

Effect of Medium of Instruction on Self-Efficacy: A Study of PMT/PET Course Aspirants

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Abstract

The study examined the effect of medium of instruction (Hindi and English) among PMT/PET course aspirants on Self efficacy. A total of 120 respondents were participated in this study. Furthermore, results revealed that the interaction effect was significant for self-efficacy. Overall, the results seem to be representing higher level of self-efficacy among engineering students than the medical students. In addition, results of medium of instructions clearly indicate higher level of self-efficacy among English instructed students as compared to Hindi medium students.

Key Words: Medium of Instruction, PMT/PET Course Aspirants and Self-Efficacy

Introduction

Self-efficacy is commonly defined as the belief or confidence in personal capabilities to achieve a goal or to be able to perform a particular activity. Students having higher self-efficacy are more likely to challenge themselves with difficult tasks and be intrinsically motivated. Self-efficacy refer to self-confidence of students which reflects how a student performs visa-avis his with their commitments. These students will put high degree of effort to complete their specific tasks. They never blame external factors for their failure and feel that the course obstructions are within their control.

Self-efficacious students also recover quickly from setbacks, overcome setbacks and achieve personal goals successfully. On the other hand, students having low self efficacy can't set their goals, can't be successful, are less likely to make a concerted, extended effort and may consider challenging tasks as threats. 'These students with low self-efficacy have low aspirations which may result in disappointing academic performance which becomes part of a self fulfilling feedback cycle.' (**Bandura et al., 1997; Margolis et al., 2006**)

However, having high level of self-efficacy doesn't mean that students believe that they will be successful; it only means that how far they have strong and full of confidence. Students believe that they have power and skills to do tasks well. They may believe that other factors will help in succeeding. In face of difficulties are likely to put in hard work and in the end achieve goals. It may be following ingredients demonstrate self-efficacy...

- The activities selected by students.
- The degree of efforts they put in to fulfil commitments.
- Persistence in the face of difficulties, and

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- The difficulty of the goals set.

The students with low self-efficacy do not have self confidence that they can achieve any goals with their abilities, nor they expect to do well in any condition. They don't believe that they may complete any task well, consequently they don't try.

Role of Self-Efficacy

Virtually all people who aspire to achieve, identify the goals and want to accomplish them. However, most people also realize that putting their plans into action for complete success is not quite so simple. **Bandura et al. (1997)** have found that behind of how goals, tasks and challenges are approached, is an individual's self-efficacy which plays a major role.

Stronger Sense of Self-Efficacy

- People with high self-efficacy have the ability to face the challenging problems as tasks to be mastered.
- In the task, they participate, and have deeper interest in the activities leading to accomplishment.
- They have a strong sense of commitment as regards interest and activities.
- They can recover quickly from setbacks and disappointments.

Weaker sense of Self-efficacy

- People with low self-efficacy, avoid to taking challenging tasks.
- They believe that difficult tasks and situations are beyond their capabilities.
- They only focus on personal failings and negative outcomes.
- They quickly lose confidence in their personal abilities.

Self-efficacy develops

The beliefs in one's self-efficacy begins to form in early childhood. We can observe a person's to see childhood when he selects a task and situation, and how he deals with a wide variety of experiences.

However, the growth of self-efficacy does not end with the time. Even in youth, self-efficacy continues to evolve as people acquire new skills, experiences and understanding.

There are many sources of self-efficacy but teachers can use the following four strategies to improve self-efficacy:

- The most effective way of developing a strong sense of efficacy is through mastery experiences, Bandura has explained that by performing tasks successfully, students gain experiences, which boost student's self-efficacy, while failures erode it. This is the most robust source of self-efficacy.
- Vicarious experiences, observing other people succeed at a task, is another important source of self-efficacy which can strengthen belief in one's own ability.
- Verbal persuasion, the people could be persuaded to believe that they have the skills and power to complete their tasks successfully. In students, teachers can boost self-efficacy with feedback to guide them.
- Psychological responses, there is an important role of moods, emotional states, physical reactions and stress level in increasing or decreasing the level of self-efficacy. Our own responses and emotional reactions impact the performance of a task. A certain level of emotional stimulation can create an energizing feeling that can contribute to completion tasks of successfully.

An anxiety mood can undermine the level of self-efficacy. Teachers can help students by reducing stressful situations and lowering anxiety surrounding events like burden of study, exam, or presentations.

Generally, it has been found that the basically of self-efficacy begins to show itself in students as they reach high school. Student's family background, medium of study, environment of classroom etc, too have impact on the level of self-efficacy. Their development, their achievements, their way of thinking etc has long term impact on children in high school, has been demonstrated (**Jencks et al. 1970**). Similarly, **Mercy et al. (2003)** found that the extent to which students have positive experiences and success in high school has important implications for their self-efficacy.

This study address the question: What is impact of medium of instructions and PMT/PET course aspirants on Self-Efficacy?

The main hypotheses formulated for the study were following: Hindi and English medium students coming from different course aspirants shall differ in the various aspects of Self-Efficacy.

Method

Sample

The sample of the present study consisted of 120 students who had passed class 12th, and are preparing for entrance exam pre training to medical and engineering degree. Respondents were students from the different institutes of Gorakhpur city. Their age was between 17-20 years. The subjects of the two groups (PMT/PET) were equally divided. Both groups were also divided on the basis of medium of instruction. **Table 1** presents the contribution of the groups.

Table 1 Sample

	Value Label	N
1	HINDI	60
MEDIUM 2	ENGLISH	60
COURSE 1	PMT	60
2	PET	60

Measures

General Self-Efficacy Scale developed by **Schwarzer, R., & Jerusalem, M. (1995)** having 10 items to assess a general sense of perceived Self-efficacy. Each item has to be rated on four alternative responses, namely; 'Not at all true', 'hardly true', 'moderately true' and 'exactly true'. Add up all responses to a sum score. The range is from 10 to 40 points.

Procedure

Rapport was established with the students and personal information was recorded using a personal data sheet. The data sheet has ten questions with 5 point rating scale. Respondents were briefed about the purpose of the study and were assured about the privacy of their responses. After taking their consent they were given the data sheet and instructions.

Result

The descriptive statistics for the scores obtained on the self-efficacy scale in the contexts of medium of instruction (Hindi and English) and PMT/PET course aspirants are shown in **Table 2**. A close perusal of the mean scores revealed that there appeared appreciable degree of variation in the responses. In order to examine the signification of differences between different groups, the raw scores were subjected to separate 2X2 factorial between group ANOVAs. **Table 3**

Table 2: Mean Scores on the measure of self-efficacy reported by medium of instruction and courses

MEDIUM COURSES		Mean	Std. Deviation	N
HINDI	PMT	29.67	3.736	30
	PET	30.60	3.663	30
	Total	30.13	3.698	60
ENGLISH	PMT	32.07	4.127	30
	PET	29.57	4.240	30
	Total	30.82	4.335	60
Total	PMT	30.87	4.086	60
	PET	30.08	3.963	60

The main effect of medium was not significant on self efficacy, $F(1,116) = .90, P > 0.05$. **Table 2** indicates that the mean scores of Hindi medium students ($M=30.13$) and students of English medium ($M=30.82$) was equally response on Self-efficacy.

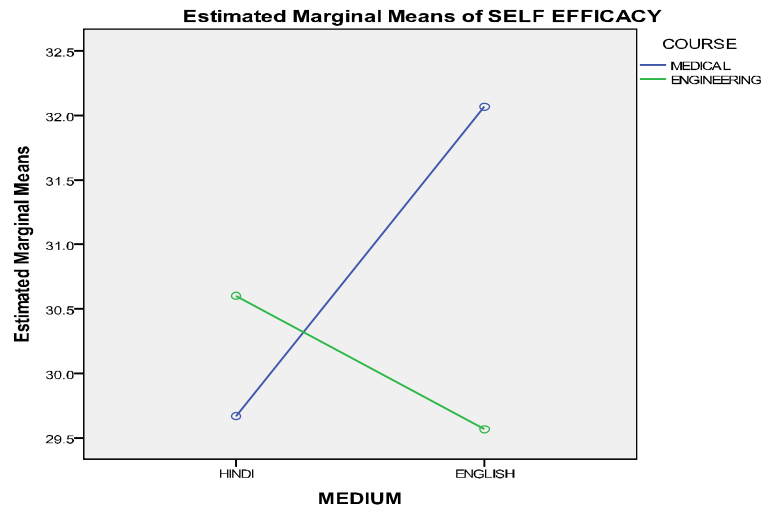
Table 3: Summaries of 2 X 2 factorial ANOVAs performed on the Self-efficacy

Source	Sum of Squares	df	Mean Square	F
medium	14.008	1	14.008	.898
course	18.408	1	18.408	1.180
medium *	88.408	1	88.408	5.669**
Error	1809.100	116	15.596	

Note: **p<.01

Similarly, the main effect of courses was not significant for self-efficacy, $F(1,116) = 1.180, P > 0.05$. As can be seen the means for medical students ($M=30.87$) and engineering students ($M=30.08$) were almost equal.

However, the interaction effect (medium and courses) was statistically significant $F(1,116) = 5.67, P > 0.01$. The graphical representation also represents higher level of self-efficacy in the Hindi medium engineering students ($M=30.60$) than the medical students ($M=29.67$). The **graph no. 1** clearly shows that the higher level of self-efficacy in English instructed medical students ($M=32.07$) as compared to engineering students ($M=29.57$) counterparts.



Graph No. 1: Mean scores on the self-efficacy as a function of the interaction effect of medium x courses

Discussion

This study indicates that the level of self-efficacy is different in the two different groups of the same age. We found that the level of self-efficacy is better in English instructed students than Hindi instructed students. They have a belief in achieving their goals successfully. They have less doubt about their aim. They can recover quickly from their setbacks. They take challenges with confidence and complete takes successfully. Even the medical's students appear to avoid taking any risk in completing their tasks.

We can also see the effect of medium of instruction on level of self-efficacy. Two different types of medium have different levels of self-efficacy. As we know **Jencks et al. (1970)** have reported that students' development, their achievement, and their way of thinking etc in starts in the 12th class and has long term impact on their performance in years to come. It is particularly interesting to note that teaching strategies used in the classroom do make a difference in student's self-efficacy. (**Schwarzer & Hallum, 2008**).

The study shows that the type of learning environment and the way of teaching can improve self-efficacy in classroom (**Bandura, et. al., 1994**). A similar result has been reported by **Luszczynska, et. al., (2010)** as we see the way of instruction plays a major role in the performance of students.

In other studies it has been shown that in young adults, high level of self-efficacy is associated with better academic performance and positive health-related behaviours (**Steptoe & Wardle, 2001; Phillips & Gully 1997**).

Bandura has also pointed out that the type of learning environment and teaching method can improve self-efficacy in the classroom. Bandura concludes that cooperative learning strategies have the dual outcome of improving both self-efficacy and academic achievement. 'Cooperative learning structures in which students work together and help one other also tend to promote more positive self-evaluations of capability and higher academic attainments than do individualistic or competitive ones.

We can suggest that some pedagogic strategies can foster self-efficacy. We can establish specific, short term goals that challenge the students.

We can also help them to lay out a specific learning strategy and verbalize their plans, ask students to complete their task, and ask them to note their progress and verbalize the next steps (**Schunk and Pajares 2002**).

Self-efficacy will be boosted, if students have a competitive environment surrounding them. Watching peer models may lead to success they may learn from the groups as defined by classmates, gender, ethnicity, social circles, interests, achievement, clothing, age etc.

Student's interest plays a major role in improving his level of self-efficacy. We should try to tie the course material to student interests such as sports, technology, literature, etc. Making own choices is other important factor which has an important role in improving the power of self-efficacy. We should set up some areas of course that allow students to make their own decisions. By giving them frequent, focused feedback, self-efficacy get high place in their personality.

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