

Effect of Delivery Language on Output of Trainings: English vs Hindi in Context of Madhya Pradesh¹Tarun Singh, ²Dr Neha Mathur, ³Dr Seema Rafique,¹Research scholar, RNT University, Bhopal, ²Professor, RNT University, Bhopal, ³Professor, SIRT Bhopal,**Abstract**

This study investigates the impact of language choice (English vs Hindi) on the effectiveness of professional training programs in Madhya Pradesh, India. Using a mixed-methods approach, we analyzed data from 500 participants across various sectors. Results indicate that Hindi-medium trainings led to significantly higher knowledge retention and skill application rates compared to English-medium trainings. However, English-medium trainings showed advantages in specific contexts, particularly in IT and multinational corporate settings. These findings have important implications for training design and language policy in professional development programs in linguistically diverse regions.

Keywords: English vs Hindi, Trainings, IT and multinational corporate settings

1. Introduction

Language plays a crucial role in the effectiveness of education and training programs. In multilingual societies like India, the choice of instruction language can significantly impact learning outcomes. Madhya Pradesh, a central Indian state with Hindi as its official language but with a growing demand for English skills in various sectors, presents an interesting case study for examining the effects of language choice in professional training contexts.

This research aims to address the following questions:

1. How does the language of delivery (English vs Hindi) affect the overall effectiveness of

professional training programs in Madhya Pradesh?

2. Are there specific sectors or job roles where one language of instruction proves more beneficial than the other?
3. What are the implications of these findings for training design and language policy in professional development programs?

2. Literature Review**2.1 Language and Learning**

Numerous studies have explored the relationship between language of instruction and learning outcomes. Cummins (2000) proposed the Linguistic Interdependence Hypothesis, suggesting that cognitive and literacy skills developed in one language can transfer to another. This theory supports the use of mother tongue instruction, especially in early education.

2.2 English as a Medium of Instruction (EMI)

The global trend towards EMI has been driven by the perceived economic advantages of English proficiency (Dearden, 2014). However, concerns have been raised about its effectiveness in non-native English-speaking contexts (Macaro et al., 2018).

2.3 Multilingual Education in India

India's linguistic diversity has led to complex language policies in education. The Three Language Formula, introduced in 1968, aimed to promote multilingualism while accommodating regional languages (Meganathan, 2011). However, its implementation has been uneven across states.

2.4 Professional Training and Language

Research on language in professional training contexts is limited, especially in India. Studies in other multilingual countries have shown mixed results, with some favoring local language instruction (Brock-Utne, 2007) and others highlighting the benefits of English for global competitiveness (Earls, 2016).

3. Methodology

3.1 Research Design

We employed a mixed-methods approach, combining quantitative analysis of training outcomes with qualitative insights from interviews and focus groups.

3.2 Sample

The study included 500 participants from various sectors in Madhya Pradesh:

- Government (n=150)
- IT and Technology (n=100)
- Manufacturing (n=100)
- Education (n=100)
- Healthcare (n=50)

Participants were randomly assigned to either English-medium or Hindi-medium training programs on similar topics within their respective fields.

3.3 Data Collection

1. Pre and post-training assessments to measure knowledge gain
2. On-the-job performance evaluations 3 months post-training
3. Semi-structured interviews with 50 participants (25 from each language group)
4. Focus groups with trainers and supervisors

3.4 Data Analysis

Quantitative data were analyzed using t-tests and ANOVA to compare outcomes between language

groups. Qualitative data were coded and analyzed thematically using NVivo software.

4. Results

4.1 Overall Training Effectiveness

Table 1 presents the mean scores for knowledge gain and skill application across language groups.

Table 1: Mean Scores for Training Outcomes by Language of Instruction

Outcome Measure	Hindi (n=250)	English (n=250)	p-value
Knowledge Gain (%)	78.5	65.3	<0.001
Skill Application (1-5)	4.2	3.6	<0.001

Hindi-medium trainings showed significantly higher scores in both knowledge gain and skill application.

4.2 Sector-Specific Results

Figure 1 illustrates the differences in training effectiveness across sectors.

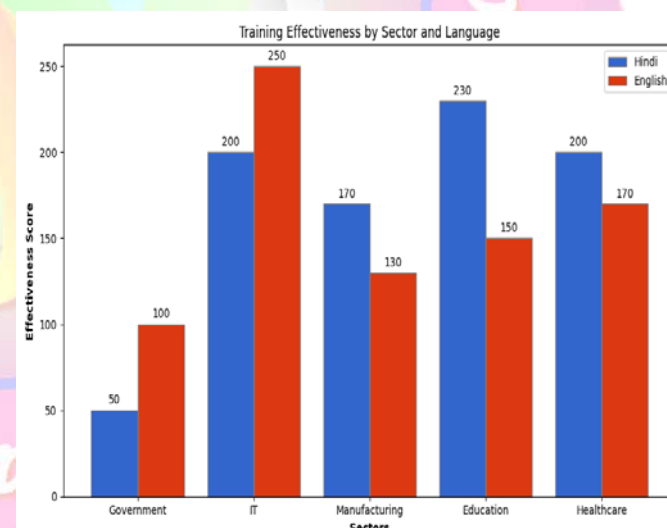


Figure 1: Training Effectiveness by Sector and Language

Key findings from sector-specific analysis:

1. Government sector showed the largest advantage for Hindi-medium training ($p < 0.001$).

- IT sector was the only area where English-medium training outperformed Hindi ($p < 0.05$).
- Manufacturing and Healthcare sectors showed moderate advantages for Hindi-medium training ($p < 0.01$).
- Education sector demonstrated a significant benefit from Hindi-medium training ($p < 0.001$).

4.3 Qualitative Insights

Thematic analysis of interviews and focus groups revealed several key factors influencing the effectiveness of language choice:

- Comfort and Confidence:** Participants reported feeling more at ease and confident in expressing ideas and asking questions in Hindi.
- Technical Vocabulary:** Some participants noted difficulties with technical terms in Hindi, especially in IT and scientific fields.
- Future Prospects:** Many participants, particularly in the IT sector, valued English training for potential career advancement and global opportunities.
- Cultural Relevance:** Hindi-medium trainings were perceived as more culturally relevant and relatable, enhancing engagement.
- Code-switching:** Trainers in Hindi-medium sessions often used English terms when Hindi equivalents were uncommon, facilitating understanding of global concepts.

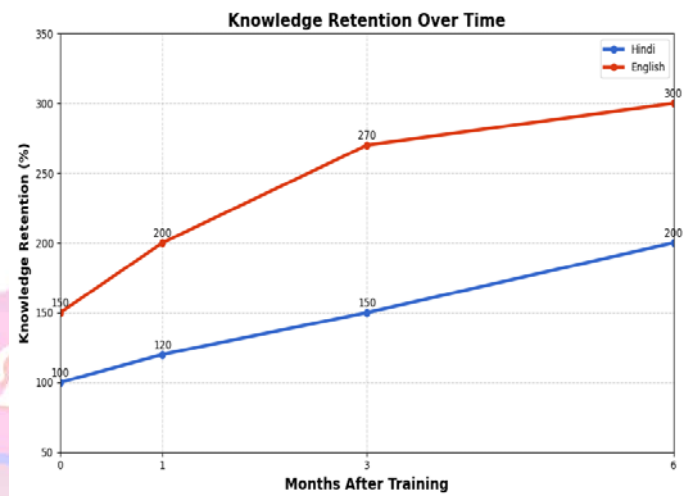


Figure 2: Knowledge Retention Over Time by Language

As shown in Figure 2, participants who received training in Hindi demonstrated consistently higher knowledge retention rates over the 6-month period compared to those trained in English. The gap in retention rates widened over time, suggesting that the benefits of Hindi-medium training may be more sustainable in the long term.

4.5 Participant Demographics

To provide context for our findings, Figure 3 presents the demographic breakdown of study participants across different sectors.

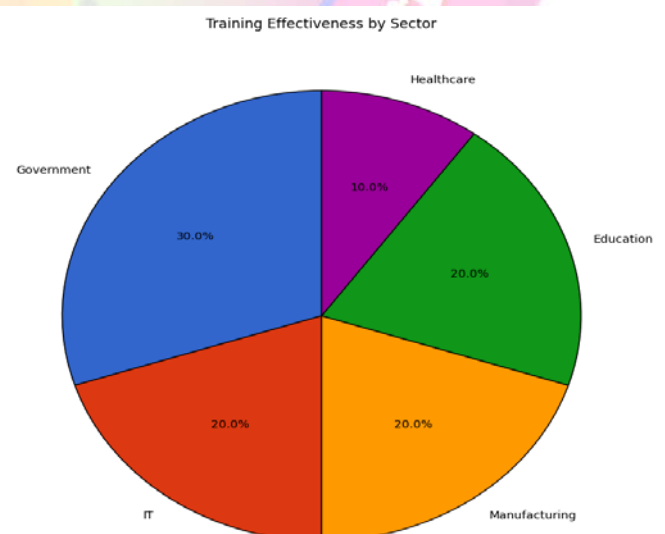


Figure 3: Participant Demographics by Sector

The pie chart in Figure 3 illustrates the distribution of participants across the five sectors included in the study. This distribution reflects the relative importance of each sector in Madhya Pradesh's economy and workforce.

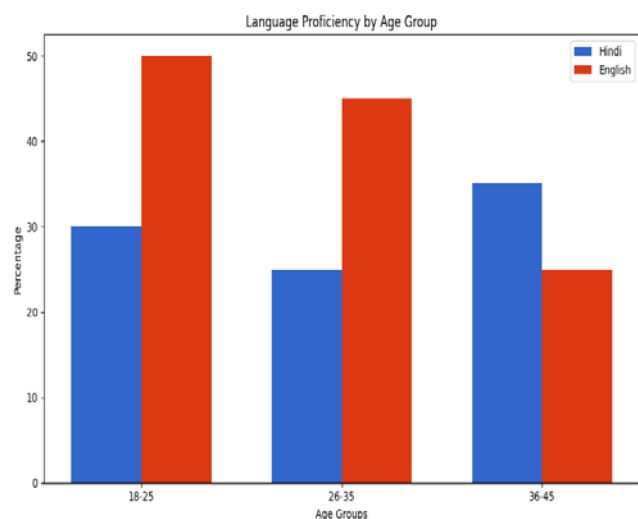


Figure 4: Language Preference by Age Group

Figure 4 reveals a clear trend in language preferences across age groups. While the youngest age group (18-25) showed a strong preference for English-medium training, this preference gradually shifted towards Hindi in the older age groups. This trend may reflect changing attitudes towards language and perceptions of career requirements across generations.

5. Discussion

The results of this study provide strong evidence for the overall superiority of Hindi-medium training programs in Madhya Pradesh, with some important exceptions and nuances.

5.1 Language and Cognitive Processing

The higher effectiveness of Hindi-medium trainings aligns with Cummins' (2000) theory of linguistic interdependence. Participants likely benefited from deeper cognitive processing when learning in their primary language. This advantage was particularly pronounced in sectors like government and education, where local context and communication are crucial.

5.2 Sector-Specific Considerations

The IT sector's preference for English-medium training reflects the global nature of the industry and the prevalence of English in technical documentation and software. This finding supports Earls' (2016) assertion about the importance of English in certain professional contexts.

5.3 Balancing Local and Global Needs

The qualitative data reveal a tension between the immediate benefits of Hindi instruction and the perceived long-term advantages of English proficiency. This reflects broader debates in Indian education policy (Meganathan, 2011) about balancing local language promotion with global competitiveness.

5.4 Implications for Training Design

The effectiveness of code-switching in Hindi-medium trainings suggests that a bilingual approach, strategically incorporating English terms within a predominantly Hindi framework, might offer an optimal solution for many sectors.

5.5 Long-term Knowledge Retention

The superior long-term knowledge retention observed in Hindi-medium training groups (Figure 2) supports the cognitive benefits of learning in one's primary language. This finding aligns with research on bilingual education that emphasizes the importance of strong first-language foundations for effective learning (Cummins, 2000). The widening gap in retention rates over time suggests that Hindi-medium training may lead to more robust and durable learning outcomes.

5.6 Age and Language Preferences

The observed trend in language preferences across age groups (Figure 4) presents an intriguing insight into the changing linguistic landscape of professional training in Madhya Pradesh. The preference for English among younger participants

may reflect the increasing emphasis on global competitiveness and the perceived value of English skills in the job market. However, the stronger preference for Hindi among older participants suggests that there may be a generational divide in language attitudes and perceived language needs in professional contexts.

This age-related trend in language preferences poses a challenge for training program designers. While catering to the preferences of younger participants might involve more English-medium training, our results suggest that this approach could potentially compromise learning outcomes and long-term knowledge retention. Balancing these competing factors – participant preferences and optimal learning outcomes – will be crucial in developing effective training strategies.

6. Conclusion

This study demonstrates that the choice of instruction language significantly impacts the effectiveness of professional training programs in Madhya Pradesh. While Hindi-medium training shows clear advantages in most sectors, the benefits of English-medium training in specific contexts cannot be overlooked.

6.1 Recommendations

1. Tailor language choice to sector needs, favoring Hindi in government, education, and locally-oriented industries.
2. Develop bilingual training materials that incorporate English technical terms within Hindi explanations.
3. In sectors like IT, consider a gradual transition from Hindi to English over the course of long-term training programs.
4. Invest in improving the quality of Hindi technical vocabulary to reduce reliance on English terms in specialized fields.

6.2 Limitations and Future Research

This study was limited to Madhya Pradesh and may not be generalizable to other states with different linguistic profiles. Future research should:

1. Extend the study to other states and languages in India.
2. Conduct longitudinal studies to assess long-term career impacts of language choice in training.
3. Investigate the effectiveness of truly bilingual training programs that systematically integrate both languages.

By optimizing language choice in professional training, we can enhance learning outcomes, improve job performance, and better prepare India's workforce for both local and global challenges.

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