 points (16.8%, p<0.001, Cohen's d=1.65), while Section 5-C showed improvement of 0.88 points (8.8%, p<0.001, Cohen's d=0.68). Qualitative analysis revealed seven key themes, such as enhanced engagement, creative thinking development, cross-linguistic competence, vocabulary expansion, collaborative learning, visual learning impact, and practical application awareness. Graphic organisers provide effective scaffolding for elementary students developing grammatical understanding and creative expression skills. The findings offer evidence-based support for integrating visual learning tools within CBSE curriculum frameworks while emphasising the importance of implementation quality.

Keywords: graphic organisers, adjective learning, elementary grammar instruction, CBSE curriculum, multilingual education, visual learning

1. Introduction

1.1 Background and Rationale

Language education serves as the fundamental cornerstone of academic and cognitive development, with grammar instruction playing a critical role in developing students' communicative competence. Among grammatical components, adjectives (विशेषण) function as essential linguistic elements that enhance descriptive precision and facilitate effective communication across oral and written modalities.

In India's Central Board of Secondary Education (CBSE) system, students face unique challenges in developing strong grammatical foundations while simultaneously building creative expression skills. Traditional pedagogical approaches, characterised by rule-based instruction and mechanical practice exercises, often struggle to foster creative expression and critical thinking skills that modern educational standards demand.

For fifth-grade students specifically, adjective learning presents a developmentally appropriate challenge that bridges concrete vocabulary acquisition and abstract grammatical understanding. At this educational juncture, students are expanding their descriptive vocabulary and developing more sophisticated sentence structures. However, many students struggle with the creative application demands of adjective usage, often producing language that lacks descriptive richness or contextual appropriateness.

1.2 Graphic Organisers in Educational Context

Graphic organisers represent visual frameworks that help students organise information and concepts, making abstract grammatical relationships concrete and visible. These learning tools align with cognitive load theory (Sweller, 1988) and dual coding theory (Paivio, 1986), suggesting that visual representations enhance information processing and retention by distributing cognitive demands across both visual and verbal processing channels.

In grammar instruction contexts, graphic organisers can provide scaffolding that guides students through the learning process, from vocabulary building and pattern recognition to creative application and cross-linguistic connections. For adjective learning specifically, graphic organisers might include adjective-noun relationship webs, semantic category charts, or structured templates that prompt students to identify, categorise, and creatively apply descriptive language in meaningful contexts.

1.3 Research Problem and Significance

Despite growing interest in visual learning strategies, research specifically examining the effectiveness of graphic organisers for adjective instruction at the elementary level in Indian CBSE contexts remains limited. The present study addresses this research gap by investigating whether graphic organisers provide more effective instructional support than traditional methods for teaching adjective learning to fifth-grade students.

This study contributes to evidence-based practices in elementary grammar instruction and provides practical guidance for educators seeking to enhance students' descriptive language skills within the CBSE curriculum framework.

1.4 Research Question and Hypothesis

Research Question: To what extent do graphic organisers improve fifth-grade students' adjective learning skills compared to traditional instructional methods within a CBSE school context?

Hypothesis: Students will demonstrate greater improvement in adjective learning and creative application when using graphic organisers compared to traditional instructional approaches, as measured by assessment scores and qualitative learning indicators.

2. Literature Review

2.1 Theoretical Framework

The implementation of graphic organisers in grammar instruction is supported by several cognitive and educational theories. Constructivist learning theory (Vygotsky, 1978) emphasises that learners actively construct knowledge through experience and scaffolded support. Graphic organisers function as scaffolding tools that bridge students' current grammatical abilities with more advanced language skills.

Schema theory suggests that learning occurs when new information connects to existing mental frameworks. Graphic organisers help students develop and activate schemas related to adjective usage by providing visual structures that organise descriptive vocabulary, grammatical relationships, and contextual applications.

Dual Coding Theory (Paivio, 1986) addresses how visual and verbal information processing work together to enhance learning. By combining visual organisation with verbal practice, graphic organisers potentially engage multiple cognitive pathways, improving both comprehension and retention of grammatical concepts.

2.2 Previous Research on Graphic Organisers

Research on graphic organisers in language instruction has generally shown positive effects across grade levels. Studies have demonstrated that visual learning tools help students organise linguistic information, make connections between concepts, and transfer knowledge to new contexts. In multilingual educational settings, graphic organisers have been particularly effective in helping students navigate between languages and develop cross-linguistic competencies.

Several studies have examined graphic organisers specifically for vocabulary development and grammatical instruction, showing that visual tools can enhance students' abilities to categorise words, understand relationships between linguistic elements, and apply grammatical knowledge in creative contexts.

2.3 Grammar Instruction in Indian Educational Contexts

Research on grammar instruction in Indian schools emphasises the complexity of multilingual learning environments where students must develop competency across multiple languages within standardised

curriculum requirements. Traditional approaches in Indian schools have typically emphasised explicit rule learning and pattern practice, which, while ensuring systematic coverage of grammatical concepts, may limit development of communicative competence and creative language use.

3. Methodology

3.1 Research Design

This study employed an action research design with pre-test and post-test measures to evaluate the effectiveness of graphic organisers on students' adjective learning skills. This design was selected for its practical applicability in classroom settings and alignment with teacher-led inquiry aimed at improving instructional practices within the CBSE curriculum framework.

3.2 Setting and Participants

The study was conducted at Dr. D. Y. Patil Academy's Shantiniketan School, Kolhapur, Maharashtra, during the 2024-25 academic year. The school follows the CBSE curriculum.

Participants: 71 fifth-grade students from two classes

- Section 5-C: 36 students (35 completed both assessments, 1 absent during post-test)
- Section 5-E: 36 students (all completed both assessments)

All participants were aged 10-11 years, representing the typical learning context of CBSE-affiliated schools.

3.3 Instructional Intervention

The research implemented a sequential approach comparing traditional and innovative methods:

Phase 1: Traditional Method Implementation (2 weeks)

Students in both classes received adjective instruction through traditional methods including:

- Teacher-centred systematic concept explanation
- Board-based example demonstrations using familiar sentences
- Worksheet-based practice exercises focusing on recognition and identification
- Direct instruction on adjective-noun relationships
- Assessment through recognition-focused evaluation

Phase 2: Graphic Organiser Intervention (2 weeks)

Both classes received adjective instruction incorporating specially designed graphic organisers:

1. Adjective Category Web: Visual organisers connecting adjectives to semantic categories
2. Evidence Collection Chart: Structured templates for gathering adjectives from various contexts
3. Bilingual Vocabulary Organiser: Charts supporting Marathi-English adjective connections
4. Creative Application Planner: Sequential organisers guiding from vocabulary identification to creative usage

3.4 Data Collection Instruments

Pre-test (Traditional Method Assessment): A 10-point assessment focusing on recognition and recall skills, including adjective identification in sentences through multiple-choice format (6 marks) and noun-adjective matching exercises (4 marks).

Post-test (Graphic Organiser Method Assessment): A 10-point assessment requiring creative synthesis and application, including original dialogue writing incorporating a minimum of 4 adjectives with a translation component demonstrating cross-linguistic competence.

Qualitative Data Collection:

- Student feedback interviews
- Teacher reflective observations documenting pedagogical experiences
- Classroom interaction observations during both instructional phases

3.5 Data Analysis

The study employed mixed-methods analysis, including descriptive statistics, paired t-tests to determine statistical significance, effect size calculations using Cohen's d, and systematic thematic analysis of qualitative data through inductive coding and triangulation across multiple data sources.

4. Results

4.1 Quantitative Findings

Analysis of pre-test and post-test scores revealed notable differences in adjective learning performance following the graphic organiser intervention between the two sections.

Section 5-C Performance (n=35)

- Mean pre-test score: 7.86/10 (78.6%, SD = 1.38)
- Mean post-test score: 8.74/10 (87.4%, SD = 1.22)
- Mean change: +0.88 points (+8.8%)
- Statistical significance: $t(34) = 3.78$, $p < 0.001$ (significant)
- Effect size: Cohen's d = 0.68 (medium effect)

Section 5-E Performance (n=36)

- Mean pre-test score: 7.64/10 (76.4%, SD = 1.13)
- Mean post-test score: 9.32/10 (93.2%, SD = 0.90)
- Mean change: +1.68 points (+16.8%)
- Statistical significance: $t(35) = 10.84$, $p < 0.001$ (highly significant)
- Effect size: Cohen's d = 1.65 (very large effect)

4.2 Individual Performance Patterns

Section 5-C Individual Patterns:

- Students showing improvement: 24/36 (66.7%)
- Students maintaining performance: 8/36 (22.2%)
- Students showing decline: 4/36 (11.1%)

Section 5-E Individual Patterns:

- Students showing improvement: 32/36 (88.9%)
- Students maintaining performance: 3/36 (8.3%)
- Students showing decline: 1/36 (2.8%)

4.3 Qualitative Findings

Comprehensive thematic analysis of student feedback revealed seven primary themes:

Theme 1: Enhanced Enjoyment and Engagement Student feedback revealed increased motivation: "नंबर दोनची टेस्ट सोडवायला खूप मजा आली" (The second test was much more enjoyable to solve).

Theme 2: Creative Thinking Development Students demonstrated awareness of enhanced cognitive processing: "आम्हाला विचार करायला लागले" (We had to think more).

Theme 3: Cross-Linguistic Competence Language learning benefits emerged clearly: "इंग्रजी आणि मराठी यांचा मेळ झाला" (English and regional language came together).

Theme 4: Vocabulary Expansion Measurable vocabulary growth was consistently reported: "आमचे शब्दसंग्रह वाढले" (Our vocabulary expanded).

Theme 5: Collaborative Learning Enhanced peer interaction: "आम्ही ग्रुप डिस्कशन केले" (We had group discussions).

Theme 6: Visual Learning Impact Improved retention through visual processing: "चार्ट बनवल्यामुळे लक्षात ठेवणं सोपं झालं" (Making charts made it easier to remember).

Theme 7: Practical Application Awareness Enhanced real-world connections: "दैनंदिन जीवनात विशेषणे कशी वापरतो हे समजले" (I understood how adjectives are used in daily life).

5. Discussion

5.1 Interpretation of Findings

The differential performance patterns between sections provide compelling evidence for the complex relationship between pedagogical approach and learning outcomes. Section 5-E's remarkable improvement (16.8 percentage points, Cohen's d = 1.65) represents a very large effect size, providing strong empirical support for graphic organiser-based methods' capacity to enhance both academic performance and creative expression simultaneously.

Section 5-C also showed significant improvement (8.8 percentage points, Cohen's d = 0.68), demonstrating a medium effect size that indicates meaningful learning gains. The fact that both sections showed statistically significant improvements (p < 0.001) but with different magnitudes suggests that while graphic organisers are effective across different classroom contexts, implementation quality and other contextual factors influence the extent of improvement.

5.2 Implications for CBSE Practice

The study's CBSE context provides insights into balancing standardised curriculum requirements with innovative pedagogical approaches. The successful integration of creative expression with measurable performance improvements suggests that curriculum objectives can be achieved through diverse methodological approaches while maintaining assessment validity.

Practical implications for CBSE grammar instruction include:

1. Sequential Integration Approach: Utilise traditional methods for foundational establishment, followed by graphic organiser methods for creative application

2. Differentiated Implementation: Consider individual adaptation patterns and provide additional support for students requiring extended scaffolding

3. Cross-Linguistic Enhancement: Leverage graphic organisers to support language competence development

4. Assessment Diversification: Incorporate both recognition-based and creative expression assessments

5.3 Limitations

Several limitations should be acknowledged:

1. Implementation Variability: Differential outcomes between sections suggest that implementation quality significantly affects results

2. Short-term Assessment: The study measured immediate post-intervention effects without examining long-term retention

3. Context Specificity: Findings from this single-school study require replication across diverse CBSE contexts for broader generalizability

6. Conclusions

6.1 Summary of Key Findings

This action research study investigated the effectiveness of graphic organisers for developing adjective learning skills among fifth-grade students in a CBSE school. Key findings include:

1. Graphic organiser implementation can lead to significant improvements in adjective learning, with one section demonstrating remarkable gains (17.2% improvement, p<0.001)

2. Individual adaptation to innovative methods varies considerably, emphasising the need for differentiated implementation approaches

3. Successful implementation enhances multiple learning dimensions, including creative expression, cross-linguistic competence, vocabulary expansion, and practical application awareness

4. Implementation quality critically influences intervention effectiveness

6.2 Educational Significance

This study contributes to educational practice by providing empirical evidence for visual learning strategies within CBSE educational contexts. The findings suggest that graphic organisers can effectively bridge traditional grammar instruction with creative expression requirements while maintaining alignment with CBSE curriculum standards.

6.3 Recommendations

For Educators:

- Implement graphic organisers as supplementary tools to traditional grammar instruction
- Provide adequate preparation and scaffolding for innovative method adoption
- Consider individual student needs and adaptation patterns
- Develop bilingual vocabulary organisers to support cross-linguistic competence

For Future Research:

- Conduct randomised controlled trials to strengthen causal inferences
- Examine long-term retention and transfer effects
- Investigate factors predicting successful adaptation to innovative methods
- Explore technology integration possibilities for digital graphic organisers

6.4 Final Reflections

This study demonstrates both the potential and complexity of implementing innovative instructional strategies within established educational frameworks. While graphic organisers show promise for enhancing adjective learning, the variable outcomes across sections underscore the critical importance of implementation quality, teacher preparation, and individualised support systems.

For CBSE educators, the findings offer evidence supporting the integration of visual learning tools while emphasising the need for thoughtful, systematic implementation approaches that account for diverse learner needs and contextual factors.

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