



Assessing Impact of PG Diploma in Inland Fisheries and Aquaculture Management on Trainee's Job Performance

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Abstract

Skill development is one of the parameters for enhancing the job performance of the workforce to achieve desired organizational outputs. This study assesses the impact of the PGDIF&AM program on trainee's job performance by comparing their job performance with non-trainees. The study analysed profile characteristics like educational background, work experience, geographical distribution of trainees and non-trainees. The study evaluates job performance across dimensions of task performance, contextual performance and adaptive performance among trainees and non-trainees. The PGDIF&AM program significantly enhanced task performance of trainees, with over half of them achieved a high level task performance as compared to non-trainees. However, contextual and adaptive performance levels found relatively low, with limited improvement observed after attending the PGDIF&AM course by trainees. This study underscores the need for tailored modifications in course curriculum to enhance contextual and adaptive performance among trainees.

Keywords:

Assessment, job performance, impact, PGDIF&AM, fisheries & aquaculture.

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Introduction

Freshwater aquaculture sector has been identified as the fastest growing agri-food production sector. Building quality human resources in and around the fisheries and aquaculture sector is imperative to bring the desired impacts in the sectorial development (Roy *et al.*, 2018; Handa, 2021). Skill development is one of the parameters for enhancing the job performance of the workforce for achieving the desired organizational outputs. Trainee's performance changes according to the effectiveness of the skill development training program. It not only improves the performance of the trainees but also enhances their knowledge, skill and builds a favourable attitude towards their job profile. The way an organization trains its staff can influence its efficiency (Iqbal *et al.*, 2014; Elnaga & Imran, 2013). Training enhances job efficiency and employee productivity but it demands huge investment in terms of time, energy and money. Therefore, the sponsoring organisation needs to know whether their investment is being made is getting desired outcomes or not as well as the host organisation needs to know about its impact on trainee's job performance (Topno, 2012). The ICAR-CIFE, Kolkata restructured its flagship one-year Post-Graduate Diploma in Inland Fisheries and Aquaculture Management (PGDIF&AM) program in 2014 with an aim to update knowledge and skills of in-service State Fisheries Department Officials in fisheries and aquaculture management. But to what extent

the job performance of the PGDIF&AM trainees has been improved needs to be assessed. Hence, the present study was planned to assess the impact of the PGDIF&AM program on trainee's job performance.

Methodology

The PGDIF&AM program was selected purposively as it is the flagship program of ICAR-CIFE offered to refresh the knowledge & skill of State Fisheries Department Officials at Kolkata Centre. The PGDIF&AM program was restructured in the year of

2014. The impact of the PGDIF&AM program was assessed by interviewing trainees and non-trainees. During 2014-2021, total 8 batches consisting of 88 trainees attended the PGDIF&AM. All the PGDIF&AM trainees (88) were selected for the study from which 75 trainees responded to the online survey. In case of non-trainees, about 300 Department of Fisheries Officials from throughout the country were contacted through email/telephone/WhatsApp, about 90 non-trainees responded to the online Google form survey. Finally, data collected from 75 trainees and 90 non-trainees were considered for the further data analysis and interpretation of results.

The job performance levels of trainees and non-trainees were measured in terms of *Task Performance* (refers to the proficiency with which an employee performs central job tasks), *Contextual Performance* (refers to employee behaviours that support the organizational, social and psychological environment in which the central job tasks are performed) and *Adaptive Performance* (refers to an employee's proficiency in adapting to changes in work roles or environment). The statements reflecting task performance, contextual performance and adaptive performance of trainees were developed and administered on three continuums viz., *To great extent*, *To some extent* and *No change* with a score of 3, 2 and 1, respectively. Based on unit index score, the respondents were categorized into low (<0.55), medium (0.55-0.70), high (0.70-0.80) and very high (0.80-1.00) categories using Human Development Index (HDI) scale. The two sample 't' test was performed to test the significance difference in performance parameters between trainees and non-trainees. The unit index scores were calculated using the following formula;

$$U = \frac{Y - \text{Min } Y}{\text{Max } Y - \text{Min } Y}$$

Where,

U = Unit index score

Y = Obtained score

Max Y = Maximum possible score

Min Y = Minimum possible score

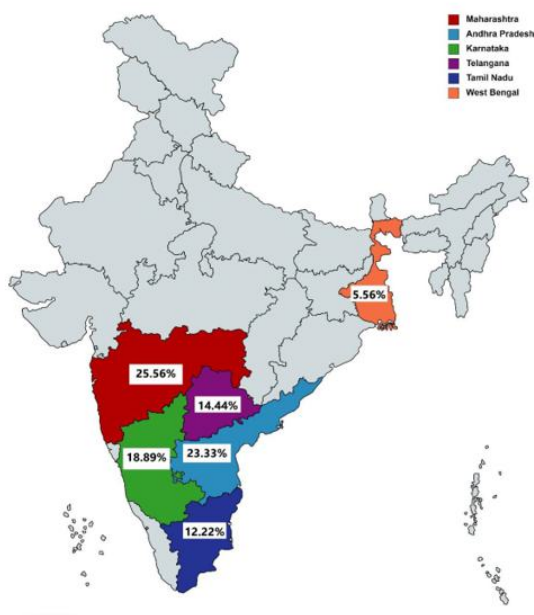


Fig. 1 Geographical representation of non-trainees

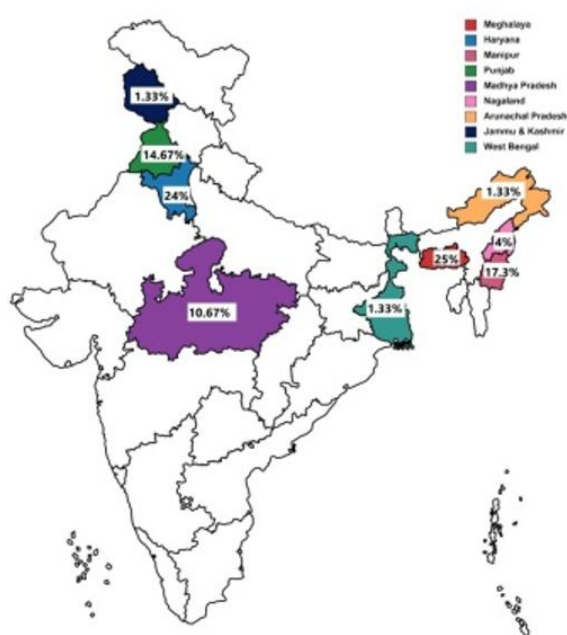


Fig. 2 Geographical representation of trainees

Results and discussion

Profile of trainees: The majority (56%) of trainees belonged to the middle age (35-50 years) group. The average age of the trainees was 40.16 years. About 70.67% of trainees were male and 29.33% of trainees were female. The majority (53.33%) of the trainees studied up to B.Sc. level followed by M.Sc. (33.33%). Only 10.63% of trainees had completed graduation from fisheries background (B.F.Sc./M.F.Sc.). Majority (84%) of the trainees were working at taluk/block level fisheries officials. About 45.34% of trainees had 6-10 years of working experience in the field of fisheries and aquaculture. The State wise geographical representation of trainees shows that half of the trainees (50.67%) were belonged to the northern region followed by north-eastern region (48%) (Fig. 2). After the PGDIF&AM training, about 60% of trainees had not attended any skill development training followed by one-third of the trainees (33.33%) had attended 1- 2 training programs. The majority of trainees (66.67%) had attended the PGDIF&AM because it was mandatory to pass for getting promotion.

Profile of non-trainees: The majority of non- trainees belonged to the young (41.11%) age group (< 35 years) followed by middle (36.67%) age group (35-50 years). The average age of non-trainees was 40.52

years. About 81.11% of non-trainees were male and 18.89% of non-trainees were female. More than one-third of the non-trainees (38.89%) did post-graduation followed by graduation (23.33%) and Ph.D. (3.33%) in fisheries and aquaculture. Majority (52.22%) of the non-trainees were working at district level fisheries officials. Half of the non-trainees (52.22%) had less than 10 years of working experience in the field of fisheries and aquaculture. The State wise geographical representation of non-trainees (Fig. 1) shows that the majority of the non-trainees (68.88%) belonged to the southern region followed by western region (25.56%). About 52.22% of the non-trainees were interested in attending skill development training for 1-2 days followed by 3-5 days (20%). About 18.89% of non-trainees were not interested in attending any skill development training if it is not mandatory. About 89.89% of the non-trainees were unaware about the existing refresher courses for State Fisheries Officials.

Job performance levels of trainees and non-trainees:

The job performance of trainees and non-trainees of the PGDIF&AM was measured in terms of task performance, contextual performance and adaptive performance (Table 1).

About 46.67% of trainees had a low to medium level of task performance whereas almost three-fourth

Table 1. Job performance levels of trainees and non-trainees

Variables	Category (Range)	Trainees (n=75)		Non-trainees (n=90)	
		f	%	f	%
Task performance	Low (<0.55)	26	34.67	54	60.00
	Medium (0.55-0.70)	9	12.00	10	11.11
	High (0.70-0.80)	13	17.33	8	8.89
	Very high (0.80-1.00)	27	36.00	18	20.00
Contextual performance	Low (<0.55)	33	44.00	56	62.22
	Medium (0.55-0.70)	12	16.00	8	8.89
	High (0.70-0.80)	7	9.33	6	6.67
	Very high (0.80-1.00)	23	30.67	20	22.22
Adaptive performance	Low (< 0.55)	45	60.00	64	71.11
	Medium (0.55-0.70)	6	8.00	5	5.56
	High (0.70-0.80)	9	12.00	7	7.78
	Very high (0.80-1.00)	15	20.00	14	15.56
Overall job performance	Low (<0.55)	28	37.33	52	57.78
	Medium (0.55-0.70)	17	22.67	10	11.11
	High (0.70-0.80)	7	9.33	15	16.67
	Very high (0.80-1.00)	23	30.67	13	14.44

Note: f = Frequency, % = Percentage

(71.11%) of non-trainees had a low to medium level of task performance. It was satisfactory to note that the majority (53.33%) of trainees had a high level of task performance whereas only 28.89% of non-trainees had a high level of task performance. The mean unit score of task performance for trainees (0.70) was predominantly high as compared to non-trainees (0.54). It implies that the PGDIF&AM course had a significant impact on improving task performance of PGDIF&AM trainees ($p=0.000$) (Table 2).

Table 2. Mean unit index score of job performance and its components

Variables	Trainees	Non-trainees	p-Value
Task performance	0.70	0.54	0.000*
Contextual performance	0.65	0.62	0.278
Adaptive performance	0.57	0.50	0.107
Overall job performance	0.64	0.55	0.032*

*Significant at 5% level of significance

Table 3. Statement wise mean unit score of trainee's & non-trainees job performance

Job performance statements/indicators	Trainees	Non-trainees
Task performance	0.70	0.54
Confidence and competence while working with farmers and field level extension personnel	0.72	0.54
Confidence in conducting training's and technology demonstrations	0.77	0.53
Demonstrating learnt knowledge and skills to farmers and field level extension personnel	0.70	0.56
Competency in identifying farmer's problems and providing reasonable solutions	0.67	0.54
Improvement in input supply and services to farmers	0.66	0.50
Motivating farmers and field level extension personnel for sustainable fish production	0.69	0.54
Overall improvement in work quality and working efficiency after completion of the PGDIF&AM	0.69	0.56
Contextual performance	0.65	0.62
Taking initiative for the increasing department visibility and farmers production	0.65	0.28
Accepting and learning from the field experiences	0.67	0.30
Networking with farmers and field extension personnel	0.64	0.28
Communicating effectively within and outside the organization	0.71	0.28
Accountability and responsibility towards job/work	0.61	0.29
Adaptive performance	0.57	0.50
Showing resiliency (coping with stress, difficult situations and adversities)	0.54	0.23
Coming up with creative solutions to deal with difficult problems	0.61	0.26
Keeping required knowledge and skills up-to-date	0.57	0.27
Competency to accept new challenges and taking initiatives	0.57	0.27
Job performance	0.65	0.54

The majority (60%) of the trainees had a low to medium level of contextual performance whereas almost three-fourth (71.11%) of non-trainees had a low to medium level of contextual performance. It was satisfactory to note about 40% of trainees had a high level of contextual performance whereas only 28.89% of non-trainees had a high level of contextual performance. The mean unit score of contextual performance for trainees (0.65) found quite less than non-trainees (0.62) which implies that the PGDIF&AM course had no significant impact on contextual performance of PGDIF&AM trainees ($p=0.278$). This might be due least inclusion of theoretical and practical course content on improving contextual performance of trainees.

The majority (68%) of the trainees had a low to medium level of adaptive performance whereas three-fourth (76.67%) of non-trainees had a low to medium level of adaptive performance. It was disappointing to note that only 21% of trainees had a high level of adaptive performance whereas only 23.34% of non-trainees had a high level of adaptive performance. The mean unit score of adaptive performance for trainees (0.57) found quite less as compared to non-trainees (0.50) which implies that the PGDIF&AM course had no significant impact on adaptive performance of PGDIF&AM trainees ($p=0.107$). This might be due least inclusion of theoretical and practical course content on improving adaptive performance of trainees.

The majority (60%) of the trainees had a low to medium level of job performance whereas about 68.89% of non-trainees had a low to medium level of job performance. It was satisfactory to note that about 40% of trainees had a high level of job performance whereas about 31.11% of non-trainees had a high level of job performance. The mean unit score of overall job performance for trainees (0.64) was predominantly high as compared to non-trainees (0.55) which implies that the PGDIF&AM course had a positive and significant impact on job performance of trainees ($p=0.032$). The statement/indicator wise mean unit index score is presented in Table 3.

Conclusion

The study assesses the job performance levels of trainees and non-trainees who were State Fisheries Development Officers in terms of task performance, contextual performance and adaptive performance. Overall, the PGDIF&AM program yielded a noteworthy enhancement in job performance of trainees, particularly in terms of task performance. Nevertheless, there remains room for improvement in contextual and adaptive performance, underscoring the potential for further refinement in the training curriculum to address these crucial aspects of improving contextual and adaptive performance by

focusing on proactiveness, resilience building, personality development, communication and problem solving skills, etc. This study contributes valuable insights for host organization to optimize the PGDIF&AM programs through revisiting course curriculum according to the trainee's job profile for elevating their overall job competency.

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Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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