



## Conceptual Foundations of Emerging and Mobile Technologies, ICT-Enabled Training, and Traditional Methods for Examinations in the Indian Civil Service

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### **Abstract**

Aiming to comprehend the importance of training civil servants, a feature that has become an integral part of modern personnel management, the author attempts to make a reference to the topic of civil servant training in developing countries as an integral part of the training process. There is no doubt that all governments realize that effective and appropriate training needs to be provided to their civil servants as a matter of maintaining an efficient and contemporary administration as stated in the paper. During the past few years, government functions have grown and expanded rapidly, while the administration itself has become more complex, specialized, and technological in nature. Merit-based recruitment policies and programs in the civil service are aimed at selecting the most qualified and competent candidates for employment in the civil service. In light of the fact that most of the selected candidates possess a degree or diploma, there is no doubt that they are highly qualified and highly educated. In spite of this, an MBA or a university degree does not necessarily qualify them as the best administrators when it comes to their respective fields. The purpose of this study is to examine the relationship between the traditional lecture method and the modern technological method of training for civil service exams. It is also to determine the degree to which these two methods are interrelated. It is pertinent to note that both classes were taught by the same trainer, who ensured that the requirements for both classes were the same. Due to the use of technology in two of the classes, they both provided significant rigor to the training process. Furthermore, both provided participants with valuable information. According to the results of this study, there is a positive correlation between traditional lecture methods and modern technology-based training methods for civil service examinations. Based on the results of the study, this conclusion can be drawn.

**Keywords:** *Conceptual Foundations of Emerging and Mobile Technologies; Civil Services Training; ICT-Enabled Training; Technology and Training*

## ***Introduction***

Even though civil servants are normally well educated before they enter the civil service, the process of education continues after they join the civil service through the process of training that takes place after they join. Knowledge sharing and distribution have greatly benefited from information and communication technology initiatives (Tiwari 2008). The best way to ensure the success of your career in the civil service is to receive training both before you enter the civil service and after you have entered the civil service. In addition to this, you should also bear in mind that training is also a lifelong process, just as education is also a lifelong process. As a result of the dawn of the Fourth Industrial Revolution, also known by the term Industry 4.0 or the "McLuhan stage," the Asian economy has regained its economic strength, affecting training and development (Tiwari 2022). Training differs in that it has a narrow and specific objective, whereas education has a broader and broader objective, as opposed to training, which has a narrow and specific objective.

The political and social conditions of modern times have undergone a lot of changes as a result of many factors. Modernization has resulted in the modern state becoming a welfare state as a result of its modernization. Because of the growth of government, there has been a tremendous increase in the functions of government as a result of the growth of government. Developing policies and programs that can advance the well-being of the people, plan for the socio-economic development of the country, and implement those policies and programs efficiently is the responsibility of all governments in order to promote the welfare of the people, plan for the socio-economic development of the country. As a result of new technologies emerging in the future, many factors will be influencing how knowledge will be shared as a result of the way in which it is created (Tiwari 2022). Over the past few decades, the lives of the people have undergone a tremendous amount of change due to the rapid advancements in science and technology. Governments that are democratic are usually the first step towards establishing democracy in a country. As a result of all of these changes, administration has become one of the most complicated projects in the world today. There is a great deal of skill and expertise required for a successful operation. This is an example of a modern administrator. This is why it has become increasingly apparent throughout the world that civil servants need to be trained in a planned and purposeful manner. As a result, all countries are now placing a greater emphasis on civil service training than in the past. It is also important to mention that every country has its own specialized training institutions.

## **Integrating Emerging Technologies with Traditional Examination Procedures**

In addition to the old legacy British system of training civil servants, the Indian system of training civil servants has had a great deal of impact on the old legacy British system of training civil servants as well. An undergraduate degree is something that is much more valuable than a high school diploma at the end of the day when it comes to higher levels of education. Many people are of the belief that the best way to recruit young people who are not trained or educated in the field of public administration is to catch them while they are still young so that they can be trained on how to do so while they are still young. This is a rare situation in which you come across people who have graduated from a university with a university degree in the majority of the cases in which you meet these people. As a prelude to giving them any new responsibilities within the administration, it is imperative that they undergo thorough training in the skills, techniques, and ethos of administration within the context of modern democratic administrations and the ethos that is expected of them before they are given any new responsibilities.

As we have seen, the sharing of knowledge can take a variety of forms, including between and within cultures, and within the framework of social organizations, where there are many ways in which the sharing of knowledge can take place. From the local level to the global level, from the poor to the wealthy, there is the possibility for knowledge development and exchange to take place on any level, from

the local to the global. No matter where one is situated in the world, there is the possibility of knowledge being developed and exchanged anywhere from the local level to the global level. In modern society, knowledge, as well as the exchange of knowledge, has become an integral part of the way we live our lives, whether we are thinking about a good government, an engaged citizenry that contributes to the growth of the economy, or any other topic. As a matter of fact, this is inevitable truth: throughout the coming years, society will develop and exchange knowledge unrestrainedly, unstoppably, and unrelentingly, resulting in the arrival of a knowledge-based society capable of coping with the changes in development. It should be noted that knowledge development and exchange are part of the reform process that is designed to ensure that the marginal and underprivileged groups are also included as part of the reform process. Due to the advent of emerging technologies, social media has become one of the best forms of knowledge development and knowledge exchange as a result of emerging technologies. It is evident that the advent of technology has made it possible for knowledge to be developed. By introducing new technologies, we have been able to create new ways to disseminate and retrieve knowledge in an efficient manner, as well as new methods of instant knowledge creation and exchange, leading to a wide variety of new commercial opportunities spawned by knowledge management and ways of doing business, as well as new methods of instant knowledge development and exchange.

## ***Methodology***

The study involved 240 aspirants to the civil service exam. As part of this research paper, an understanding of the importance of effective communication in training methodologies is developed through the use of both modalities. It was found that 120 aspirants for the civil service exam were exposed to a traditional lecture method and 120 were exposed to a modern technology-based app. In this case, modern technology was utilized in the training process. This was an examination in which modern technology was used in order to train candidates.

There was a similar instructor in both courses, the same course content and materials were discussed, the same assignments were assigned and the same amount of time was allotted for completing each assignment. The class test was given to all of the students at the same time. In order to evaluate a student's preparation for the civil service exam, a class test was designed to test their learning outcomes. There was a requirement for each aspirant to complete a specific method of training in the classes in order to qualify for the Civil Service exam. The aspirants to the Civil Service Exam were able to complete the given class test after they had completed their respective training through traditional lecture methods as well as the use of modern technology. In the course of the civil services exam, students from both classes were required to take part in class discussions in which the class using the traditional lecture method participated orally, while the class using the modern technology method participated via the internet.

Using technology as a teaching method, there has been an abundance of study material that has been created online for the class that was taught using a modern method of teaching. There was no requirement for all those aspirants who were going to sit for the civil service examination at that time to be online during this part of the process. Aspirants to the civil service examinations were not required to meet together as a class with the instructor in order to prepare for the civil service examinations. It took a week for each aspirant to submit their assignments so that they could prepare for the exam. In the traditional lecture-based classes, it was expected that those who attended the lectures were going to be physically present at the lectures and should submit their assignments before they left them. With the use of modern technology, the trainers provided the class with lecture notes that were made available to them in the form of audio links and written notes that could be accessed via the internet where they were able to connect to the class. To make the class more accessible, we have decided to use audio links and written notes. As part of the traditional lecture method, PowerPoint presentations were used in conjunction with

notes as a way to convey information. There were also audio links in the course content that enabled aspirants for civil service exams to hear recordings of lectures that had been given by the trainer, in addition to video links, text links, and PowerPoint slideshow presentations that were used throughout the course by the trainer.

To obtain feedback from respondents, we developed a questionnaire with a five-point Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree). The purpose of the questionnaire was for respondents to rate their level of agreement with the statement based on this scale. In order to determine the validity of the measuring questions, Cronbach's Alpha was calculated, and the calculation of SPSS for Reliability Statistics showed that the Cronbach's Alpha value for the "Number" of items (21 questions on Traditional Lecture Method and Modern Technology Training Method) is '.719'. This indicates that the data are reliable and suitable to be analyzed further. This is greater than a value of '.6'.

**RELIABILITY TEST: Cronbach's Alpha**

**Measure of Internal Consistency**

Cronbach's alpha tests to see if **multiple-question Likert scale** surveys are reliable. It will tell you if the test you have designed is accurately measuring the variable of interest.

Cronbach's Alpha		INTERPRETATION	
$\alpha = \frac{K}{K-1} \left[ 1 - \frac{\sum s_y^2}{s_x^2} \right]$		Interpreting ALPHA for dichotomous or Likert scale question.	
		CRONBACH'S $\alpha$	INTERNAL CONSISTENCY
Where		0.90 and above	Excellent
$K$	is the number of test item	0.80 - 0.89	Good
$\sum s_y^2$	is sum of the item variance	0.70 - 0.79	Acceptable
$s_x^2$	is the variance of total score	0.60 - 0.69	Questionable
		0.50 - 0.59	Poor
		below 0.50	Unacceptable

<https://www.statisticshowto.com/cronbachs-alpha-spss/>

**Table - Reliability Statistics**

Cronbach's Alpha	N of Items
.719	21

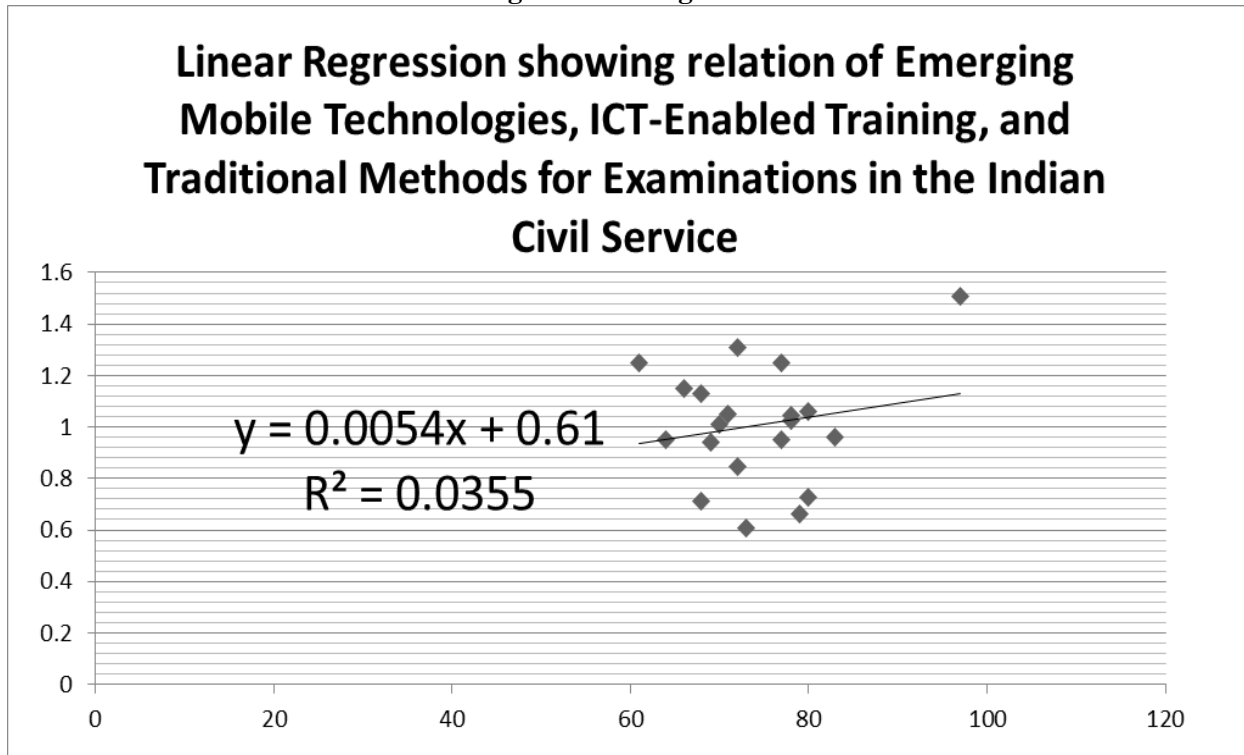
**Data Collection**

**1. Primary data:** The following primary data was collected from the samples selected through the use of a questionnaire consisting of 21 questions regarding traditional lecture methods and modern technologies in training methods. In order to gather data for this study, a sample of 40 civil service exam

aspirants was selected from various coaching centers that prepare students for different civil service exams.

**2. Linear Regression:** To further prove or disprove the relationship between traditional lecture method and modern technology training for civil service examinations where the former has been considered an Independent Variable and the latter as a Dependent Variable, a simple linear method, a statistical method, has been implemented to establish the relationship. Establish the relationship between the two variables. The data received from the questionnaire designed as well as the analysis on Excel has helped in showing a general flow of the points based on the X axis and the Y axis, where  $(y = mx+c)$  indicates a positive trend, and the points are close together, which is indicative of a strong and positive correlation between traditional lecture method and modern technology training for civil service exams, as demonstrated by the regression line where they intercept is 0.005 and the m intercept is 0.61. The Slope where a slope is the measure of the steepness of a straight line (Change in y / change in x, for any two points on the line) & Regression Square is .035.

Fig – Linear Regression



### Results and Discussion

This study looked at the correlation between post-test scores and preferred learning styles of civil service candidates as well as the relationship between traditional lecture methods and modern technology training methods for civil service exams. In both classes, we calculated T-statistics, mean values, and standard deviations based on the data. There was no significant difference in the post test scores of the aspirants for civil service exams between the two groups at the .05 alpha level between the two groups.



See Table 1 for the results

	<b>Treditional method of Lecture</b>		<b>Modern Technology method training</b>		<b>P value of 2 samples assuming unequal variables</b>
<b>Variables</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Mean</b>	<b>Std. Dev.</b>	
Post-test	73.45	3.575	76.6	3.439	0.021

### **T - values and P – value**

Is there a size that is considered to be large enough? With every t value, there is a corresponding p - value that goes along with it. A p-value is a probability that the results from a sample of data could have occurred as a result of chance. It is possible to have values between 0% and 100% for P. These values are usually expressed as decimal numbers. In this case, a p value of 5% is equal to zero. As a result, it is good to have a low p - value in order to indicate that the data did not just happen by chance. In other words, if a p value is .01, this means that 1% of the time there is a chance that the results of the experiment were the result of chance. In most cases, a p-value of 0.05 (5%) is accepted as a valid indicator of the validity of a set of data. To put it another way: If  $p < 0.05$ , reject  $H_0$  and accept  $H_1$  based on Levene's test results, which means that there is no significant difference between variables. Therefore, we can assume that they are related in some way. Accept  $H_0$  if  $P > 0.05$  and reject  $H_1$  if  $P > 0.05$ . In this case, the variables are significantly different from one another. It is therefore impossible to assume that the findings have anything to do with one another. With regard to the results of the class test conducted between the two classes, the results of the t-test showed that there were significant differences between the two classes. For aspirants of civil service exams who attended the traditional lecture method rather than the modern technology-based training, the mean score was 76.6, while for students who were trained using modern technology, the mean score was 73.4.

Taking into account that the variables were unequal, there was no significant difference between the two groups as measured by the P value for two samples when considering the unequal variables. Two samples were analyzed for the P value, which was lower than 0.05 for two samples. Given Considering that both groups are interested in having a well-organized course, meaningful assignments, and a logical sequence of activities, it indicates that traditional lecture methods may be related to modern technology training methods for civil service exams, as they are both seeking well-organized course work, meaningful assignments, and logical sequences of activities. A good lecturer or trainer has the ability to work effectively with both traditional and modern technology that is used as part of the lecture or training session.

### **Conclusion**

A substantial portion of the personnel management process within the government has been carried out by the civil service over the past few years. Throughout history, the Government has become increasingly complicated, complex, and technical as a result of which administration has become a very complicated, complex, and technical activity. Due to the fact that the Government has become increasingly complicated, complex, and technical as a result of the growth of its functions, specialized knowledge and skills of the highest order have become crucial because the administration has become more complicated, complex, and technical as a result of the increase in government functions. It is therefore the author's opinion that a coherent training program for civil servants has become an essential

part of their job description in the last few years, as it has become an absolute necessity in the context of their day-to-day responsibilities.

For the purpose of determining whether modern technology training methods for preparing for civil service exams are as effective as traditional lecture methods for preparing for civil service exams, a study should be conducted. As one of the primary objectives of this study, we wanted to compare traditional lecture methods with the modern technology-based training methods used in the preparation of courses. In both classes, the same trainer provided the training, and ensured that the requirements for both classes were the same. The same trainer also ensured that the requirements were the same for both classes. It is important to emphasize that both of these classes included the use of technology and provided considerable rigor and value to the training process. There was a positive correlation between the traditional lecture method and the modern technology training method used for civil service exams in this study. On the other hand, the significant difference between the two groups of classes could be seen with regard to the results that were obtained after the class test had been conducted. As a result of the modern technology training method, students were able to perform better, and a probability score calculated based on the Levene's test results showed that the probability of the occurrence of results on the data was only 0.021 out of 100% for those students who were exposed to the modern technology training method. The results of this study do not at all provide an adequate basis for concluding that students who have been exposed to modern technology training methods for civil service examinations are superior to those who have been exposed to traditional lecture-based training methods. There may have been other factors contributing to these results as well. It was found that students who attended civil service exams with a modern technology training method preferred learning styles over students who attended classes with traditional methods. For the civil service exams, they preferred direct experience and least preferred authority, as well as the fact that modern technology training methods allowed them the freedom to work independently and so they preferred direct experience and least preferred authority.

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