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Role Of L-1 In Enhancing Cognitive Facilities: A Perception Of Technical Students

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Abstract

Technical education is the key role player for development of any nation, aims is to enable the person for world of work and fit for it. Language plays crucial role for work culture as well for human relations. Mother tongue is the basic input to shape our emotions and thoughts. This study is to find out students' perception and significance difference towards learning technical education in mother tongue with regard to gender, place and potential occupation. The study sample is 200, 100 each from male and female. Study found these results, scores are not normally distributed by Shapiro-Wilk test U(199)=.001. p-is less than .05. In this study the researcher observed that there is significance difference between male and female engineering students' perceptions regarding learning technical education through the mother tongu. It is also found that there is no significance difference between rural and urban engineering students' perceptions. Further the it is found that there is no difference between employed and unemployed parents' perceptions.

Key Words: language-1 (L1), cognitive facilities, technical education, mother tongue, perception.

Introduction

Technical education plays a key role in the progress of any nation. It aims primarily at enabling men for work in the practical view of making them suitable for job to support the economic conditions of the country. Technical skills effect the innovations besides aiding in providing good settlement at the national and international level. The concept of Technical education in the mother tongue is not new since Rajasthan has provided an Engineering diploma in Hindi and Tamil Nadu in Tamil. It is a fact that before independence and until the 1950s, engineering was taught in Urdu. Learning in regional language enhances Creativity, positive attitude towards learning, skills, organizational skills, learning process, self-employment, entrepreneur skills, strengthen efficiency in using tools, to stand in global markets and also accelerate industrialization.

Language is one of the vital parts of any culture. Community is built on how people communicate with one another and build relationships. The mother tongue is the language that provides a clear shape to our feelings and ideas. Learning through mother tongue is also crucial in improvising other skills as critical thinking besides literacy skills. Self-esteem is higher in students who learn in their mother tongue.

The urbanization and modernization of India will put multiple policy-making challenges on the manufacturing and service sectors of the economy. The shift from predominantly agrarian to industrialized and urbanized India has to handle the growing needs of civil society through expansion of manufacturing and service sector expansion. Despite Indian technical higher education being one of the best in the world, the country has not emerged as the manufacturing hub of the world like China. Multiple causes can be attributed to the failure. However, the neglect of extending technical education in the mother tongues of our multi-lingual society is one of the main factors which need to be taken up for course corrections.

RATIONALE OF THE STUDY

Recently, the Union Education Minister has set up a task force for preparing a roadmap on imparting technical education in students' mother tongues**.** The recently announced National Education Policy 2020 promotes education in regional languages, enabling teaching in a language that a student is comfortable in. If explained in regionally spoken language, the students can easily understand the concepts. In France, Germany, Russia and in China education is imparted in mother tongue only. They believe that it will help in social inclusiveness, improving literacy rates, reducing poverty, and international cooperation. Language can become a catalyst for inclusive development. Removing the existing linguistic barriers will help realize the goal of inclusive governance.

The Indian students have a keen sense of mind for technical education but are taken back because the curriculum is in the English language. If this mental block is removed, the country can emerge as the best production hub and compete globally with countries like China, Japan, and Tiger four-Hong Kong, Singapore, South Korea, and Taiwan. They have extended technical education to their younger generations.

It is a strange phenomenon that India has a large pool of unemployed in the world. However, we have an acute shortage of technically qualified labour force to cater to our society's industrial and support services. The large-scale urban migration's greater reliance on machines to cater to daily support services leads to great demand for a large pool of technically qualified labour force in the economy, whose range of services extend from shop floor workers, industrial labour, technicians, Engineers, and systems operators to handle the production systems and other provisions. To break the multifaceted jinx strategy, it needs to be adopted. Hence there is a great need to revamp

technical education to strengthen our nation. Therefore, this becomes imperative for us to ensure that technical education is imparted constructively, fulfilling the technical requirements of the country. A perception study of the academic community will give valuable input in charting the right course of action.

Objectives of the Study:

1. To find out students' perceptions towards learning technical education in their mother tongue.
2. To find the significant difference between students towards learning technical education in mother tongue with regard to gender, place, and parental occupation.

The hypothesis of the Study:

1. Male and female students would not differ significantly in their perception on learning technical education in mother tongue.
2. Rural and urban students would not differ significantly **in their perception on** learning technical education in their mother tongue.
3. There would be no significant difference between students with employed and other than employed parents with regard to their perception on learning technical education in mother tongue**.**

Methodology:

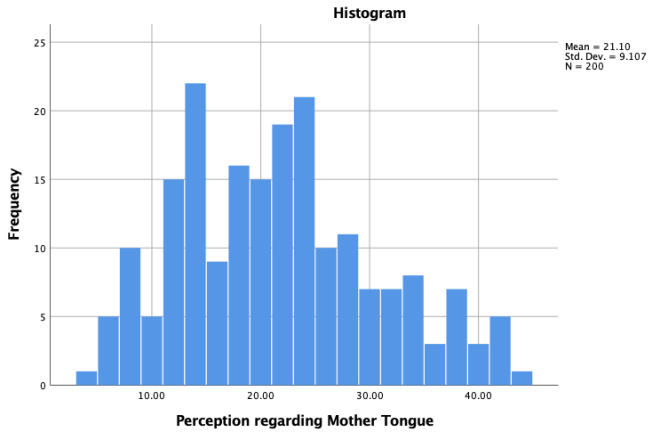
The investigator used descriptive survey method to collect the relevant information for the research. The present study covered 200 college students (100 male and 100 female) selected through stratified random sampling technique from Engineering Colleges of Guntur District of Andhra Pradesh. For the data collection, the investigator used the self-constructed perception scale to measure the perceptions of teachers and students towards teaching – learning in technical education in their mother tongue. Results and Interpretation the data was analyzed by using statistical technique Mann-Whitney U test.

Findings of the study:

Table 1

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Perception regarding Mother Tongue	.072	200	.013	.974	200	.001
a. Lilliefors Significance Correction						

Figure 1



The normality of data for students' achievements with mother tongue (L1) and second language (L2) as an instructional medium was assessed using the Shapiro-Wilk test. As presented in table-1, the Shapiro-Wilk test $U_{(199)}$=.001 shows that the scores are not normally distributed; the p-value is less than .05; therefore, the researcher failed to reject the null hypothesis for normality.

Gender Perception:

The Mann-Whitney U test is used to analyze two samples that are likely to be originated from the same underlying population; therefore, in this research, the Man Whitney U test is used to analyze data.

Table –Perception of students regarding learning Technical Education Mother Tongue

Table 2

Ranks				
	Gender - Male and Female	N	Mean Rank	Sum of Ranks
Perception regarding Mother Tongue	Male	100	91.97	9196.50
	Female	100	109.04	10903.50
	Total	200		

Table 3

Test Statistics[a]	
	Perception regarding Mother Tongue

Mann-Whitney U	4146.500
Wilcoxon W	9196.500
Z	-2.087
Asymp. Sig. (2-tailed)	.037
a. Grouping Variable: Gender - Male and Female	

The sample size is 200; therefore, the asymptotic significance level (2-tailed) = .05 is used for the hypothesis testing. The significance value (2-tailed) is .037; therefore, the null hypothesis that male and female students would not differ significantly in their perception on learning technical education in mother tongue is rejected. Thus, the data analysis shows a significant difference between male and female engineering students' perceptions regarding learning technical education through the mother tongue.

The analysis of the Mann-Whitney U-Test shows that the difference between the perceptions of male and female engineering students with regard to the technical learning education through mother tongue was statistically significant, $U_{(199)}$=4146.500, p=.037 (refer table 2).
The perceptions of female (M=109.04) are higher than the male (M=109.04) engineering students with regard to learning technical education through the mother tongue. According to the Cohens classification effect, the effect size is .147, which is a small effect (refer table 3).

Area Perception

Table 4

Ranks				
	Area - Rural and Urban Area	N	Mean Rank	Sum of Ranks
Perception regarding Mother Tongue	Rural	115	98.93	11377.50
	Urban	85	102.62	8722.50
	Total	200		

Table 5

Test Statistics[a]	
	Perception regarding Mother Tongue
Mann-Whitney U	4707.500
Wilcoxon W	11377.500
Z	-.445
Asymp. Sig. (2-tailed)	.656

a. Grouping Variable: Area - Rural and Urban Area

The sample size is 200; therefore, the asymptotic significance level (2-tailed) = .05is used for the hypothesis testing. The significance value (2-tailed) is .656; therefore, the null hypothesis that rural and urban students would not differ significantly in their perception on learning technical education in their mother tongue is accepted. Thus, the data analysis shows no significant difference between rural and urban engineering students' perceptions regarding learning technical education through the mother tongue.

The analysis of the Mann-Whitney U-Test shows that the difference between the perceptions of rural and urban engineering students with regard to the learning of technical education through mother tongue was not statistically significant, $U_{(199)}$=4707.500, p=.656(refer table 4).
Urban (M=102.62) perceptions are the same as the Rural (M=98.93) engineering students with regard to learning technical education through the mother tongue. According to the Cohens classification effect, the effect size is .03, which is a small effect (refer table 5).

Table 6

Ranks				
	Occupation - Employed Others	N	Mean Rank	Sum of Ranks
Perception regarding Mother Tongue	Employed	90	92.38	8314.00
	Others Employed	110	107.15	11786.00
	Total	200		

Table 7

Test Statistics[a]	
	Perception regarding Mother Tongue
Mann-Whitney U	4219.000
Wilcoxon W	8314.000
Z	-1.797
Asymp. Sig. (2-tailed)	.072
a. Grouping Variable: Occupation - Employed Others	

The sample size is 200; therefore, the asymptotic significance level (2-tailed) = .05 is used for the hypothesis testing. The significance value (2-tailed) is .072; therefore, the null hypothesis 'There would be no significant difference between students with employed and other than employed parents with regard to their perception on learning technical education in mother tongue' is

accepted. Thus the data analysis shows no significant difference between the perceptions of employed parents and other than employed parents of engineering students with regard to the learning technical education through the mother tongue.

The analysis of the Mann-Whitney U-Test shows that the difference between the perceptions of employed parents and other than employed parents of engineering students with regard to the learning technical education through mother tongue was not statistically significant, $U_{(199)}$=4219.000, p=.072(refer table 6).

Urban (M=107.15) perceptions are the same as the Rural (M=92.38) engineering students with regard to learning technical education through the mother tongue. According to the Cohens classification effect, the effect size is .127, which is a small effect (refer table 7).

Conclusions

Country can see no progress unless it promotes technical knowledge. The above findings lead to the conclusion that the perceptions of engineering students on learning in Mother tongue is not normally distributed. Hence the overall perception of students differed. It is also to be noted that students differed in their perception on learning in Mother tongue with respect to their gender but not with respect to place of residence and parents' employment. Hence the present day technical education should be in comfortable language to be effective.

LIMITATIONS OF THE STUDY

● More than one district in each category of engineering students should have been taken for the study.
● The sample size is smaller in each of the subgroups that only 200 students from only 10 engineering institutions were selected for the study
● Instead of purposive sampling, other methods of randomization should have been adopted.

REFERENCES

1. Ausubel, D. (1963). The Psychology of Meaningful Verbal Learning. New York: Grune & Stratton.
2. Butzkamm, W. (2003). We only learn language once. The role of the mother tongue in FL classrooms: Death of a dogma. Language Learning Journal, Winter 2003, No 28, 29- 39 .
3. Bruner, J. S. (1978). The role of dialogue in language acquisition. In A. Sinclair, R., J. Jarvelle, and W. J.M. Levelt (eds.) The Child's Concept of Language. New York: Springer-Verlag.
4. PIAGET, JEAN. (1971). Biology and Knowledge. Chicago: University of Chicago Press.
5. VYGOTSKY, LEV S. 1987. Collected Works of L. S. Vygotsky, Vol. 1: Problems of General Psychology, trans. Norris Minick. New York: Plenum.

6.Wagner, Daniel A.; Daswani, C. J.; and Karnati, Romilla,(2010) "Technology and Mother-Tongue Literacy in Southern India: Impact Studies among Young Children and Out-of-School Youth". Journal Articles (Literacy.org). 5. https://repository.upenn.edu/literacyorg_articles/5