

## **Effect of Medium of Instruction on Students’ Self-efficacy towards Learning**

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### **Abstract**

For the transmission of knowledge and skill, Language is an indispensable component. Language is a key for transmission of knowledge and a source of communication. The purpose of this study was to investigate the effect of medium of instruction Urdu (L1) and English (L2) on students’ self-efficacy, towards learning at secondary level. One thousand five hundred and sixteen (N= 1615) 10<sup>th</sup> grade students were randomly selected from 24 schools of both gender and locale on equal basis from those secondary schools where both medium of instructions are opted at secondary level. Self-efficacy scale was used as a research instrument. t-test was applied to analyze the data. The analyses revealed that medium of instruction have significant effect on students’ self-efficacy toward learning. Students learning through indigenous language show high self-efficacy as compared to second language learner at secondary level. On the basis of study the researcher recommended that Urdu the national language should be adapted as medium of instruction up to, at least, secondary level. The researchers also recommended that English may be used in specific schools by arranging talent sections to meet the global needs.

**Key words:** Medium of instruction, first language L1, Second language L2, Students’ self-efficacy.

### **Introduction**

Medium of instruction means the language used by teacher in the classroom to impart knowledge (Ahmed, Zarif, & Tehseen, 2013). It is a key for transmission of knowledge. According to Mlay, (2010) it can be communicated effectively with language, gesture, and pitch of voice. Medium of instruction affect the students, attributes such as self-efficacy toward learning. Medium of instruction has been a debatable issue in Pakistan as the country has different regional languages. Along with Urdu and English (Official Languages), other dominant languages in Pakistan are Punjabi, Sindhi, Pushto, Siraiki, Hindko and Blouchi. Diversity of languages and cultural differences inflame the unsettled issue of medium of instruction in Pakistan. Besides Urdu, being the national language, there are some other languages that are being used as

the medium of instruction at different level of schooling in Pakistan (Rahman, 1997). In Educational Conference (1947) and National Educational Policy (1959), it was recommended that provincial languages will be the medium of instruction at primary level and Urdu will be medium of instruction from elementary to secondary level. While higher education will be given in English. In National Education Policy (1979), it was suggested that all English medium schools established by Government will use Urdu or recommended language by the Provincial Assembly as medium of instruction and gradually Urdu will be used as a medium of instruction in higher education (Farakh & Choudhry, 2013). In the education policy (1992), similar recommendation were given, and declared that Urdu would be the medium of instruction at elementary level (Shakoor, Azeem, Dogar & Khaton, 2011). In

National Educational Policy (2009), it has been recommended that English will be compulsory subject from grade 1-14. Ahmed, Zarif, & Tehseen, (2013) reported that majority (78%) of the schools using Urdu as medium of instruction. There are two official languages in Pakistan, Urdu & English. Urdu is more understandable and easier as compare to English for the students. Ahmed (2011) reported in his study that from primary level mother tongue should be Medium of instruction and Urdu should be introduced at grade 4-5 and should continue up to grade 6-12. While at higher secondary level English should be medium of instruction. In short, it is concluded that medium of instruction should be comprehensible for teachers as well as for students so that both can attain satisfaction from teaching learning process. This is endorsed by the study of Parveen, Gopang and Shaikh (2008) which reflected that students should be instructed only in the medium of instruction that is familiar to them. For effective learning and academic excellence a native language must be used as a medium of instruction.

### **Review of Related Literature**

Educationists, scholars and thinkers have different views on medium of instruction. Most of the experts favour mother tongue (L1) as a medium of instruction. According to Imam Ibn-e-Khaldoon student can well comprehend the content only when mother tongue is used as medium of communication. The students who are not taught by mother tongue, their creative abilities do not develop. As Mandela said, if you speak to a man in a language he understands, you speak to his head, if you speak to a man in his own language, you speak to his heart (Ahmed, 2011). Some educationists are against to adopt mother tongue as a medium of instruction. According to their views, mother tongue will create biasness among province and weakened the national integrity. In the opinion of Kiranmayi and Celta (2010), without one common medium of instruction,

it will produce regional and state biasness. There are some thinkers who proposed third option. They say that there should be a national language or common language as medium of instruction that may be combination of all regional / mother / provincial languages (Moyo, 2002).

For those students who desire to learn other modern or science subjects, English may be compulsory, but continuation of English as a medium of instruction for all students might be a wrong decision. The study of Pinnock (2009), revealed that in Pakistan 91.62% student's use their L1's at home where as the medium of instruction at schools is Urdu or English. This contradiction results in poor education in Pakistan. It is an admitted fact that devoid of adopting national language as a medium of instruction, a nation will stay behind (Khan, 2006). In his opinion, students of our institutions have become habitual of rotting the content because of foreign medium of instruction. Learning through second language hinders the mental creativity of the students. Medium of instruction is yet an unresolved issue in Pakistan. Thus, the researchers aimed to find the effect of medium of instruction on students' motivation toward learning at secondary level.

### **Statement of the Problem**

Medium of instruction has been a debatable issue and an unresolved issue in Pakistan because of dominance of other local or regional languages in different areas. The effect of medium of instruction on learner's motivation has been internationally investigated by several researchers. Hence the objective of the present study was to explore the effect of medium of instruction on self-efficacy of secondary school students' in Pakistan.

### **Objectives of the Research**

The objectives of the study were:

1. To search the level of self-efficacy of

- secondary level students.
2. To study the effect of medium of instruction on students' self-efficacy towards learning at secondary level.
3. To compare the self-efficacy level of students taught through English, and Urdu as medium of Instruction.

### Research Questions of the Study

The research questions of the study were:

1. What is the level of self-efficacy of secondary school students?
2. Do male and female students' differ in their self-efficacy?
3. Do urban and rural area students differ in their self-efficacy?
4. What is the effect of medium of instruction on students' self-efficacy?
5. What is the effect of medium of instruction on male students' self-efficacy?
6. What is the effect of medium of instruction on female students' self-efficacy?
7. What is the effect of medium of instruction on urban area students' self-efficacy?
8. What is the effect of medium of

instruction on rural area students' self-efficacy?

### Research Design

It was a causal comparative study conducted through survey based on quantitative method.

### Population

The population of the study was 10<sup>th</sup> grade students of such public sector secondary schools of both gender and locale of Punjab province wherein both medium of instructions English and Urdu were opted at secondary level.

### Sample of the Study

The target population for the study was comprised of 10<sup>th</sup> class students of such public sector 24 secondary schools of both gender and locale in Sahiwal division wherein both mediums of instruction i.e. English, and Urdu were opted at secondary level. The true picture of the sample is depicted in tables 1 and 2.

Table 1

*District wise breakdown of Sample participating in the study*

Sr. No.	District	Male School	Female School	Total School	Male Students	Female Students	Total Students
1	Sahiwal	4	4	8	265	272	537
2	Okara	4	4	8	270	278	548
3	Pakpattan	4	4	8	260	270	530
4	Total	12	12	24	795	820	1615

The above table shows that 24 male and female schools were selected from three districts of Sahiwal Division eight schools from each district including 4 boys and 4 girls' secondary. As a whole, sample of 1615 students (from 12 male and 12 female schools of both gender and locale) were selected from district Okara, Sahiwal and Pakpattan. There were 795 male and 820 female respondents showing a total of 1615. As per the requirement of the study, gender and locale base participation of the

respondent was ensured from three selected districts.

### The Research Instrument

This instrument was used by Cheema (2013) for his doctoral study. Cronbach Alpha (reliability) of the instrument was 0.82 (with 31 statements). All of statements in the questionnaires were assessed on five point Likert scale because this type of

questionnaire is very useful instrument to gather data for quantitative studies.

### Data Collection

The sample was selected from three district of the Punjab; Sahiwal, Okara and Pakpattan. A questionnaire in Urdu and

English (version) was used to collect data from selected schools. The researchers personally visited the three selected districts for data collection. In boys' secondary schools, the researcher personally visited and met the teachers and students. But in girls' secondary schools, due to some reservation to visit the school, data was collected with the help of teachers of the concerned schools. The students were given instructions about the questionnaire, and it

was clarified that this data collection would not put any effect on the school, and students' results or ranking. Every participant was asked to write his/ her name with school and district name that were kept anonymous. The researcher collected the filled questionnaires in the classroom with the help of class teacher.

### Results

Data were analyzed by using SPSS-16 software. Category wise results have been presented in the forms of tables. The researchers calculated mean scores (M), standard deviation (SD) of respondents by applying t-test on self-efficacy scale towards learning scale.

Table 2

*Mean and SD of Self-efficacy of the entire sample*

Variable	N	Mean	SD
Self-efficacy	1615	108.51	12.676

The above table 2 shows that the mean for the whole sample is (108.51) with standard deviation (12.676). Sample mean score (108.51) which is more than that of

scale mean score (93) which reflects that student's self-efficacy level is above average.

Table 3

*Comparison of male and female students' self-efficacy*

Gender	N	Mean	SD	Df	t	p-value
Male	795	108.28	12.37	1613	0.707	0.479
Female	820	108.73	12.97			

$p < 0.05$

Table 3 reflects that difference in mean scores was not significant at  $p < 0.05$  with t value (0.707) and  $df(1613)$ . Hence it can be stated that there is no difference between

male respondents (M=108.28, SD=12.37) and female (M=108.73, SD=12.97) self-efficacy.

Table 4

*Comparison of urban and rural students' self-efficacy*

Locality	N	Mean	SD	df	t-value	p	Effect size
Urban	681	109.25	11.475	1613	2.011	.044	0.003
Rural	934	107.96	13.464				

$p < 0.05$

The above table 4 reflects that difference in mean scores was significant at  $p < 0.05$  with  $t$ -value (1613) = 2.011. However, effect

size (0.003) is very small. It shows that 0.3 percent of the variance in students' self-efficacy is explained by locality.

Table 5

*Comparison of English and Urdu medium students' self-efficacy*

Medium	N	Mean	SD	df	T	P	Effect size
English	756	107.39	13.53	1613	-3.32	.001	0.007
Urdu	859	109.49	11.80				

$p < 0.05$

Above table reflects that difference in mean scores was significant at  $p < 0.05$  with  $t$ -value (1613) = -3.32 along with effect size is 0.007. However, the effect size is very

small. This shows that only 0.7 percent of the variance in students' self-efficacy is explained by medium of instruction.

Table 6

*Comparison of English and Urdu medium male students' self-efficacy*

Medium	N	Mean	SD	df	t	Sig. p-value
English	348	108.22	13.243	793	-.117	0.907
Urdu	447	108.32	11.656			

$p < 0.05$

The above table 6 reveals that difference in mean score was not significant at  $p < 0.05$  with  $t$  value (-.117) and  $df(1438)$ . It reflects that Urdu medium male respondents

( $M=108.32$ ,  $SD=11.656$ ) have similar self-efficacy as English medium respondents ( $M=108.22$  &  $SD=13.24$ ).

Table 7

*Comparison of English and Urdu medium female student's self-efficacy*

Medium	N	Mean	SD	df	t	p	Effect size
English	408	106.69	13.75	818	-4.53	.000	0.024
Urdu	412	110.75	11.82				

$p < 0.05$

Table 7 shows that the difference in mean scores was significant at  $p < 0.05$  with  $t$ -value (818) = -4.53 along with effect size (0.024). However, the effect size (0.024) is moderate. This shows that only 2.4 percent of the variance in female students' self-efficacy is explained by medium of instruction. It reflects that Urdu medium female respondents ( $M=110.75$ ,  $SD=11.82$ ) have significantly higher self-efficacy as

compared to English medium female respondents ( $M=106.69$ ,  $SD=13.75$ ).

The table below reflects that difference in mean was not significant at  $p < 0.05$  with  $t$  value (.023) and  $df(679)$ . It is apparent that urban English medium students ( $M=109.26$ ,  $SD=11.792$ ) have similar self-efficacy as the urban Urdu medium students ( $M=109.24$ ,  $SD=11.117$ ).

Table 8  
*Comparison of English and Urdu medium urban students' self-efficacy*

Medium	N	Mean	SD	Df	t	p
English	365	109.26	11.792	679	0.023	0.982
Urdu	316	109.24	11.117			

$p < 0.05$

Table 9  
*Comparison of English and Urdu medium rural students' self-efficacy*

Medium	N	Mean	SD	df	T	p-value	Effect size
English	391	105.65	14.78	932	-4.50	.000	0.021
Urdu	543	109.63	12.17				

$p < 0.05$

Table 9 reflects that difference in means was significant at  $p < 0.05$  with t value (932)=-4.50 beside effect size 0.021. However, the effect size (0.021) is moderate. This shows that only 2.1 percent of the variance in rural students' self-efficacy is explained by medium of instruction. It shows that Urdu medium rural students (M=109.63 & SD=12.17) have higher score on self-efficacy scale as compared to the English medium rural students' (M=105.65, & SD=14.78).

## Results

The analysis of the study showed that medium of instruction imparts positive effect on students' self-efficacy. Gender wise comparison reflected a negligible difference between male and female students level of self-efficacy. Analysis (t-test and effect size) showed that due to small effect size (0.003) there was significant difference but very small in magnitude between urban and rural respondent's self-efficacy level.

The mean scores of English and Urdu respondents on self-efficacy scale were (107.39 & 109.49) with standard deviation 13.53 and 11.80 respectively. Although the difference in means was significant but the effect size is very small so it could be concluded that medium of instruction contributes only 0.7 percent on self-efficacy of students.

The analyses also showed that there was no significant difference between rural and urban respondents self-efficacy with mean score (107.96 & 109.25) with SD 13.46 and 11.48 respectively. Due to a negligible effect size (0.003) it can be concluded that there is significant difference but of small magnitude between rural and urban respondents' self-efficacy level showing only 0.3 percent contribution of medium of instruction in students' self-efficacy. Comparison of English and Urdu medium rural students' self-efficacy shows that Urdu medium rural students (M=109.63, SD=12.17) have higher score on Self-efficacy scale as compared to the English medium rural students' (M=105.65, SD=14.78).

Comparison of English and Urdu medium female student's self-efficacy shows that the difference in mean scores was significant with effect size 0.024. It reflects that Urdu medium female respondents have significantly higher self-efficacy as compared to English medium female respondents (M=106.69 SD=13.75). Overall female, rural and Urdu medium respondents showed higher level of self-efficacy as compared to male, urban and English medium student.

## Discussion

The cited literature has proved that medium of instruction impart significant effect on the self-efficacy of secondary

school students. Analyses showed that medium of instruction had a positive and strong effect on students' self-efficacy. The study in hand also revealed that students perform better in Urdu medium because Urdu language is similar to their regional languages. The study of Mills, Pajares and Harron (2007) showed different negating results of the above findings and exposed a considerable positive effect on students' self-efficacy as a result of medium of instruction. According to Bandura (1997) students having lower level of self-efficacy showed low aspiration that might result in unsatisfactory academic performance. The findings of Tripathi (2013) was also conformity to the above findings and it was concluded that English medium instructed student had higher level of self-efficacy.

This study also reflected that Urdu medium students had high self-efficacy as compared to English medium respondents of the entire sample. Analyses also reflected some interesting results. The study showed that medium of instruction imparted no effect on self-efficacy of male respondents,

while female respondents were highly influenced by the medium of instruction. It was in contradictory to the findings of Dickerson and Taylor, (2000) who had concluded that women tended to lack of confidence in decision making and were less likely to take on challenges while men were more likely to take on any task despite of their capability.

### **Recommendations**

The following recommendations are suggested on the basis of the findings:

Govt. of Pakistan could adapt national language Urdu as medium of instruction from primary to secondary level. English may be taught as a subject only from elementary to secondary. As the researchers recommend that meeting the global needs of computer, medicine, science and technology education could be arranged in particular schools using English as medium instruction.

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