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ACTIVITY-BASED EXPERIENTIAL LEARNING FOR BEHAVIOR CHANGE: DESIGNING AND VALIDATING A GAME-ORIENTED FRAMEWORK THAT IMPROVES LEADERSHIP, COMMUNICATION, AND SELF-MANAGEMENT IN INDIVIDUALS AND WORKPLACE TEAMS

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Abstract

The present study investigates the design and validation of a game-oriented experiential learning framework aimed at fostering sustainable behavior change in leadership, communication, and self-management competencies among individuals and workplace teams. Grounded in Kolb's (1984) experiential learning theory and self-determination theory (Deci & Ryan, 2000), the study proposes an Activity-Based Experiential Learning (ABEL) framework that integrates gamification elements such as points, challenges, role-play simulations, and reflective debriefing into structured workplace training. The objective is to empirically examine the effectiveness of this framework in enhancing three core competencies leadership capability, interpersonal communication, and self-management skills in corporate settings. A quasi-experimental pre-test and post-test design was adopted, with 180 participants drawn from information technology and service-sector organizations in India. Validated psychometric instruments measured the dependent variables, while paired-sample t-tests and ANOVA were employed for data analysis. The hypothesis that game-oriented experiential learning significantly improves leadership, communication, and self-management was supported at the $p<0.05$ level. Results demonstrated statistically significant improvements across all three competencies, with effect sizes ranging from moderate to large. The discussion contextualizes these findings within existing literature and proposes implications for organizational learning design. The conclusion affirms that structured, activity-based gamified frameworks constitute a viable, scalable, and evidence-based approach to behavioral development in workplaces.

Keywords: *Experiential Learning[1], Gamification[2], Leadership Development[3], Workplace Communication[4], Self-Management[5].*

1. Introduction

The contemporary workplace, characterized by volatility, uncertainty, complexity, and ambiguity (VUCA), demands that employees and leaders continually develop adaptive behavioral competencies beyond mere technical expertise (Egan, 2022). Among these, leadership, communication, and self-management have emerged

as the most critical soft skills required for organizational success in the twenty-first century (Lacerenza et al., 2017). The World Economic Forum's Future of Jobs Report (2023) identified these competencies as central to workforce readiness, while the National Association of Colleges and Employers (NACE) consistently ranks communication, leadership, and professionalism among the top attributes sought by employers globally. In the Indian context, the India Skills Report (2024) highlighted that only 48.7% of graduates were found employable, with a significant deficit in interpersonal communication, team leadership, and self-regulatory behavior, underscoring the urgency for innovative learning interventions. Traditional training methodologies primarily lecture-based, passive, and content-heavy have demonstrated limited efficacy in translating knowledge acquisition into sustained behavioral change (Bitrián et al., 2024). Research consistently shows that individuals retain approximately 70% of what they experience firsthand compared to merely 10% of what they read or hear passively (Kolb, 2014). This pedagogical gap has propelled interest in experiential learning approaches that immerse participants in realistic, reflective, and application-oriented activities. Kolb's (1984) experiential learning theory, which conceptualizes learning as a four-stage cyclical process of concrete experience, reflective observation, abstract conceptualization, and active experimentation, provides the foundational architecture for such interventions. Complementing this, self-determination theory (SDT) posits that intrinsic motivation, autonomy, competence, and relatedness are fundamental to sustained behavioral engagement (Deci & Ryan, 2000; Wibisono et al., 2023).

Gamification the application of game-design elements such as points, leaderboards, badges, challenges, and narrative-driven scenarios in non-game contexts has gained substantial traction as a strategy for enhancing motivation, engagement, and learning retention in workplace training (Deterding et al., 2011; Rahiman et al., 2023). A systematic review by Nair and Mathew (2024) confirmed that gamification significantly enhances employee engagement and knowledge retention, while Bitrián et al. (2024) empirically demonstrated that gamified e-training systems improve self-efficacy and behavioral compliance among corporate employees. However, the integration of gamification specifically within activity-based experiential learning frameworks targeting leadership, communication, and self-management in Indian workplace settings remains insufficiently explored (Tripathi, 2024). This gap is particularly significant given the growing emphasis on experiential and competency-based training within Indian corporate and educational ecosystems under the National Education Policy (NEP) 2020 framework. The present study addresses this gap by designing and validating an Activity-Based Experiential Learning (ABEL) framework a structured, game-oriented intervention that fuses Kolb's experiential cycle with targeted gamification mechanics and empirically testing its effectiveness in improving leadership, communication, and self-management among professionals in Indian IT and service-sector organizations. The findings contribute to both theoretical understanding and practical application of gamified experiential training for sustainable workplace behavior change.

2. Literature Review

Experiential learning has been widely recognized as a transformative pedagogical approach for developing behavioral competencies in professional settings. Kolb (2014) underscored that genuine learning occurs when individuals engage in direct experiences, reflect on their outcomes, conceptualize patterns, and experiment with new approaches. This cyclical model has been extensively applied in leadership education, where immersive simulations and activity-based scenarios enable participants to practice decision-making, conflict resolution, and team management under controlled yet realistic conditions (Peterson & Kolb, 2018). Building upon this foundation, Egan (2022) proposed a comprehensive framework for leadership learning through games, arguing that game-based pedagogies enhance both cognitive engagement and behavioral transfer when structured around clear learning objectives, competitive dynamics, and reflective debriefing. The effectiveness of gamification in organizational training has received increasing empirical attention over the past decade. Deterding et al. (2011) provided the foundational conceptualization of gamification as the use of game-design elements in non-game

contexts, noting its potential for behavior change and skill development. Extending this, a large-scale study by Rahiman et al. (2023), conducted across Gulf Cooperation Council countries, established that gamification significantly enhanced employee engagement and organizational productivity, with perceived motivation and usefulness serving as key mediating factors. Similarly, Bitrián et al. (2024) demonstrated through structural equation modeling with 1,178 employees that gamification positively influenced information quality, system quality, and enjoyment within e-training platforms, which in turn enhanced employees' self-efficacy and behavioral compliance. Dahalan et al. (2024) confirmed through a meta-analytic review that gamification and game-based learning significantly improved training performance, engagement, retention, and motivation among corporate learners.

Regarding specific competencies, communication skills development through experiential methods has shown promising results. The Harvard Business Publishing Global Leadership Development Study (2024), surveying over 1,100 learning and development professionals, found that 70% rated mastery of diverse leadership behaviors particularly communication and problem-solving as critically important for future organizational needs. In India, Verma (2024) documented that activity-based communication training incorporating role-plays and phonetics labs yielded a 26% improvement in customer satisfaction scores and significant qualitative shifts in participant confidence. Lacerenza et al. (2017) conducted a comprehensive meta-analysis of 335 leadership training studies and reported a 25% increase in learning outcomes and a 20% improvement in overall job performance following structured experiential programs, establishing empirical benchmarks for the field. Self-management, encompassing emotional regulation, time management, goal-setting, and adaptability, constitutes a critical yet often neglected competency in workplace training. Wibisono et al. (2023) demonstrated through PLS-SEM analysis that gamification directly and indirectly enhances work engagement among millennials by satisfying basic psychological needs of autonomy, competence, and relatedness. Tripathi (2024) confirmed within the Indian IT sector that organizational learning culture fosters learning agility a construct encompassing self-regulatory and adaptive behaviors which mediates improved firm performance. The convergence of these findings underscores that game-oriented experiential approaches, when thoughtfully designed, possess robust potential to enhance self-management behaviors. However, integrated frameworks that simultaneously address leadership, communication, and self-management through a unified gamified experiential architecture remain scarce, motivating the present investigation.

3. Objectives

1. To design and implement an Activity-Based Experiential Learning (ABEL) framework integrating game-oriented elements and assess its effectiveness in enhancing leadership, communication, and self-management competencies among workplace professionals.
2. To validate whether statistically significant differences exist in participants' leadership, communication, and self-management scores between pre-intervention and post-intervention phases, and to examine the role of demographic variables (gender, experience, sector) in moderating these outcomes.

4. Methodology

The study adopted a quasi-experimental, single-group, pre-test and post-test research design to evaluate the effectiveness of the Activity-Based Experiential Learning (ABEL) framework. The population comprised professionals from information technology and service-sector organizations based in Bangalore, Delhi-NCR, and Pune, India. A purposive sampling technique was employed to select 180 participants (98 male, 82 female) with professional experience ranging from 2 to 15 years. The intervention spanned six weeks and included 12

structured sessions, each lasting 90 minutes, incorporating game-based activities such as leadership simulation challenges, role-play communication exercises, goal-setting competitions, reflective journaling with gamified rewards, and team-based problem-solving quests with point systems and leaderboards. Three validated psychometric tools were used for measurement: the Multifactor Leadership Questionnaire (MLQ-5X) by Bass and Avolio (1995) for leadership competency, the Interpersonal Communication Competence Scale (ICCS) by Rubin and Martin (1994) for communication skills, and the Self-Management Practice Scale (SMPS) adapted from Frayne and Geringer (2000) for self-regulation. Each instrument demonstrated high internal consistency (Cronbach's alpha ranging from 0.81 to 0.89) in the pilot study conducted with 30 participants. Data were collected through structured questionnaires administered before and after the six-week intervention. Quantitative analysis employed paired-sample t-tests to compare pre-test and post-test mean scores, one-way ANOVA to examine the influence of demographic variables, and Cohen's d to compute effect sizes. All statistical analyses were conducted using SPSS version 28.0 at a 0.05 significance level.

5. Results

Table 1: Demographic Profile of Participants (N=180)

Variable	Category	Frequency	Percentage (%)
Gender	Male	98	54.4
	Female	82	45.6
Age Group	22–30 years	64	35.6
	31–40 years	78	43.3
	41–50 years	38	21.1
Experience	2–5 years	56	31.1
	6–10 years	74	41.1
	11–15 years	50	27.8
Sector	IT	104	57.8
	Service	76	42.2

Table 1 presents the demographic distribution of the 180 participants. The sample comprised 54.4% males and 45.6% females, ensuring reasonable gender balance. The largest age cohort was 31–40 years (43.3%), reflecting mid-career professionals who typically occupy pivotal roles in organizational leadership pipelines. Experience-wise, the majority (41.1%) had 6–10 years of professional tenure, indicating sufficient workplace maturity to meaningfully engage with behavioral training interventions. The sectoral split between IT (57.8%) and service industries (42.2%) enabled cross-industry applicability assessment.

Table 2: Pre-Test and Post-Test Comparison of Leadership Competency Scores

Phase	N	Mean	SD	t-value	df	p-value	Cohen's d
Pre-Test	180	3.12	0.74	8.46	179	0.001	0.63
Post-Test	180	3.78	0.68				

Table 2 reveals a statistically significant improvement in leadership competency scores following the ABEL intervention. The mean score increased from 3.12 (SD=0.74) at pre-test to 3.78 (SD=0.68) at post-test. The paired-sample t-test yielded a t-value of 8.46 (df=179, p=0.001), confirming the improvement was highly significant. Cohen's d of 0.63 indicates a medium-to-large effect size, suggesting that the game-oriented

simulation activities, including leadership challenge scenarios and reflective debriefing, substantially enhanced participants' transformational and situational leadership behaviors.

Table 3: Pre-Test and Post-Test Comparison of Communication Skills Scores

Phase	N	Mean	SD	t-value	df	p-value	Cohen's d
Pre-Test	180	3.24	0.69	9.12	179	0.001	0.71
Post-Test	180	3.98	0.61				

Table 3 demonstrates that communication competency showed the highest improvement among the three variables. The mean score rose from 3.24 (SD=0.69) to 3.98 (SD=0.61), with a t-value of 9.12 (p=0.001) and a large effect size (Cohen's d=0.71). This indicates that game-based role-play exercises, storytelling challenges, and peer-feedback simulations embedded within the ABEL framework were particularly effective in developing interpersonal communication skills, including assertiveness, active listening, empathy expression, and conflict articulation.

Table 4: Pre-Test and Post-Test Comparison of Self-Management Scores

Phase	N	Mean	SD	t-value	df	p-value	Cohen's d
Pre-Test	180	2.96	0.81	7.38	179	0.001	0.58
Post-Test	180	3.54	0.72				

As presented in Table 4, self-management scores improved significantly from a pre-test mean of 2.96 (SD=0.81) to a post-test mean of 3.54 (SD=0.72). The t-value of 7.38 (p=0.001) confirmed statistical significance, while Cohen's d of 0.58 indicated a moderate effect size. The relatively lower (though still significant) effect size compared to communication and leadership suggests that self-management behaviors encompassing emotional regulation, time discipline, and goal persistence require longer reinforcement periods and more sustained gamified feedback loops for deeper internalization.

Table 5: One-Way ANOVA Influence of Professional Experience on Post-Test Leadership Scores

Source	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	4.82	2	2.41	5.34	0.006
Within Groups	79.88	177	0.45		
Total	84.70	179			

Table 5 presents the one-way ANOVA results examining whether professional experience moderated post-intervention leadership scores. The F-value of 5.34 (p=0.006) indicates a statistically significant difference across experience groups. Post-hoc Tukey HSD analysis revealed that participants with 6–10 years of experience (M=3.94) scored significantly higher than those with 2–5 years (M=3.61), while participants with 11–15 years (M=3.82) did not differ significantly from either group. This suggests that mid-career professionals, who are actively navigating leadership transitions, derive the greatest benefit from gamified experiential interventions.

Table 6: Comparative Summary of Effect Sizes Across Competencies

Competency	Pre-Test Mean	Post-Test Mean	Mean Difference	Cohen's d	Improvement (%)
Leadership	3.12	3.78	0.66	0.63	21.2
Communication	3.24	3.98	0.74	0.71	22.8
Self-Management	2.96	3.54	0.58	0.58	19.6

Table 6 provides a consolidated comparative view of improvements across the three target competencies. Communication skills registered the highest improvement at 22.8% with the largest effect size (d=0.71), followed by leadership at 21.2% (d=0.63), and self-management at 19.6% (d=0.58). The pattern suggests that experiential activities involving interpersonal interaction and immediate peer feedback hallmarks of communication-focused game exercises produce more rapid behavioral gains, while internally oriented competencies like self-management require additional structural reinforcement for equivalent impact.

6. Discussion

The findings of the present study provide robust empirical support for the effectiveness of the Activity-Based Experiential Learning (ABEL) framework in enhancing leadership, communication, and self-management competencies among Indian workplace professionals. The statistically significant improvements across all three competencies, with moderate-to-large effect sizes, substantiate both hypotheses and align closely with established international and Indian evidence on experiential and gamified training methodologies. The 21.2% improvement in leadership competency corroborates the meta-analytic findings of Lacerenza et al. (2017), who reported that structured experiential leadership programs produce a 25% increase in learning outcomes and a 20% improvement in job performance. The ABEL framework's leadership simulation challenges which immersed participants in realistic crisis-management, delegation, and strategic decision-making scenarios activated the full spectrum of Kolb's (1984) experiential learning cycle: participants encountered concrete leadership dilemmas (concrete experience), engaged in structured debriefing and reflective journaling (reflective observation), articulated leadership principles and mental models (abstract conceptualization), and applied refined strategies in subsequent game rounds (active experimentation). This cyclical engagement is consistent with Peterson and Kolb's (2018) assertion that leadership capabilities are most effectively developed through iterative experiential practice rather than passive instruction. Furthermore, the ANOVA results indicating that mid-career professionals (6–10 years experience) benefited most significantly echo the Harvard Business Publishing (2024) global study finding that 70% of learning and development professionals consider behavioral versatility the critical leadership imperative, particularly during mid-career transitional phases.

The communication competency's highest improvement (22.8%) and largest effect size (d=0.71) align with Verma's (2024) Indian study documenting significant communication gains through activity-based training methods. The ABEL framework's communication modules encompassing gamified role-plays, negotiation simulations, storytelling competitions, and structured peer-feedback challenges with point-based rewards provided psychologically safe yet competitive environments for practicing assertiveness, empathy, and conflict resolution. Bitrián et al. (2024) confirmed that gamification enhances perceived information quality and engagement within training contexts, while Deterding et al. (2011) theorized that well-designed game elements satisfy autonomy and competence needs central to self-determination theory, thereby driving deeper behavioral engagement. The immediacy of interpersonal feedback inherent in communication exercises appears to accelerate the learning-feedback-refinement cycle, explaining the superior effect size compared to more

introspective competencies. The comparatively moderate but significant improvement in self-management (19.6%, d=0.58) is theoretically coherent. Self-management encompasses internally regulated behaviors such as emotional control, goal persistence, time discipline, and adaptive coping competencies that are less immediately responsive to external gamification mechanics and require sustained reinforcement (Frayne & Geringer, 2000). Wibisono et al. (2023) demonstrated that gamification enhances work engagement by satisfying basic psychological needs, and Tripathi (2024) confirmed within the Indian IT sector that organizational learning culture fosters learning agility, a construct closely aligned with self-management. The ABEL framework's self-management modules including gamified goal-setting challenges, self-monitoring dashboards, and reflective journaling with point rewards did produce significant gains, but the data suggest that longer intervention durations and organizational follow-up mechanisms (booster sessions, digital nudges, manager reinforcement) would be necessary to achieve effect sizes comparable to communication and leadership. Rahiman et al. (2023) similarly observed that gamification's impact on productivity is maximized when embedded within ongoing organizational engagement systems rather than isolated training events.

The study also addresses a critical gap in the Indian context. While the National Education Policy (2020) emphasizes experiential and competency-based learning across educational levels, its translation into corporate training frameworks remains nascent. The India Skills Report (2024) documented persistent employability gaps in communication and leadership, and Tripathi (2024) underscored the mediating role of learning agility in Indian IT firms' performance. The ABEL framework offers a contextually appropriate, scalable, and empirically validated response to these challenges, integrating culturally relevant game scenarios with internationally validated assessment instruments. Practically, the findings carry significant implications for organizational learning and development professionals, suggesting that six-week gamified experiential programs can produce measurable behavioral improvements without requiring extensive technological infrastructure an important consideration for India's diverse corporate landscape comprising both multinational corporations and growing small-to-medium enterprises.

7. Conclusion

The present study conclusively demonstrates that the Activity-Based Experiential Learning (ABEL) framework, integrating game-oriented elements within Kolb's experiential learning cycle, is an effective, scalable, and evidence-based intervention for enhancing leadership, communication, and self-management competencies among Indian workplace professionals. The statistically significant pre-to-post improvements across all three competencies, combined with moderate-to-large effect sizes, validate the framework's theoretical foundation and practical applicability. Communication skills exhibited the highest responsiveness to the gamified experiential approach, followed by leadership and self-management. The moderating role of professional experience, with mid-career professionals showing the greatest gains, offers actionable guidance for targeted deployment. These findings contribute to both academic literature on experiential learning and gamification and to organizational practice, providing human resource development professionals with an empirically grounded blueprint for designing behavioral training interventions. Future research should employ randomized controlled designs, longitudinal follow-up assessments, and cross-cultural comparisons to establish generalizability and long-term durability of the behavioral changes observed.

8. References

1. Bass, B. M., & Avolio, B. J. (1995). *MLQ Multifactor Leadership Questionnaire*. Mind Garden. https://doi.org/10.1037/t03624-000

2. Bitrián, P., Buil, I., & Catalán, S. (2024). Gamification in workforce training: Improving employees' self-efficacy and information security and data protection behaviours. *Journal of Business Research*, *176*, 114569. https://doi.org/10.1016/j.jbusres.2024.114569
3. Dahalan, F., Alias, N., & Shaharom, M. S. N. (2024). Gamification and game-based learning for vocational education and training: A systematic literature review. *Education and Information Technologies*, *29*(2), 1279–1317. https://doi.org/10.1007/s10639-023-11845-y
4. Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
5. Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification." *Proceedings of the 15th International Academic MindTrek Conference*, 9–15. https://doi.org/10.1145/2181037.2181040
6. Egan, J. D. (2022). Exploring terms and proposing a framework for leadership learning through games. *New Directions for Student Leadership*, *2022*(174), 11–22. https://doi.org/10.1002/yd.20496
7. Frayne, C. A., & Geringer, J. M. (2000). Self-management training for improving job performance: A field experiment involving salespeople. *Journal of Applied Psychology*, *85*(3), 361–372. https://doi.org/10.1037/0021-9010.85.3.361
8. Harvard Business Publishing. (2024). *2024 Global Leadership Development Study*. Harvard Business Publishing Corporate Learning. https://www.harvardbusiness.org/leadership-learning-insights/2024-global-leadership-development-study/
9. India Skills Report. (2024). *India Skills Report 2024*. Wheebox, CII, AICTE, AIU, and UNDP. https://wheebox.com/assets/pdf/ISR_Report_2024.pdf
10. Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
11. Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development* (2nd ed.). Pearson FT Press.
12. Lacerenza, C. N., Reyes, D. L., Marlow, S. L., Joseph, D. L., & Salas, E. (2017). Leadership training design, delivery, and implementation: A meta-analysis. *Journal of Applied Psychology*, *102*(12), 1686–1718. https://doi.org/10.1037/apl0000241
13. Nair, L. B., & Mathew, J. (2024). Unlocking potential: Systematic review on the use of gamification in leadership curriculum. *Education and Information Technologies*, *29*(8), 10099–10123.
14. National Education Policy. (2020). *National Education Policy 2020*. Ministry of Education, Government of India.
15. Peterson, K., & Kolb, D. A. (2018). How you learn is how you live: Using nine ways of learning to transform your life. *Berrett-Koehler Publishers*.
16. Rahiman, H. U., Kodikal, R., Suresh, S., & Peter, A. (2023). Game on: Can gamification enhance productivity? *F1000Research*, *12*, 818. https://doi.org/10.12688/f1000research.131579.2
17. Rubin, R. B., & Martin, M. M. (1994). Development of a measure of interpersonal communication competence. *Communication Research Reports*, *11*(1), 33–44.
18. Tripathi, A. (2024). Organizational learning culture and firm performance: The mediating role of learning agility. *Vikalpa: The Journal for Decision Makers*, *49*(3), 151–168.
19. Wibisono, G., Setiawan, Y., Aprianda, B., & Cendana, W. (2023). Understanding the effects of gamification on work engagement: The role of basic need satisfaction and enjoyment among millennials. *Cogent Business & Management*, *10*(3), 2287586.
20. World Economic Forum. (2023). *The Future of Jobs Report 2023*. World Economic Forum. https://www.weforum.org/publications/the-future-of-jobs-report-2023/