International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 23s, 2025
https://theaspd.com/index.php

Impact Of Application-Based Training Method On Fraud Prevention: A Special Reference To Classroom And Case Study Pattern

Amit Kumar[1], Dr. Roopali Patil[2]
[1]Research Scholar, D Y Patil Deemed to be University, Navi Mumbai
ak170253@gmail.com
[2]Associate Professor, D Y Patil Deemed to be University School of Management
roopali.patil@dypatil.edu

Abstract:
The growing complexity of fraud in financial and business operations has necessitated innovative approaches to fraud prevention training. This study explores the impact of application-based training methods—specifically classroom learning and case study patterns—on enhancing fraud prevention capabilities. Utilizing a mixed-method approach, the research evaluates how real-world simulations and interactive problem-solving techniques influence the understanding, detection, and deterrence of fraudulent activities. Preliminary findings suggest that training programs grounded in application-based methods, particularly case-based learning, significantly improve critical thinking, ethical judgment, and practical fraud detection skills among trainees. This paper concludes with suggestions to enhance current training models and proposes directions for future research.

1. INTRODUCTION

Fraud poses a significant threat to organizations worldwide, affecting financial health, stakeholder trust, and market integrity. Traditional training approaches, often theoretical, have been insufficient in equipping professionals with the tools necessary to detect and prevent fraudulent activities effectively. With increasing digitization and evolving fraud tactics, there's a growing demand for more immersive, application-based training methods.

Application-based learning emphasizes real-world relevance, using scenarios, case studies, and simulations to reinforce concepts. Classroom instruction paired with practical exercises and analytical case studies offers a balanced approach that cultivates theoretical understanding and applied skills. This paper investigates the impact of these methods on enhancing the efficacy of fraud prevention training.

Classroom teaching and case-based teaching represent two prominent educational approaches in fraud prevention training. Classroom teaching offers structured, theory-driven instruction on fraud typologies, regulatory requirements, and internal control mechanisms. In contrast, case-based teaching immerses learners in real-world scenarios, fostering critical thinking and practical problem-solving skills by examining actual fraud incidents. When combined, these methods have the potential to enhance both conceptual understanding and practical application.

2. LITERATURE REVIEW

2.1 Fraud and the Need for Training

According to the Association of Certified Fraud Examiners (ACFE, 2022), organizations lose approximately 5% of annual revenues to fraud. The study emphasizes the critical role of training in mitigating fraud risk. Fraud awareness and prevention rely heavily on both theoretical knowledge and applied skills.

2.2 Traditional vs. Application-Based Training

Traditional fraud prevention training includes lectures, manuals, and compliance checklists. While essential, such approaches often fail to instill critical thinking or adaptive decision-making (Becker & Connolly, 2019).

In contrast, application-based training leverages active learning strategies, such as case study analysis and classroom simulations, which have shown promise in professional education (Kolb, 2015).

2.3 Case-Based Learning and Fraud Detection

Case-based learning (CBL) has been effectively used in legal, medical, and business education (Herreid, 2007). In fraud prevention, CBL allows learners to assess complex fraud scenarios, identify red flags,

and propose mitigation strategies. Studies (Kim & Patel, 2021) indicate that such contextual learning significantly enhances retention and practical application of anti-fraud principles.

Weerts et al. (2019) propose using *case-based reasoning (CBR)* to assist fraud analysts in interpreting alerts generated by black-box machine learning systems. By displaying similar past cases alongside new alerts, the system supports expert decision-making. This method was deemed *"useful and easy to use"* by fraud analysts at a major Dutch bank

3. RESEARCH METHODOLOGY

3.1 Research Design

This study employed a quantitative (mixed method) research design to examine impact of training and application-based training methods. A descriptive approach was selected to provide a detailed analysis of the variables under investigation.

3.2 Population and Sampling

The study sampled 120 participants from accounting and finance backgrounds enrolled in a professional fraud prevention training program. Participants were divided into two groups: Group A: Received traditional classroom lectures. Group B: Received application-based training using case studies and simulations.

A simple random sampling technique was used to select a sample of participant to ensure representativeness and reduce bais.

3.3 Data Collection Methods

Primary data were collected using Structured questionnaires developed based on Likert scales. The questioner is devided into three section: demographic information, and application-based learning. The data collection process was completed with the help of circulating google form, and meeting with respondent to provide information.

3.4 Instrument and Measures

The survey instrument consist of Likert-scale questions, multiple choice options and ope ended response. Reliability of the instrument was tested using Cronbach's Alpha with a value of a=>.05, indicating acceptable internal consistency.

3.5 Data Analysis

Researcher has used the T-test as a t-test is a type of inferential statistics used to determine if there is significant difference between two variables. If case more that one variables then ANOVA used. It is used to analysed the difference among a group of means in the responses.

4. RESULT AND DISCUSSION

Reliability test of questions is performed where Cronbach alpha value is .651.

Reliability Statistics

Cronbach's Alpha	N of Items
.651	11

Table:1

Test of Hypothesis

H11: there is significant impact of application-based training on fraud prevention.

H01: There is no significant impact of application-based training on fraud prevention.

Case Processing Summary

		N	%
Cases	Valid	118	95.9
	Excluded[a]	5	4.1
	Total	123	100.0

a. Listwise deletion based on all variables in the procedure.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		429.119	117	3.668		
Within People	Between Items	61.014	10	6.101	3.787	.000
	Residual	1884.804	1170	1.611		
	Total	1945.818	1180	1.649		
Total		2374.938	1297	1.831		

Grand Mean = 3.55 table: 3

Table:3 represent, Anova test perform on multiple variable or parameter where calculated significance value is less than alpha value 0.5. so, it can be concluded that Null hypothesis is reject and there is significant impact of application-based training on fraud prevention.

Table:5 Less than 0.05 p value for test of significant impact on fraud prevention shows that respective variables have significance of relation between 'application-based training and its impact on fraud prevention'.

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
I always understand concept in a easy method and better way in classroom.	31.986	119	.000	3.842	3.60	4.08
I get better opportunity to interact with trainer in classroom.	27.942	117	.000	3.669	3.41	3.93
I can ask my questions or clear my doubts in classroom training.	27.769	119	.000	3.642	3.38	3.90
I preffer classroom training because learning enviornment is our favior.	26.224	119	.000	3.175	2.94	3.41
Lecture method training notes are helpful as reference in day to day working for fraud prevention.	28.164	119	.000	3.583	3.33	3.84
I feel more confidence after classroom training	28.727	119	.000	3.483	3.24	3.72
It consist practical example of situation which will apply at workplace.	25.419	119	.000	3.183	2.94	3.43
I always prefer case study which help me to understand easily.	33.231	119	.000	3.767	3.54	3.99
Case study is more convenience for me to get more information.	27.769	119	.000	3.642	3.38	3.90
I would like to prefer case discussion in classroom.	33.231	119	.000	3.767	3.54	3.99
Case study based on factual data and also refer solution for the situation.	31.272	119	.000	3.400	3.18	3.62

Table:4

H02: There is no significance difference between case and classroom training towards learning aspects.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Case study	120	3.48	1.372	.125
Classroom	120	3.23	1.464	.134

Table: 5

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Case study	27.750	119	.000	3.475	3.23	3.72
Classroom	24.137	119	.000	3.225	2.96	3.49

Table:6

Table:5&6 represent hypothesis-2 and T test perform on data to get result and it found that there is significance difference between case study and classroom training methods towards learning aspects. T-test perform on two variable classroom and case study methods to determine difference of mean and to calculate significance value. Significance value is .000 which is less that alpha a=0.05 so researcher can conclude that null hypothesis is rejected. There is difference in classroom and case study methods in training towards learning aspects.

Chi-square test also perform on same variables (Table:7) and its found that P Value is .491 which is less that alpha (a) value 0.5 so research can conclude that alternate hypothesis is accepted and there is difference in classroom and case based

Case-based learning.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Classroom * Case study	120	96.0%	5	4.0%	125	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.459[a]	16	.491
Likelihood Ratio	18.710	16	.284
Linear-by-Linear Association	.480	1	.488
N of Valid Cases	120		

Table:7

5. CONCLUSION AND RECOMMENDATION

The study highlights the significant role that both classroom and case-based teaching methods play in enhancing students' understanding of fraud prevention and ethical decision-making. Classroom instruction provides foundational knowledge of fraud theories, legal frameworks, and preventive controls, while case-based teaching bridges the gap between theory and practice, offering students the opportunity to apply their knowledge to real-world scenarios. Together, these methods foster critical thinking, ethical awareness, and a deeper engagement with the complexities of fraud detection and prevention. The combination proves more effective than either approach alone, suggesting that a blended pedagogical strategy is essential for cultivating the analytical and ethical competencies needed to combat fraud in professional environments.

Application-based training, particularly through case study and classroom simulations, substantially enhances the effectiveness of fraud prevention education. Participants not only acquire knowledge but also develop practical skills necessary for real-world fraud detection and response. The evidence suggests that institutions should prioritize such experiential methods in their training curricula to combat the growing sophistication of fraudulent activities. 85% of respondent has accepted that application-based training is more effective to understand subject easily.

Recommendation:

1) Integrate Hybrid Learning Models: Combine traditional instruction with case-based learning for holistic training.

2) Customize Case Studies: Tailor scenarios to specific industry sectors to enhance relevance.
3) Use Technology: Leverage AI-driven fraud simulation tools to replicate real-time decision-making environments.
4) Trainer Expertise: Employ trainers with practical experience in forensic accounting and fraud investigation.
5) Periodic Refresher Courses: Conduct ongoing training to reinforce and update skills in line with emerging fraud trends.

BIBLIOGRAPHY

1) ACFE. (2022). Report to the Nations on Occupational Fraud and Abuse.
2) Becker, J., & Connolly, J. (2019). The efficacy of experiential learning in financial crime education. Journal of Business Ethics Education, 16, 45-60.
3) Herreid, C. F. (2007). Start with a Story: The Case Study Method of Teaching College Science. NSTA Press.
4) Kim, S., & Patel, R. (2021). Improving Fraud Detection through Scenario-Based Learning: A Case Study Approach. Journal of Financial Crime, 28(3), 871–890.
5) Kolb, D. A. (2015). Experiential Learning: Experience as the Source of Learning and Development (2nd ed.). Pearson Education