

# Exploring the Association Between Design of Training and Trainer Demographics

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## ABSTRACT

Trainings are the basic component of job enrichment and effective trainings program can surely result in improved output at workplace. The present study is an attempt to highlight the design and development process of the training programs run by District Institute of Education and Training to improve the learning level of elementary level teachers in various districts of Uttarakhand. The respondents have been surveyed to express their views on five levels of ADDIE model. Further, an association has been explored between the demographics of trainers and design and development process of the training programs.

**Keywords:** Design of training, Instructional design, Observation, Discussion, Questionnaire

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## EDUCATION—AN INTRODUCTION

Education is provided by public as well as private institutions in India and it is the responsibility of central as well as state governments to provide the educational facilities to countrymen. Since independence, there were various commissions, policies, acts, rules and regulations have been formulated at both the school as well as higher education levels to improve the status of education. After independence it has been realized by the policy makers and as per Article 45 of the Indian Constitution—

*“The State shall endeavor to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years (MHRD, 2017).”<sup>1</sup>*

Articles 15, 16, 19, 28, 25, 29, 46, 146, 244, 330, and 335 of the Indian Constitution provide various constitutional provisions with reference to education and equity. In spite of these all constitutional and legislative provisions, the outcome is not as healthy as it must be. The child is the focus of our whole education system and teachers play a pivotal role in shaping the child's ideology. The quality of education depends largely on the quality of its teachers but this observation has not been expanded to the intention that quality teachers comes out from the institutions where high quality teacher educators exist. A significant contribution of teacher preparation in its development of teachers' aptitude to examine teaching from the learners' point of view brings diverse experiences and analogies to the classroom (Darling-Hammond, 2000). Although, there are serious drawbacks in teacher preparation programs either in-service or pre-service. Formal teacher education persists to have low 'ecological validity', and emphasizes tensions in the selection and technical expertise of district institute of education and training (DIET) staff, and in their attitudes towards basic teachers, that confine engagement with local contexts (Dyer *et al.*, 2004). According to Anurag Behar, CEO Azim Premji Foundation there are four methods to improve our education system that<sup>2</sup>—

1 [http://mhrd.gov.in/directive\\_principles\\_of\\_state\\_policy\\_article-45](http://mhrd.gov.in/directive_principles_of_state_policy_article-45)

2 <http://www.livemint.com/Opinion/fneTCbkEoKXbS1DzaZur8M/How-to-improve-education.html>

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- In order to perform better, the faculties must be paid better, which will then lead to improvement (Ballou & Podgursky, 1997).
- Governments should attempt and attract scholastic fraternity to become teachers. Coherent salary packages, high standard recruitment practices and conditions to support professional satisfaction are some key areas which should be kept in consideration.
- There is no alternate of a good teacher and the capacities of teachers must be developed to perform better via high quality teacher trainings.

The teachers who are more prepared for teaching are more confident and successful with students than those who have had little or none (Darling-Hammond, 2000). The research also indicates that the reforms in teacher training creating more tightly integrated programs with specialized coursework on teaching and learning construct teachers who are more effective as well as more likely to come into and stay in teaching profession. The policies implemented by states regarding teacher training and professional development may create a significant difference in the qualifications and capacities that teachers bring to their profession (Darling-Hammond, 2000). Policy recommendations comprise the development and upgrading of teacher training programs in India as well as other developing countries, along with thorough research into the demographic, structural, and cultural framework for each program and focusing on the advancement of teacher knowledge and aptitude in specific subject areas (Husen *et al.*, 1978).

## REVIEW OF LITERATURE

The analyze, design, develop, implement, and evaluate (ADDIE) Model has been first developed by Florida State University for in-service training of military personnel and further it has been extensively applied for other relevant areas. The most extensively used style for developing new training programs is Instructional Design (ID). This approach offers a sequential system to evaluate the learners' requirements, the design and development of training objects, and the evaluation of the usefulness of the training program (Kruse, 2002). Instructional designers believe that the use of systematic design procedures can make instruction more useful, well-organized and applicable than less precise approaches to planning instruction. The system approach entails an analysis of how its constituents interrelate with each other and requires synchronization of all activities. Nevertheless, a multiplicity of systematic ID processes (Dick & Carey, 1996; Gagne *et al.*, 1974, Kemp *et al.* 1998, Smith & Ragan, 1998) have been illustrated, but all descriptions comprise the core components of ADDIE to ensure analogy among goals, strategies, evaluation as well as the efficacy of the resulting instruction (Gustafson and Branch, 2002).

Figure 1 ADDIE model. In Wikipedia, n.d., retrieved January 28, 2017, from [https://en.wikipedia.org/wiki/ADDIE\\_Model](https://en.wikipedia.org/wiki/ADDIE_Model). Copyright 2017 by Wikipedia

The ADDIE Model is a practical and easy framework for ID. The process can be applied in a multiplicity of settings, because of its methodical and generic structure. The structure provides trainers by recognizing the trainee needs and applies this information to the design and development of the training programs (Petersen, 2003).

## OBJECTIVES OF THE PROPOSED RESEARCH

After completing this research, we will be able-

- To explore the correlation between the design/development of training and experience of trainers
- To explain the relationship between the design/development of training program and academic background of the trainers
- To understand the instructional design process through ADDIE Model

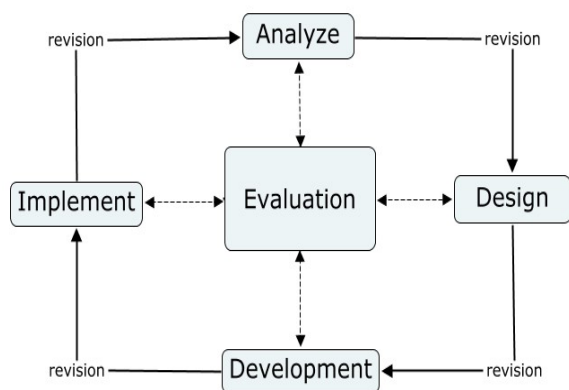


Figure 1: ADDIE model. In Wikipedia, n.d., retrieved January 28, 2017, from [https://en.wikipedia.org/wiki/ADDIE\\_Model](https://en.wikipedia.org/wiki/ADDIE_Model). Copyright 2017 by Wikipedia

## Hypothesis

- $H_0$ : There is no significant relationship between qualification of the trainers and design of training (DoT) program.
- $H_0$ : There is no significant relationship between experience of trainers and development of the training program.

## RESEARCH METHODOLOGY

ADDIE model has been used for the purpose of research. A questionnaire has been developed using the various components of ADDIE Model. Demographic profile of the respondents has been sought in the form of their age, work experience, designation and qualification, which will further assist the study. Respondents were supposed to supply their views on five point Likert scale ranging from 1-Strongly agree (SA), 2-Agree (A), 3-Neutral (N), 4-Disagree (D) and 5-strongly disagree (SD). The collected data has been analyzed using R programming to explore the necessary statistic (Chi square value and Karl Pearson coefficient of correlation) to relate various variables identified in the study.

## Sampling

For the sampling purpose, the faculty members of DIET in Uttarakhand have been selected randomly using stratified random sampling method, because it provides a better estimate of the whole and it results in more reliable and detailed information (Kothari, 2011). There are 13 DIETs functioning in the state, viz., Tehri, Gauchar, Ratura, Roorkee, Charigaon, Barkot, Dehradun, Almora, Didihat, Lohaghat, Bageshwar, Bhimtal, and Rudrapur and there are approximately 215 faculty members working in various departments (In service programs field interaction innovation and coordination, pre-service teacher education, district resource unit, planning and management, educational technology, work experience, curriculum material development and evaluation, administrative branch etc.) of the institute, so the calculated sample for the study becomes 100<sup>3</sup>. The information have been sought from the respondents either personally, e-mail or Google Forms. The demographic profile of the respondents is presented in Table 1.

## Data Analysis

The research data has been collected from hundred respondents. On cross-tabulating the data between 'formulation of learning objectives by trainers and trainers' qualification', it has been observed that 30% respondents who are Masters with B Ed, 29% with Masters with M Ed degree and 10% with PhD degree have strongly/agreed that they formulate the learning objectives for the training program which they design upon. Whereas, 28% respondents have responded as neutral and 3% have disagreed that they formulate the learning objectives for the training program (Table 2). The Karl Pearson Coefficient of Correlation is calculated as 0.059, which shows a positive correlation between Des, and H. The calculated value of  $\chi^2$  at 95% confidence level is 1.687 which is less than the tabulated value ( $\chi^2_{cal} = 12.592$ ) for six degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between formulation of learning objectives and trainers' qualifications.

On cross-tabulating the data between 'applying a mix of instructional methods and trainers' qualification', it has been

$$3 \quad n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2 (N-1) + z^2 \cdot p \cdot q}$$
 where  $p = 0.02$ ,  $q = 0.98$ ,  $N = 215$ ,  $e = 0.02$ ,  $z$  value at 95% confidence level.

**Table 1:** Demographic profile of respondents

Demographic profile		Frequency	Percent
Designation	Lecturer	88	88%
	Senior Lecturer	12	12%
Highest qualification	Masters with B Ed	42	42%
	Masters with M Ed	42	42%
	PhD	16	16%
Experience (in years)	< 10 Years	24	24%
	11-20 Years	24	24%
	21-30 Years	40	40%
	> 30 Years	12	12%
Gender	Male	42	42%
	Female	58	58%
Age (in years)	25-35	16	16%
	36-45	47	47%
	46-60	37	37%

**Table 2:** Cross-tabulation between design of training program and qualifications of trainers

		Highest Qualification (Q)			
		Masters with B Ed	Masters with M Ed	PhD	Statistic
Formulation of learning objectives for the training program (Des1)	SA	19	21	6	$\chi^2 = 1.687$
	A	11	8	4	R = 0.059
	N	11	12	5	
	D	1	1	1	
	SD	-	-	-	df = 6
Mix of instructional methods/activities (Des2)	SA	18	18	5	$\chi^2 = 6.909$
	A	14	20	9	R = -0.054
	N	6	4	1	
	D	4	0	1	
	SD	-	-	-	df = 6
Designing content outline (Des3)	SA	10	10	4	$\chi^2 = 10.704$
	A	16	5	4	R = 0.116
	N	3	5	0	
	D	10	18	7	
	SD	3	4	1	df = 8

observed that 32% respondents who are Masters with B Ed, 38% with Masters with M Ed degree and 14% with PhD Degree have strongly/agreed that they apply a mix of instructional methods and activities to design the training program. Whereas, 11 % respondents have responded as neutral and 5% have disagreed that they formulate the learning objectives for the training program (Table 2). The Karl Pearson Coefficient of Correlation is calculated as -0.054, which shows a negative correlation between Des2 and Q. The calculated value of  $\chi^2$  at 95% confidence level is 6.909 which is less than the tabulated value ( $\chi^2_{cal} = 12.592$ ) for six degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between applying a mix of instructional methods and trainers' qualifications. Further, 26% trainers who are Masters with B Ed, 15% with Masters with M Ed degree and 8% with PhD Degree have strongly/agreed that design the content outline for the training program. Whereas, 8 % respondents have responded as neutral and 43% have strongly/disagreed that they design the content outline for the training program (Table 2). The Karl Pearson Coefficient of Correlation is calculated as 0.116, which

shows a positive correlation between Des3 and Q. The calculated value of  $\chi^2$  at 95% confidence level is 10.704 which is less than the tabulated value ( $\chi^2_{cal} = 15.507$ ) for eight degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between designing the content outline and trainers' qualifications.

On cross-tabulating the data between 'developing the content plan and instructional methods and trainers' qualification', it has been observed that 23% respondents who are Masters with B Ed, 22% with Masters with M Ed degree and 11% with PhD degree have strongly/agreed that they develop the content plan and instructional methods for the training program which they act upon (Table 3). Whereas, 10% respondents have responded as neutral and 34% have strongly/disagreed. The Karl Pearson Coefficient of Correlation is calculated as -0.109, which shows a negative correlation between Dev1 and Q. The calculated value of  $\chi^2$  at 95% confidence level is 3.558 which is less than the tabulated value ( $\chi^2_{cal} = 15.507$ ) for eight degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship



**Table 3:** Cross-tabulation between development of training program and experience of trainers

		<i>Highest qualification (Q)</i>			
		Masters with B Ed	Masters with M Ed	PhD	Statistic
Development of content plan and instructional methods (Dev <sub>1</sub> )	SA	8	9	5	$\chi^2 = 3.558$
	A	15	13	6	
	N	4	5	1	R = -0.109
	D	11	13	4	
	SD	4	2	0	
Development with the help of scholarly books/ journals/ magazines (Dev <sub>2</sub> )	SA	6	15	1	$\chi^2 = 11.232$
	A	9	3	3	
	N	11	5	1	R = 0.073
	D	10	13	9	
	SD	6	6	2	
Development with the help of subject matter experts (Dev <sub>3</sub> )	SA	14	13	5	$\chi^2 = 7.609$
	A	15	10	4	
	N	6	4	0	R = 0.143
	D	7	15	7	
	SD	-	-	-	
Development with the help internet/online tools (Dev <sub>4</sub> )	SA	4	4	2	$\chi^2 = 14.763$
	A	11	6	1	
	N	15	23	5	R = 0.150
	D	11	9	5	
	SD	1	0	3	

between development of content plan/instructional methods and trainers' qualifications. Further, cross-tabulating the data between 'development with the Help of scholarly books/ journals/ magazines and trainers' qualification', it has been observed that 15% respondents who are Masters with B Ed, 18% with Masters with M Ed degree and 4% with PhD Degree have strongly/agreed that they take the help of books/ journals or magazines (Table 3). Whereas, 17% respondents have responded as neutral and 46% have strongly/ disagreed. The Karl Pearson Coefficient of Correlation is calculated as 0.073, which shows a positive correlation between Dev<sub>2</sub> and Q. The calculated value of  $\chi^2$  at 95% confidence level is 11.232 which is less than the tabulated value ( $\chi^2_{cal} = 15.507$ ) for eight degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between developing the training program with the help of scholarly books/ journals/ magazines and trainers' qualifications.

On cross-tabulating the data between 'developing the training program with the help of subject matter experts and trainers' qualification', it has been observed that 29% respondents who are Masters with B Ed, 23% with Masters with M Ed degree and 9% with PhD Degree have strongly/agreed that they develop training program with the help of subject experts (Table 3). Whereas, 10% respondents have responded as neutral and 29% have disagreed. The Karl Pearson Coefficient of Correlation is calculated as 0.143, which shows a positive correlation between Dev<sub>3</sub> and Q. The calculated value of  $\chi^2$  at 95% confidence level is 7.609 which is less than the tabulated value ( $\chi^2_{cal} = 12.592$ ) for six degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between developing the training program with the help of subject matter experts and trainers' qualifications. Further, cross-tabulating the data between

'development with the Help of internet and online tools and trainers' qualification', it has been observed that 15% respondents who are Masters with B Ed, 10% with Masters with M Ed degree and 3% with PhD Degree have strongly/agreed that they take the help of internet and online tools. Whereas, 43% respondents have responded as neutral and 29% have strongly/disagreed (Table 3). The Karl Pearson Coefficient of Correlation is calculated as 0.150, which shows a positive correlation between Dev<sub>4</sub> and Q. The calculated value of  $\chi^2$  at 95% confidence level is 14.763 which is less than the tabulated value ( $\chi^2_{cal} = 15.507$ ) for eight degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between developing the training program with the help of internet, online tools, and trainers' qualifications.

On cross-tabulating the data between 'formulation of learning objectives by trainers and trainers' experience', it has been observed that 15% respondents who have less than 10 years experience, 17% with experience between 11 to 20 years, 29% between 21 to 30 years and 8% with more than 30 years have strongly/agreed that they formulate the learning objectives for the training program which they design upon. Whereas, 28% respondents have responded as neutral and 3% have disagreed that they formulate the learning objectives for the training program. The Karl Pearson Coefficient of Correlation is calculated as -0.080, which shows a negative correlation between Des<sub>1</sub> and E (Table 4). The calculated value of  $\chi^2$  at 95% confidence level is 5.259 which is less than the tabulated value ( $\chi^2_{cal} = 16.919$ ) for nine degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between formulation of learning objectives and trainers' experience.

On cross-tabulating the data between 'applying a mix of instructional methods and trainers' experience', it has been

**Table 4:** Cross-tabulation between development of training program and experience of trainers

		Experience in Years (E)				
		< 10	11-20	21-30	> 30	Statistic
Formulation of learning objectives for the training program (Des <sub>1</sub> )	SA	8	13	19	6	$\chi^2 = 5.259$
	A	7	4	10	2	
	N	8	6	11	3	R = -0.080
	D	1	1	0	1	
	SD	-	-	-	-	
Mix of instructional methods/ activities (Des <sub>2</sub> ) <sub>W</sub>	SA	9	9	16	7	$\chi^2 = 6.813$
	A	12	13	14	4	
	N	2	1	7	1	R = -0.025
	D	1	1	3	0	
	SD	-	-	-	-	
Designing content outline (Des <sub>3</sub> )	SA	5	5	13	1	$\chi^2 = 12.916$
	A	6	7	8	4	
	N	2	0	6	0	R = -0.009
	D	9	11	9	6	
	SD	2	1	4	1	

observed that 21% respondents who have less than 10 years experience, 22% with experience between 11 to 20 years, 30% between 21 to 30 years and 11% with more than 30 years have strongly/agreed that they apply a mix of instructional methods and activities to design the training program (Table 4). Whereas, 11% respondents have responded as neutral and 5% have disagreed that they formulate the learning objectives for the training program. The Karl Pearson Coefficient of Correlation is calculated as -0.025, which shows a negative correlation between Des<sub>2</sub> and E. The calculated value of  $\chi^2$  at 95% confidence level is 6.813 which is less than the tabulated value ( $\chi^2_{cal} = 16.919$ ) for nine degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between applying a mix of instructional methods and trainers' experience. Further, it has been observed that 11% respondents who have less than 10 years experience, 12% with experience between 11 to 20 years, 21% between 21 to 30 years and 5% with more than 30 years have strongly/agreed that they design the content outline for the training program. Whereas, 8% respondents have responded as neutral and 43% have strongly/ disagreed that they design the content outline for the training program. The Karl Pearson Coefficient of Correlation is calculated as -0.009, which shows a negative correlation between Des<sub>3</sub> and E (Table 4). The calculated value of  $\chi^2$  at 95% confidence level is 12.916 which is less than the tabulated value ( $\chi^2_{cal} = 21.026$ ) for twelve degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between designing the content outline and trainers' experience.

On cross-tabulating the data between 'developing the content plan and instructional methods and trainers' experience', it has been observed that 12% respondents who have less than 10 years experience, 13% with experience between 11 to 20 years, 23% between 21 to 30 years and 8% with more than 30 years have strongly/agreed that they develop the content plan and instructional methods for the training program which they act upon. Whereas, 10% respondents have responded as neutral and 34% have strongly/ disagreed (Table 5). The Karl Pearson Coefficient of Correlation is calculated as -0.160, which shows a negative correlation between Dev<sub>1</sub> and E. The calculated value of  $\chi^2$  at 95%

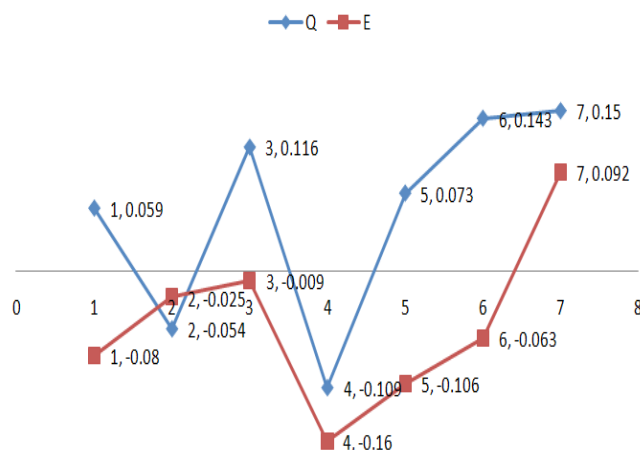
confidence level is 18.698 which is less than the tabulated value ( $\chi^2_{cal} = 21.026$ ) for twelve degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between development of content plan/instructional methods and trainers' experience. Further, cross-tabulating the data between 'development with the Help of scholarly books/ journals/ magazines and trainers' experience', it has been observed that 6% respondents who have less than 10 years experience, 11% with experience between 11 to 20 years, 18% between 21 to 30 years and 2% with more than 30 years have strongly/agreed that they take the help of books/ journals or magazines. Whereas, 17% respondents have responded as neutral and 46% have strongly/ disagreed. The Karl Pearson Coefficient of Correlation is calculated as -0.106, which shows a negative correlation between Dev<sub>2</sub> and E. The calculated value of  $\chi^2$  at 95% confidence level is 13.552, which is less than the tabulated value ( $\chi^2_{cal} = 21.026$ ) for twelve degrees of freedom and it shows that null hypothesis is accepted (Table 5). Hence, there is a significant relationship between developing the training program with the help of scholarly books/ journals/ magazines and trainers' experience.

On cross-tabulating the data between 'developing the training program with the help of subject matter experts and trainers' experience', it has been observed that 14% respondents who have less than 10 years experience, 16% with experience between 11 to 20 years, 21% between 21 to 30 years and 10% with more than 30 years have strongly/agreed that they develop training program with the help of subject experts (Table 5). Whereas, 10% respondents have responded as neutral and 29% have disagreed. The Karl Pearson Coefficient of Correlation is calculated as -0.063, which shows a negative correlation between Dev<sub>3</sub> and E. The calculated value of  $\chi^2$  at 95% confidence level is 6.353 which is less than the tabulated value ( $\chi^2_{cal} = 16.919$ ) for nine degrees of freedom and it shows that null hypothesis is accepted. Hence, there is a significant relationship between developing the training program with the help of subject matter experts and trainers' experience. Further, cross-tabulating the data between 'development with the help of internet, online tools, and trainers' experience', it has been observed that 7% respondents who have less than 10 years experience, 8%



**Table 5:** Cross-tabulation between development of training program and experience of trainers

	Experience in Years (E)				Statistic	
	< 10	11-20	21-30	> 30		
Development of content plan and instructional methods (Dev <sub>1</sub> )	SA	3	3	10	6	$\chi^2 = 18.698$ R = -0.160 df = 12
	A	9	10	13	2	
	N	2	3	2	3	
	D	10	6	11	1	
	SD	0	2	4	0	
Development with the help of scholarly books/journals/magazines (Dev <sub>2</sub> )	SA	4	5	12	1	$\chi^2 = 13.552$ R = -0.106 df = 12
	A	2	6	6	1	
	N	2	4	8	3	
	D	9	7	11	5	
	SD	7	2	3	2	
Development with the help of subject matter experts (Dev <sub>3</sub> )	SA	7	7	13	5	$\chi^2 = 6.353$ R = -0.063 df = 9
	A	7	9	8	5	
	N	2	3	5	0	
	D	8	5	14	2	
	SD	-	-	-	-	
Development with the help internet/online tools (Dev <sub>4</sub> )	SA	4	3	3	0	$\chi^2 = 9.434$ R = 0.092 df = 12
	A	3	5	7	3	
	N	11	8	20	4	
	D	4	8	9	4	
	SD	2	0	1	1	



with experience between 11 to 20 years, 10% between 21 to 30 years and 3% with more than 30 years have strongly/agreed that they take the help of internet and online tools. Whereas, 43% respondents have responded as neutral and 29% have strongly/disagreed. The Karl Pearson Coefficient of Correlation is calculated as 0.092, which shows a positive correlation between Dev<sub>4</sub> and E. The calculated value of  $\chi^2$  at 95% confidence level is 9.434 which is less than the tabulated value ( $\chi^2_{cal} = 21.026$ ) for twelve degrees of freedom and it shows that null hypothesis is accepted (Table 5). Hence, there is a significant relationship between developing the training program with the help of internet, online tools, and trainers' experience.

## CONCLUSION AND RECOMMENDATIONS

Education is a dynamic subject which needs regular updating in curriculum, subjects offered, teaching methodology as well as teaching pedagogy. We are living in a rapid changing technology era where we need to update ourselves to keep track with the global pace. Trainings are closely associated with education and it is must for an organization to update the knowledge of its teaching fraternity. A significant relationship has been observed between the development (content plan/instructional methods, use of internet/online tools, Use of Books and magazines, coordination with subject matter experts etc.) of the training program and experience as well as qualifications of the trainers. There is a strong correlation between the design and development of training programs with reference to trainers' qualification as well as experience. As the qualification of the faculty members improve, the design and development process also gets improved. It has been observed that as the experience of the trainers increase, they develop the training program based on their experiences instead of being reluctant on books, magazines or online tools. Further, a significant relationship has been observed between the design of the training program (a provision to mix of instructional methods and content outline, formulation of learning objectives), and experience and qualifications of the trainers. Effective trainings help the individuals to perform better and improve the workplace output as well. So, in order to design and develop effective training programs the trainers must follow the standard instructional design models (e.g., ADDIE model, Rapid prototyping, Dick & Carey and Kemp ISD, Gagne's Model, Kilpatrick's Four Level Evaluation model), which they feel handy and functional in their processes. During development of the training program-online tools, internet, books, magazines,

journals and subject matter experts must be involved in the process to impact the output.

## REFERENCES

- Allison, P. D. (2002). Missing data: Quantitative applications in the social sciences. *British Journal of Mathematical and Statistical Psychology*, 55(1), 193-196.
- Ballou, D., & Podgursky, M. J. (1997). Teacher pay and teacher quality. WE Upjohn Institute.
- Bates, A. W. (2000). *Managing Technological Change: Strategies for College and University Leaders*. The Jossey-Bass Higher and Adult Education Series. Jossey-Bass Publishers, 350 Sansome St., San Francisco, CA 94104.
- Darling-Hammond, L. (2000). How teacher education matters. *Journal of teacher education*, 51(3), 166-173.
- Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education policy analysis archives*, 8, 1.
- Dick, W., Carey, L., & Carey, J. O. (2006). The systematic design of instruction.
- Dyer, C., Choksi, A., Awasty, V., Iyer, U., Moyade, R., Nigam, N., & Sheth, S. (2004). Knowledge for teacher development in India: the importance of 'local knowledge' for in-service education. *International Journal of Educational Development*, 24(1), 39-52.
- Husen, T., Saha, L. J., & Noonan, R. (1978). Teacher Training and Student Achievement in Less Developed Counties. World Bank Staff Working Paper No. 310.
- Gagne, R. M., & Briggs, L. J. (1974). *Principles of instructional design*. Holt, Rinehart & Winston.
- Gustafson, K. L., & Branch, R. M. (2002). What is instructional design. *Trends and issues in Instructional Design and Technology*, 16-25.
- Jones, B. A. (2014). ADDIE Model (Instructional Design).
- Kemp, J. E., Morrison, G. R., & Ross, S. M. (1998). *Designing effective instruction*. Columbus, Ohio, EEUU.
- Kruse, K. (2002). Introduction to instructional design and the ADDIE model. Retrieved January, 26, 2005.
- Peterson, C. (2003). Bringing ADDIE to life: Instructional design at its best. *Journal of Educational Multimedia and Hypermedia*, 12(3), 227-241.
- Raina, V. K. (1995). Teacher educators in India: in search of an identity. *Journal of Teacher Education*, 46(1), 45-52.
- Smith, P. L., & Ragan, T. J. (1999). *Instructional design* (p. 3). New York: Wiley

