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Title: Measuring What Matters: A Study on Leadership Training Among Middle Managers

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Measuring What Matters: A Study on Leadership Training Among Middle Managers

Abstract

Purpose

As global investments in leadership development continues to grow, this paper aims to determine what training methods work best for middle managers, a demography that grapples with the challenges of managing both senior leadership and frontline employees. This study investigates on the perceived effectiveness of different training methods and explores the motivation and perception of middle managers before and after undergoing the experience. The findings of this study could help organisations be more strategic and focused when investing on developing middle managers.

Methodology

A mixed-methods approach was employed involving a survey of 200 middle managers. Regression analysis was then conducted to identify training methods associated with perceived leadership development effectiveness. To complement this analysis, qualitative thematic analysis of open-ended responses was conducted. Anchored on adult learning theory and self-determination theory, the analysis conducted provides deeper insight into participant experiences and perceptions from leadership training.

Findings

Leadership workshops, executive coaching, group projects, and online learning were rated as the most effective methods of leadership training. Among the middle managers surveyed, motivation to undertake leadership training significantly increased after participation, while perception of training value remained stable or slightly improved. Qualitative feedback highlighted the importance of interactivity, personalisation, and relevance to real-world challenges in the design and delivery of leadership training.

Originality

This paper contributes a focused and data-driven examination of leadership training effectiveness among middle managers, an integral group within modern-day organisations. It integrates quantitative and qualitative insights to bridge the gap between training investments and meaningful outcomes in leadership development.

Keywords: leadership development; learning and development; human resource management; adult learning; middle managers

Measuring What Matters: A Study on Leadership Training Among Middle Managers

Introduction

Leadership development is becoming more critical than ever in driving business sustainability and continuity (Brown and Crawford, 2022; Kjellström *et al.*, 2020; McCauley and Palus, 2020). In this pursuit, middle managers play a pivotal role in translating high-level strategies into tactical actions to realise meaningful results (Hortovanyi *et al.*, 2021; Rezvani and Hudson, 2021). In carrying out this role, they face the dual challenges of meeting the expectations of management while keeping their direct reports motivated (Gjerde and Alvesson, 2020; Salas-Vallina *et al.*, 2021). Despite these important factors, the effectiveness of leadership development not only for middle managers, but all employees in general, remains to be a subject of debate (Day *et al.*, 2021; Vogel *et al.*, 2021). Many companies continue to invest significant amounts of money on leadership training without fully understanding the measurable impact of these expenditures (Day *et al.*, 2021; Kjellström *et al.*, 2020).

Building upon these trends, this paper investigates the different methods of conducting leadership training for middle managers and how they are perceived by the demography. Additionally, the motivation levels among middle managers in undertaking leadership training are also explored. While various leadership development studies have focused broadly on senior executives, this study concentrates on middle managers who often act as the translators between strategic vision and day-to-day operations, or connectors between senior management and frontliner staff (Outila *et al.*, 2021; Radaelli and Sitton-Kent, 2016). Their dual role is particularly significant in today's hybrid organisations where alignment is critical. Further, middle managers play a crucial role in both large corporations and small and medium sized enterprises (SMEs) where leadership pipelines may be less formal but equally vital (Kasseeah, 2016). SMEs constitute the majority of enterprises globally thus understanding what works in developing middle managers, albeit directionally, can inform adaptable leadership development strategies (Garavan *et al.*, 2016; Thorpe *et al.*, 2009).

In this study, a survey of 200 middle managers in North America and Europe was conducted towards identifying training methods and practices that yield the most significant improvements in leadership capabilities. In the survey, respondents were asked about the various methods of leadership training that they have experienced in the past, their experiences with the respective approaches, and how the learning journey has changed their perception and view on corporate training as a whole. Through this mixed-method approach, this study aims to advance the understanding of leadership development and adult learning theories. This effort can also bridge the gap between investments on leadership training and their measurable organisational impact. Two research questions (RQ) guide the design and implementation of this study namely RQ1: What leadership training methods are deemed to be effective among the surveyed middle managers?, and RQ2:

What is the general perception and motivation of the surveyed middle managers on leadership training before and after undergoing the experience?

Literature Review and Theoretical Framework

This study was conducted against the backdrop of recent developments in the areas of leadership development and emerging challenges for middle managers. The convergence of these topics presents an opportunity to gain better understanding of how leadership development takes place in the modern-day workplace. From the review conducted, some pertinent areas for further research on leadership development include the need for refinement of existing frameworks, transformative approaches in developing leaders, and enhanced methodological rigour in researching the subject (Vogel *et al.*, 2021). While it is acknowledged that leadership development research has advanced over the years, further explorations are required on its equitable practices, and effectiveness of evaluation towards improving policy and practice (Day *et al.*, 2021). When it comes to researching methods of leadership development, there are views that existing research are overly focused on individual coaching and competencies, which prompts a call for integrating various theoretical perspectives and approaches (Eva *et al.*, 2019). These perspectives on the literature indicate how the areas for further research are rather fundamental in nature, specifically in the way that they seem to point to the need for theoretical integration. While extending theory is not the main objective of this study, it is anchored on a set of theoretical frameworks as a means of observing how the findings reflect the relevant theories or otherwise.

As for research on leadership development effectiveness, there is an indication that potential improvements are observed on key skills such as conflict resolution, quality improvement, and peer collaboration (Mustafa *et al.*, 2020). In realising these outcomes, some of the most effective methods identified within the literature include interactive workshops, video simulations, peer feedback, coaching, mentoring, and action learning (Geerts *et al.*, 2020; Grocutt *et al.*, 2022). With recent developments at the workplace, especially post-COVID-19, the definition of leadership effectiveness has also been expanded to consider ethics; as leaders navigate challenges like self-interest, power, and moral dilemmas (Ciulla, 2020). This development highlights the expansion of dimensions that define leadership efficacy at the workplace. It integrates the factor of ethics with conventional measures of leadership effectiveness such as visioning, communication, and rallying influence. As the focus of this study is on identifying the effectiveness of different methods, there is interest to see how it compares to findings from existing studies.

Taking into consideration the demography of interest in this study, the literature aligns with the conventional view that middle managers play a critical part in organisational change and communication, specifically in translating strategy into actions (Abdullah and Sofyan, 2022). In their role of managing upwards and downwards, middle managers are said to often adopt the role of 'protector' to their direct reports from the stress or pressure from senior management (Gjerde and Alvesson, 2020). Assuming this mediator or bridging

role, there is also expectation for middle managers to embrace technology such as artificial intelligence (AI) to handle quantifiable tasks, while they develop on soft skills such as empathy and humility as part of their pursuit in coaching and motivating employees (Henderikx and Stoffers, 2022). These perspectives on middle managers highlight how they might be prone to challenges related to managing professional relationships and stakeholder expectations at the workplace. The complexity of this dynamic among middle managers builds the rationale of this study in investigating the best ways to prepare them for this demanding role.

More recent studies have expanded the lens of leadership development to include a variety of experiential and technological interventions. Tenschert *et al.* (2024) emphasised the benefits of self-leadership and mindfulness training in fostering stress resilience and emotional regulation. These methods offer new angles for competency building in leadership development which extends beyond instructional training and encourages deeper involvement of participants. In a related domain, Schmidt *et al.* (2025) highlighted the pedagogical value of films as tools to support reflective scenario-based learning within leadership training. This approach builds upon existing practice of observatory learning which is common across leadership training specifically within activities such as case study discussions and role playing. Adjacent to these findings, Wei (2024) discussed a reflexive learning model which has proven to be effective in enhancing leadership for innovation by cultivating tolerance of ambiguity and interdisciplinary thinking. This suggests potential value for middle managers operating in volatile environments.

In terms of technology adoption, the study of Rukadikar and Khandelwal (2024) explored how generative AI tools are increasingly in use for personalised self-upskilling among leaders. Their review of emerging practices showed that how AI fosters greater adaptability and continuous learning which are critical traits for middle managers. In a different but related aspect, Ghasemy (2022) studied sustainability leadership development and found strong evidence for mentoring leadership communities as an effective mode of intervention. These modes align with group-based learning preferences often cited by practitioners of leadership training. Further, Gigliotti *et al.* (2025) conducted a retrospective study of the alumni of a leadership programme and reported how the course contributed to stronger systems thinking and social capital. This highlights the extended organisational value of leadership development and the importance of post-programme integration. Additionally, Shams *et al.* (2024) linked leadership behaviour improvement to identity shifts, suggesting that effective trainings help bridge the learning transfer gap through improved self-awareness.

As the focus of this study is North America and Europe, it is also worth exploring recent studies focusing on other regions (i.e., Asia, Africa) for comparison. In the study of Azman *et al.* (2024) in Southeast Asia, it was found that leadership development faces the systemic challenges of lack of contextualised programmes and talent pipelines. This angle is of interest in this study in ascertaining if similar challenges are faced in Western countries. Meanwhile, (Valerio *et al.*, 2024) highlighted the role of gender in leadership development in Southeast Asia, finding that women's participation in targeted leadership fellowships enhances confidence and

institutional influence. Such an observation surfaces an opportunity for similar studies to include a gender perspective in the future. Similarly in South Africa, (Lewis, 2023) examined the intersection of race and gender in a leadership programme, revealing complexities on how participants experience learning and peer relationships. Access to resource and capabilities is also a factor that can influence training efficacy. In a study conducted in Pakistan, (Zulfqar *et al.*, 2021) evaluated a leadership training and observed a measurable increase in transformational behaviours among academic leaders, which demonstrates the value of leadership training in facilitating behavioural change. (MacKechnie *et al.*, 2022) provided further insight through a systematic review of healthcare leadership programmes in low- and middle-income countries, which identified key themes such as communication and organisational structure as central to leadership success. These studies highlight the importance of regional and industry specific contexts in leadership training design and delivery. As this study focuses on North America and Europe, it complements these findings and contributes to the global understanding of leadership training methods by offering a data-driven perspective that can inform future comparative research.

Two theories are relevant in developing the theoretical framework for this study. First, adult learning theory (ALT) (Knowles *et al.*, 2020) which outlines how adults are self-directed and prefer experiential learning. As the interest of this study is on the different methods that are currently in practice, there is opportunity to see how topical significance and experiential learning play a role in ascertaining which activities are more favoured. The second relevant theory is self-determination theory (SDT) which outlines the intrinsic and extrinsic motivation factors that drive employees towards certain goals (Ryan and Deci, 2020). In the context of this study, SDT relates to the way leadership development is situated across the key priorities and motivations of middle managers, given their unique role of bridging management and operations. ALT and SDT provide an interesting opportunity to see how perspectives from the survey respondents of this study, who are mostly industry practitioners, compare against suggestions made by the theories.

Methodology

In this mixed-method study, a quantitative approach was adopted given its suitability to identify relationships and quantify impact of different training methods on leadership effectiveness improvement. To complement this approach, qualitative thematic analysis was also conducted on written feedback received as part of the data.

A survey of 200 middle managers based in North America and Europe was conducted with primary focus on their experiences with different methods of leadership training (e.g., classroom session, coaching, case study, role play, leadership workshop). On average, the middle managers are within the age group of 30 to 45 and are from both the private and public sectors. The survey also contained questions on their perception and motivation towards leadership training before and after undergoing the said training. The questions on method

effectiveness were intended to surface preference for different approach to leadership training, while the questions on motivation were aimed at understanding how leadership development is perceived in general, and how the perception change or persist after participating. In designing the survey, both quantitative and qualitative questions were asked whereby respondents were asked to rate their experiences with open-ended questions for them to provide subjective feedback. The demography was focused to be in North America and Europe given similarities in terms of working culture between these two regions, which can offer opportunities for comparisons with similar studies conducted with similar demography groups in Asia or Africa; especially reception to remote work before and after COVID-19 (Buehler and Pucher, 2022; Schwoerer *et al.*, 2024; Sullivan, 2012). This study adhered to the ethical guidelines of the institution in which it was conducted. All participants were aware of the voluntary nature of their participation, and no personally identifiable information was collected. The survey questions are presented in Appendix A.

The participants were selected using a convenience sampling method via Prolific, an online research platform that helps researchers reach targeted groups (Novielli *et al.*, 2023). In this case, middle managers with leadership training experience were invited to participate. A total of 200 responses were collected as it is deemed as a reasonable sample size for exploratory regression studies and is consistent with similar research in this field (Hair, 2010). To ensure clarity and content validity, the survey questions were reviewed by two subject matter experts and then pilot-tested with 10 respondents. Feedback received from the pilot helped to refine the wording of several items. Internal consistency of the scaled responses was examined, and responses showed acceptable levels of consistency, indicating that participants interpreted the questions similarly.

From the data gathered, regression analysis was conducted given its ability to model relationships between dependent and independent variables, and provide insights and significance of the relationships (Vetter and Schober, 2018). In the context of this study, the overall effectiveness of leadership training is the dependent variable, while the ratings and responses on the different leadership training methods are the independent variables. Regression analysis was also selected for this study as the dependent variable was continuous, and the independent variables were continuous and categorical. This allowed for inclusion of multiple predictors to facilitate comprehensive analysis of the factors influencing training transfer and effectiveness. Further, this approach offered the ability to ascertain how different approaches compare when they are aimed at the same objectives. The statistical significance of the relationships observed could then be determined towards comparing how it stood against common views on the different methods of leadership training.

The choice of using survey-based research to evaluate leadership development effectiveness is in alignment with several previous studies. Hopkins *et al.* (2022) conducted a survey to assess how women's leadership and peer coaching programmes influence behaviours and practices in human services. Similarly, Batista-Foguet *et al.* (2021) used large-scale surveys to validate leadership assessment tools like the multifactor leadership questionnaire, while Labrague and Obeidat (2022) employed cross-sectional survey data to explore

the role of transformational leadership in mediating work–family conflict in the healthcare sector. Belias *et al.* (2022) also used structured surveys to examine the link between types of leadership and job satisfaction in the tourism sector. These examples demonstrate how survey methods that utilise rating scales and regression analysis are well suited for examining leadership training effectiveness and workplace outcomes.

In addition to quantitative analysis, this study integrates qualitative thematic analysis of open-ended survey responses to gain deeper insight into subjective experiences. This dual-method approach has precedence in leadership development research, such as Turner *et al.* (2022) who used thematic analysis of interviews to evaluate leadership education preferences in the healthcare sector. Douglas *et al.* (2022) applied qualitative thematic coding to assess how leadership development programmes influenced organisational outcomes among aviation executives, while Hughes *et al.* (2023) employed reflexive thematic analysis to understand the strategies used by nurse leaders in Europe. These studies validate the use of thematic analysis as a practical method to complement survey data, particularly when exploring leadership identity.

While the methodology promises several benefits, a few limitations must be acknowledged. The use of convenience sampling limits the generalisability of the findings, as the sample may not fully represent the broader middle management population across all industries or geographies (Emerson, 2021). However, the aim of this study is not to generalise across all contexts, but rather to provide directional insights on which leadership training methods are perceived to be more effective. As such, the results should be interpreted as exploratory than definitive, with the intention of informing future studies that may apply more representative or longitudinal designs. Additionally, this study focused on perceived effectiveness rather than direct measurement of behavioural outcomes post-training. Future research could explore how different leadership training methods affect actual job performance or team outcomes. Qualitative studies such as interviews or case studies may also offer deeper insight into the personal and organisational contexts that shape leadership development success.

Findings

Survey Response on Effectiveness of Leadership Training

In order to conduct to analyse the data, a regression method called ordinary least squares was used. This approach helps determine which leadership training methods are most strongly linked to higher effectiveness ratings by finding the best-fitting relationship between the training methods and respondents' ratings. Data from survey respondents were gathered primarily containing their ratings of different leadership training methods on a scale from 1 (not effective at all) to 5 (highly effective). The dependent variable (i.e., effectiveness of leadership training) was derived from the rating provided by each respondent. This is based on the representation on the input provided to this question as indicator of how effective middle managers find

leadership training to be as a whole. The independent variables for this study are outlined as follows and the results of the regression analysis are summarised in Table I.

- Classroom Training
- Executive Coaching
- Online Learning
- Case Study
- Group Project
- Simulation
- Role Playing
- Leadership Workshop

Variable	Ordinary	Std. Error	t-Statistic	P-Value	95% Conf. Int.
Constant	0.0693	0.285	0.243	0.808	[-0.493, 0.631]
Classroom	0.0509	0.061	0.835	0.405	[-0.069, 0.171]
Coaching	0.2225	0.062	3.588	0.000	[0.100, 0.345]
Online Learning	0.1544	0.054	2.856	0.005	[0.048, 0.261]
Case Study	0.0152	0.064	0.238	0.812	[-0.111, 0.141]
Group Project	0.1833	0.059	3.128	0.002	[0.068, 0.299]
Simulation	0.0768	0.069	1.107	0.270	[-0.060, 0.214]
Role Playing	0.1077	0.056	1.939	0.054	[-0.002, 0.217]
Workshop	0.2476	0.072	3.433	0.001	[0.105, 0.390]
R ²	0.75				
Adjusted R ²	0.73				

Note: The R² and Adjusted R² values indicate that the variance in the dependent variable is explained by the independent variables of the model.

Table I: Regression Coefficients for Leadership Training Effectiveness

In addition to the regression analysis, Table II outlines the mean and standard deviation for independent variables, and Table III outlines the Variance Inflation Factor (VIF) score of the variables. All VIF values are below 5, indicating no severe multicollinearity within the model. The variables are moderately correlated with one another, thus enabling for the variables to be used as part of the regression analysis.

Training Method	Mean	Standard Deviation
Classroom Training	3.55	1.14
Executive Coaching	3.70	1.15
Online Learning	3.15	1.14
Case Study	3.44	1.15
Group Project	3.49	1.15
Simulation	3.53	1.16
Role Playing	3.55	1.17
Leadership Workshop	3.73	1.12

Table II: Mean and Standard Deviation of Independent Variables

Variable	VIF
Classroom Training	1.47
Executive Coaching	1.31
Online Learning	1.26
Case Study	1.36
Group Project	1.38
Simulation	1.62
Role Playing	1.76
Leadership Workshop	1.83

Table III: VIF Scores of the Variables

Based on the results presented in Table I and Table 2, the regression analysis reveals several significant findings. First, the most preferred method of leadership training according to respondents are leadership workshop, executive coaching, group project, and online. On the other hand, methods such as classroom training, case study, and role playing did not appear to be as prominent or rated lower among survey respondents. This suggests that the high level of engagement, personal sharing, and social learning that takes place within the environments of the favoured methods to be factors that make them preferred among the survey respondents. This aligns with both ALT and SDT, as outlined in the theoretical framework section. This possibility is also likely observed in executive coaching whereby the discussion, usually one-on-one, is targeted and focused on the personal challenges and opportunities of the middle managers themselves. One interesting finding is the selection of online learning as a preferred mode of learning, even if can be commonly deemed as isolating or less interactive by some (Hehir *et al.*, 2021; Raza *et al.*, 2021). Online learning was also rated higher than other methods that might be more interactive and engaging in nature (i.e., classroom training, case study, simulation, and role playing. This appears to be a departure from ALT which suggests how high touchpoint learning is more favoured by adult learners.

In addition to the objective questions, subjective and open-ended questions were also asked in the survey based on the following questions: (1) What aspects of leadership training did you find most beneficial?, and (2) What aspects of leadership training did you find least beneficial? From the data gathered, thematic analysis was conducted to identify common themes and patterns within the responses. This involved coding of the responses from across the demography whereby similar codes are categorised into themes that are converted into meaningful insights for better understanding of the data. In terms of beneficial aspects, respondents

highlighted keenness on practical application of the new knowledge or skill that they acquire, especially when applicable in real-world scenarios. Exercises that mimic actual workplace scenarios were deemed to be useful mainly due to how related these experiences are to their actual challenges at the workplace. One respondent noted, “The role plays I’ve been involved in with professional actors were really beneficial.” In alignment with the findings from the ratings, on group-based learning, another theme observed is the preference for interactive methods that involve other learners as well. One respondent mentioned, “The group work was highly relevant to the day-to-day work of a leader.”

Further, respondents appreciated the personalised feedback and coaching that they received from the leadership training that they have attended. This is potentially due to the immediacy of the application of knowledge to the workplace. Another element appreciated by respondents is communication skill improvement, given how it is a critical skill to ensure leadership effectiveness. This can come in the form of either clarity in communication or firmness in providing direction or decision-making. Ultimately, the sense of self-discovery and sustained personal development is an experience that the respondents resonate with. One participant noted, “Leadership training gave me self-awareness, and allowed me to identify what I am weak and strong at.”

With regards to least beneficial aspects of leadership training according to the survey respondents, several themes emerged. Respondents indicated that some content can be overly theoretical. This might stem from training instructors who might be coming from an academic background, or perhaps those who practice more conventional methods of teaching. One respondent mentioned, “The theoretical lectures felt too abstract compared to practical exercises.” Generic and irrelevant materials that were presented as content of the programmes are also deemed to be not beneficial. Some of these criticisms from experiences that do not significantly enlighten or lead to self-discovery among the respondents. Lastly, respondents indicated how sessions that are long and time-consuming to be less efficient and productive in their acquisition of new and useful skills and knowledge.

Survey Response on Motivation to Pursue Leadership Training

As outlined in Table IV, from the sampled data of 200 middle managers, the average motivation level to undertake leadership training prior to participation among participants was relatively high (mean = 3.62), within a Likert scale of 1 to 5, with the motivation level on one’s leadership effectiveness level post-training being even higher (mean = 3.97). This finding suggests that the motivation level of the middle managers surveyed either maintained or increased after participating in leadership training; which is also indicated by the strong positive correlation (0.712). This is indicative of the potential of leadership training as a means of boosting the motivation of employees in leadership role, at least at middle management level, in addition to other aspects of the workplace ecosystem such as culture, benefits, and job satisfaction.

Statistic	Motivation Before	Motivation After
Mean (1 – 5)	3.62	3.97
Standard Deviation	1.08	0.92
Correlation	0.712	-

Statistic	Value
t-statistic	-3.64
Degrees of freedom	434
p-value	< 0.001

Table IV: Motivation Levels Before and After Leadership Training

An open-ended question was also asked in the survey which read, “Please describe any changes in your motivation levels after completing the leadership training.” From the analysis of the responses received, several key themes emerged. Many participants reported an increase in their motivation levels after completing the leadership training that they had undergone. They felt more enthusiastic in applying their newly-acquired skills and knowledge in their roles. A significant number of respondents indicated improvement in confidence levels which in turn boosted overall motivation to work. They felt more capable and ready to tackle impending leadership challenges at the workplace. This implies an emotional impact of a leadership training experience. Participants expressed stronger desire to implement new techniques and strategies which might have also contributed to their increased motivation. It is also an indicator of continuous personal development, which might be inherent to some.

Conversely, some respondents indicated temporary boost in motivation immediately after training, but noted how this increase did not sustain over time. This might be the result of the immediate satisfaction of completing a course, without any certainty of longevity in terms of content relevance. This temporary sense of achievement remains a challenge for most training programmes, as it guarantees no certainty of long-term competency development. A small portion of respondents indicated no significant change on motivation level. This group also cited how the training did not provide new insights directly applicable to their role. While in the minority, this group is still a concern given the amount of money and time spent on leadership training. A smaller group indicated decreased motivation, often due to mismatch of expectations or irrelevance of content within their training, which highlights the importance of learning needs analysis.

Survey Response on Perception on Leadership Training

In addition to questions on motivation on leadership training, the 200 middle managers surveyed was also asked on their perception on leadership training before undertaking a programme. This relates to the value they put on the training itself in being helpful and useful to them; to be rated between a rating of ‘not valuable at all’ (1) to ‘highly valuable’ (5). The goal was to understand how learning intervention might change or maintain their perception of leadership training as a useful investment of their time and commitment. As presented in Table V, the average perception of the value of leadership training among participants is relatively high both before training (mean = 3.79) and after the training (mean = 3.85). Respondents put a generally fair to high value on leadership training, which increases slightly upon completion of training. From the t-test conducted, however, it can be observed how there is no significant difference in change of perception before and after training. The positive correlation between before and after valuation on training (0.752) indicates that participants tend to maintain or improve this perception after completing the training.

Statistic	Perception Before	Perception After
Mean (1 – 5)	3.79	3.85
Standard Deviation	1.13	1.06
Correlation	0.752	-

Statistic	Value
t-statistic	-0.572
Degrees of freedom	434
p-value	0.568

Table V: Perception of Value on Leadership Training Before and After Participation

Qualitative thematic analysis was then conducted on an open-ended question which read, “Please describe any changes in your perception of the value of leadership training after completing the programme.” Many participants reported a heightened appreciation for leadership training, recognising its value in developing essential leadership skills. A significant number of respondents indicated improvements on confidence levels and leadership skills which boosted perception on the value of leadership training. The majority of participants reported positive change in their appreciation of the experience, enhanced self-confidence, and improved leadership skills. A small portion of respondents reported minimal change in their perception. These

respondents cited how training did not provide new insights or was not directly applicable to their roles. This also suggests that while leadership training can be effective in boosting self-confidence, the minimal change in perception of value cited by some respondents highlights the importance of aligning module selection with participants' immediate needs and expectations. There needs to be a consistent drive to attain high level of relevance, engagement, and applicability to ensure that investments in leadership training provide the desired value.

The findings of the analysis conducted reveal the most effective training methods among middle managers, supported by strong model fit ($R^2 = 0.75$) and low multicollinearity. Qualitative feedback reinforced this by highlighting the value of interactivity, personalisation, and real-world application. Motivation levels increased significantly post-training, while perception of leadership training value remained stable or improved slightly. These findings suggest that well-designed training has the potential to positively impact motivation and leadership confidence. That said, sustaining long-term outcomes remains a concern raised by several participants. These insights provide a foundation for the discussion on aligning methods with learner needs and workplace realities, as well as reflections with the theoretical framework of this study.

Discussion

Based on the survey findings, it can be observed how specific leadership training methods such as leadership workshop, executive coaching, and group projects are rated highly by respondents. This finding is consistent with the assertions of ALT and SDT on how adult learners prefer self-directed, experiential, social, and relevant learning experience. While this is the case, the finding on how online learning is also rated highly, even higher than more engaging activities such as role play or case study, reveals an interesting insight on the demography namely North American and European middle managers. This finding prompts a query on whether the working culture in this region shapes the way they perceive leadership training, which is often a part of overall corporate training. Specifically, could the prevalence of remote or online working in these regions lead to this preference? Would the same be observed should a similar study be conducted in another region (e.g., Asia, Africa, Oceania)? Building upon this interesting finding, could there also be a case for further integration of new learning technologies so that more middle managers around the world can be more receptive to online learning? This can potentially enable better cost efficiency given the minimal logistical arrangements and adjustments required. These question present opportunities for further research building upon these findings, which might be limited within the context of this study.

Reflecting on the survey findings regarding motivation and perception on leadership training, it can be seen how the majority of respondents are generally positive and receptive towards leadership training. Although, it might be seen as taking away time from their day-to-day commitment or productivity in doing works and tasks assigned to them. While this is the case, the observation of minority respondents who indicated how the boost

of morale or confidence could be temporary and not sustained over time, raises the question of whether learning content and methodology that are applied today are fully effective. This also surfaces the need for both learning designers and human resource departments to ensure that learning needs of participants are fully aligned and relevant to the content of the training programme. Could there be situations where the solution of a particular competency gap is not even learning? Instead, this might come in the form of changes on policy, system, or process. A clear and definitive problem statement can save all the time and energy before jumping into training as a solution.

Based on the type of training methods that are preferred by the survey respondents, and the majority of them are generally motivated towards leadership training, the onus is on employers to ensure that the selection of methods that they choose for specific groups within the workforce is strategic, targeted, and focus. If we look into the range of methods that are rated higher in this study, there is opportunity for potential integration of the different methods to be compiled into a learning journey that middle managers can undertake together in cohorts. This is observable given the glaring preference for social learning, also in alignment with ALT. The risk of temporary satisfaction and lack of sustenance in training highlights the need for employers to ensure that participants are engaged before, during, and after training experiences. Otherwise, the surfacing or self-discovery that happens during the training is not fully capitalised upon. As observed, most participants felt a boost in confidence and morale in the short-term, but without continuity, this boost cannot be sustained. Could there be follow-ups or check-ins conducted three or six months down the line to ensure programme effectiveness can be improved in the long run?

Limitations and Considerations for Future Research

It must be noted that the use of convenience sampling in this study presents a limitation in terms of the generalisability of the findings. This has been acknowledged within the Methodology section, and while it does not invalidate the insights shared, it suggests that the results should be interpreted as directional rather than definitive. The intention of this paper is to offer an exploratory contribution that informs future research and practice. Further studies involving more representative or longitudinal samples would help extend the usefulness of these findings for both academic and organisational contexts.

To build on the findings of this study, future research should explore how contextual factors (e.g., industry type, organisational culture, delivery format) affect the long-term impact of leadership training. Studies that track behavioural outcomes over time would add to our understanding of what makes training truly effective for middle managers. For practitioners, this study suggests that investing in targeted approaches (e.g., leadership workshops, coaching) can be particularly impactful. Organisations should consider blending these methods and tailoring learning content to align with participants' career stages and learning preferences.

Ensuring strong pre-training motivation and consistent post-training reinforcement can also enhance the return on leadership training investments.

Conclusion

From the analyses conducted in this study, it was observed how the middle managers surveyed prefer training methods such as leadership workshop, coaching, and group project. Meanwhile, their motivation and perception generally improved post-training albeit with varying sustainability. With these findings, there is opportunity for organisations to be more focused and targeted across these methods when developing their middle managers. With the interesting finding on how online learning is also favoured with middle managers in the regions assessed (i.e., North America, Europe), the case is more prevalent in these regions for companies to pursue experimentation and consideration of new learning technologies to enhance the overall online leadership training experience. Regardless of levels of leadership, one element remains to be important in the context of designing leadership training: alignment of learning content and delivery with specific learner needs. There is significant case for blended approach to be adopted, given the variety of methods favoured among the middle managers surveyed.

The ideal situation for leadership training is when pre-training motivation is high, engagement and participation levels during training is consistently active, and post-programme follow through is strong. While this is the aspiration, the likelihood of continuously sustaining such level of performance is highly challenging. This is primarily due to the resources required for leadership training to be done effectively. For example, customised and tailored programme to specific industry or demography require changes on the existing design of an open programme. For one-on-one executive coaching to happen across all levels of leadership, investments are required for the significant hourly rates of executive coaches. While perfection can't be attained, organisations should still aspire to invest on what works best for their target employees. In this regard, the hope is for the findings of this study to assist this intervention and help companies invest better in developing their middle managers towards overall performance improvement at enterprise level.

References

- Abdullah and Sofyan. (2022), "Middle Managers and Dilemmas in the Organisation", *Asian Journal of Research in Business and Management*, doi: 10.55057/ajrbm.2022.4.2.4.
- Azman, N., Sirat, M., Abdul Rahman, S., Ahmad, Y. and Komoo, I. (2024), "Higher education leadership development in selected ASEAN countries: an exploratory study of challenges and prospects in public higher education institutions", *Compare: A Journal of Comparative and International Education*, Vol. 54 No. 7, pp. 1137–1154, doi: 10.1080/03057925.2023.2179869.
- Batista-Foguet, J.M., Esteve, M. and Witteloostuijn, A. van. (2021), "Measuring leadership an assessment of the Multifactor Leadership Questionnaire", *PLOS ONE*, Public Library of Science, Vol. 16 No. 7, p. e0254329, doi: 10.1371/journal.pone.0254329.
- Belias, D., Rossidis ,Ioannis, Papademetriou ,Christos and and Mantas, C. (2022), "Job Satisfaction as Affected by Types of Leadership: A Case Study of Greek Tourism Sector", *Journal of Quality Assurance in Hospitality & Tourism*, Routledge, Vol. 23 No. 2, pp. 299–317, doi: 10.1080/1528008X.2020.1867695.
- Brown, S.M. and Crawford, M.J. (2022), "Thinking about developing business leadership for the post-COVID world", *New England Journal of Entrepreneurship*, Vol. 25 No. 2, pp. 94–102, doi: 10.1108/NEJE-04-2021-0026.
- Buehler, R. and Pucher, J. (2022), "Cycling through the COVID-19 Pandemic to a More Sustainable Transport Future: Evidence from Case Studies of 14 Large Bicycle-Friendly Cities in Europe and North America", *Sustainability*, Vol. 14 No. 12, p. 7293, doi: 10.3390/su14127293.
- Ciulla, J.B. (2020), "Ethics and Effectiveness: The Nature of Good Leadership", *The Search for Ethics in Leadership, Business, and Beyond*, Vol. 50, Springer International Publishing, Cham, pp. 3–32, doi: 10.1007/978-3-030-38463-0_1.
- Day, D.V., Riggio, R.E., Tan, S.J. and Conger, J.A. (2021), "Advancing the science of 21st-century leadership development: Theory, research, and practice", *The Leadership Quarterly*, Vol. 32 No. 5, p. 101557, doi: 10.1016/j.leaqua.2021.101557.
- Douglas, S., Merritt, D., Roberts, R. and Watkins, D. (2022), "Systemic leadership development: impact on organizational effectiveness", *International Journal of Organizational Analysis*, Vol. 30 No. 2, pp. 568–588, doi: 10.1108/IJOA-05-2020-2184.
- Emerson, R.W. (2021), "Convenience Sampling Revisited: Embracing Its Limitations Through Thoughtful Study Design", *Journal of Visual Impairment & Blindness*, SAGE Publications Inc, Vol. 115 No. 1, pp. 76–77, doi: 10.1177/0145482X20987707.
- Eva, N., Wolfram Cox, J., Tse, H.H.M. and Lowe, K.B. (2019), "From competency to conversation: A multi-perspective approach to collective leadership development", *The Leadership Quarterly*, p. 101346, doi: 10.1016/j.leaqua.2019.101346.

- Garavan, T., Watson, S., Carbery, R. and O'Brien, F. (2016), "The antecedents of leadership development practices in SMEs: The influence of HRM strategy and practice", *International Small Business Journal: Researching Entrepreneurship*, Vol. 34 No. 6, pp. 870–890, doi: 10.1177/0266242615594215.
- Geerts, J.M., Goodall, A.H. and Agius, S. (2020), "Evidence-based leadership development for physicians: A systematic literature review", *Social Science & Medicine*, Vol. 246, p. 112709, doi: 10.1016/j.socscimed.2019.112709.
- Ghasemy, M. (2022), "Replication Data for: Approaches to education for sustainability (EfS) leadership development: A comparison of Malaysian and Japanese academics based on PLSe2 and ML methodologies", Harvard Dataverse, doi: 10.7910/DVN/URLOYK.
- Gigliotti, R.A., Blank Shavelsky, M., Goldthwaite, C., Spear, S.E. and Waran, V. (2025), "Retrospective Review of Leadership Development Programs: Alumni Perceptions of Value, Influence, and Organizational Outcomes", *Journal of Leadership Studies*, Vol. 18 No. 4, pp. 18–35, doi: 10.1002/jls.21917.
- Gjerde, S. and Alvesson, M. (2020), "Sandwiched: Exploring role and identity of middle managers in the genuine middle", *Human Relations*, Vol. 73 No. 1, pp. 124–151, doi: 10.1177/0018726718823243.
- Grocutt, A., Gulseren, D., Weatherhead, J.G. and Turner, N. (2022), "Can mentoring programmes develop leadership?", *Human Resource Development International*, Vol. 25 No. 4, pp. 404–414, doi: 10.1080/13678868.2020.1850090.
- Hair, J.F. (Ed.). (2010), *Multivariate Data Analysis*, 7. ed., Pearson Prentice Hall, Upper Saddle River, NJ.
- Hehir, E., Zeller, M., Luckhurst, J. and Chandler, T. (2021), "Developing student connectedness under remote learning using digital resources: A systematic review", *Education and Information Technologies*, Vol. 26 No. 5, pp. 6531–6548, doi: 10.1007/s10639-021-10577-1.
- Henderikx, M. and Stoffers, J. (2022), "An Exploratory Literature Study into Digital Transformation and Leadership: Toward Future-Proof Middle Managers", *Sustainability*, Vol. 14 No. 2, p. 687, doi: 10.3390/su14020687.
- Hopkins, K., Meyer, M., Afkinich, J., Bialobrzeski, E. and Perry, V. (2022), "Impact of leadership development and facilitated peer coaching on women's individual, collective, and organizational behaviors in human services", *Nonprofit Management and Leadership*, Vol. 32 No. 3, pp. 387–408, doi: 10.1002/nml.21487.
- Hortovanyi, L., Szabo, R.Z. and Fuzes, P. (2021), "Extension of the strategic renewal journey framework: The changing role of middle management", *Technology in Society*, Vol. 65, p. 101540, doi: 10.1016/j.techsoc.2021.101540.
- Hughes, V., Wright, R., Taylor, J., Petchler, C. and Ling, C. (2023), "A qualitative descriptive study of effective leadership and leadership development strategies used by nurse leaders in European island countries", *Nursing Open*, Vol. 10 No. 2, pp. 1071–1082, doi: 10.1002/nop2.1374.

- Kasseeah, H. (2016), "The performance of small firms: Does formality matter?", *Journal of Small Business & Entrepreneurship*, Vol. 28 No. 6, pp. 431–448, doi: 10.1080/08276331.2016.1202094.
- Kjellström, S., Stålné, K. and Törnblom, O. (2020), "Six ways of understanding leadership development: An exploration of increasing complexity", *Leadership*, Vol. 16 No. 4, pp. 434–460, doi: 10.1177/1742715020926731.
- Knowles, M.S., Holton Iii, E.F., Swanson, R.A. and Robinson, P.A. (2020), *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development*, 9th ed., Routledge, doi: 10.4324/9780429299612.
- Labrague, L.J. and Obeidat, A.A. (2022), "Transformational leadership as a mediator between work–family conflict, nurse-reported patient safety outcomes, and job engagement", *Journal of Nursing Scholarship*, Vol. 54 No. 4, pp. 493–500, doi: 10.1111/jnu.12756.
- Lewis, C.P. (2023), "Leadership development, gender and race: Intersectional insights from South Africa", *International Journal of Training and Development*, Vol. 27 No. 1, pp. 75–98, doi: 10.1111/ijtd.12285.
- MacKechnie, M.C., Miclau, T.A., Cordero, D.M., Tahir, P. and Miclau, T. (2022), "Leadership development programs for healthcare professionals in low-and middle-income countries: A systematic review", *The International Journal of Health Planning and Management*, Vol. 37 No. 4, pp. 2149–2166, doi: 10.1002/hpm.3457.
- McCauley, C.D. and Palus, C.J. (2020), "Developing the theory and practice of leadership development: A relational view", *The Leadership Quarterly*, p. 101456, doi: 10.1016/j.leaqua.2020.101456.
- Mustafa, S., Stoller, J.K., Bierer, S.B. and Farver, C.F. (2020), "Effectiveness of a Leadership Development Course for Chief Residents: A Longitudinal Evaluation", *Journal of Graduate Medical Education*, Vol. 12 No. 2, pp. 193–202, doi: 10.4300/JGME-D-19-00542.1.
- Novielli, J., Kane, L. and Ashbaugh, A.R. (2023), "Convenience sampling methods in psychology: A comparison between crowdsourced and student samples", *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, Educational Publishing Foundation, US, doi: 10.1037/cbs0000394.
- Outila, V., Piekkari, R., Mihailova, I. and Angouri, J. (2021), "'Trust But Verify': How middle managers in a multinational use proverbs to translate an imported management concept", *Organization Studies*, Vol. 42 No. 10, pp. 1581–1601, doi: 10.1177/0170840620934065.
- Radaelli, G. and Sitton-Kent, L. (2016), "Middle Managers and the Translation of New Ideas in Organizations: A Review of Micro-practices and Contingencies", *International Journal of Management Reviews*, Vol. 18 No. 3, pp. 311–332, doi: 10.1111/ijmr.12094.
- Raza, S.A., Qazi, W., Khan, K.A. and Salam, J. (2021), "Social Isolation and Acceptance of the Learning Management System (LMS) in the time of COVID-19 Pandemic: An Expansion of the UTAUT Model", *Journal of Educational Computing Research*, Vol. 59 No. 2, pp. 183–208, doi: 10.1177/0735633120960421.

- Rezvani, Z. and Hudson, P. (2021), "How do middle managers really make decisions within the oil and gas industry?", *Safety Science*, Vol. 139, p. 105199, doi: 10.1016/j.ssci.2021.105199.
- Rukadikar, A. and Khandelwal, K. (2024), "Leadership development through self-upskilling: role of generative artificial intelligence", *Development and Learning in Organizations: An International Journal*, Vol. 38 No. 4, pp. 27–30, doi: 10.1108/DLO-01-2024-0005.
- Ryan, R.M. and Deci, E.L. (2020), "Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions", *Contemporary Educational Psychology*, Vol. 61, p. 101860, doi: 10.1016/j.cedpsych.2020.101860.
- Salas-Vallina, A., Alegre, J. and López-Cabrales, Á. (2021), "The challenge of increasing employees' well-being and performance: How HUMAN RESOURCE MANAGEMENT practices and engaging leadership work together toward reaching this goal", *Human Resource Management*, Vol. 60 No. 3, pp. 333–347, doi: 10.1002/hrm.22021.
- Schmidt, G.B., Van Dellen, S.A. and Islam, S. (2025), "Ready, Set, Leadership Development! Using Films in Developing Leaders", *New Directions for Student Leadership*, Vol. 2025 No. 185, pp. 39–43, doi: 10.1002/yd.20656.
- Schwoerer, R., Bueechl, J., Beldarrain, Y. and Härting, R. (2024), "The Effects of Remote Work on Employee Satisfaction: An Eastern-Western Cross-Cultural Analysis", *Procedia Computer Science*, Vol. 246, pp. 1309–1318, doi: 10.1016/j.procs.2024.09.562.
- Shams, K., Dailey, S. and Steffensmeier, T. (2024), "Unveiling the impact: A mixed-method inquiry into the impact of leadership development programs", *Journal of Leadership Education*, doi: 10.1108/JOLE-01-2024-0029.
- Sullivan, C. (2012), "Remote Working and Work-Life Balance", in Reilly, N.P., Sirgy, M.J. and Gorman, C.A. (Eds.), *Work and Quality of Life*, Springer Netherlands, Dordrecht, pp. 275–290, doi: 10.1007/978-94-007-4059-4_15.
- Tenschert, J., Furtner, M. and Peters, M. (2024), "The effects of self-leadership and mindfulness training on leadership development: a systematic review", *Management Review Quarterly*, doi: 10.1007/s11301-024-00448-7.
- Thorpe, R., Cope, J., Ram, M. and Pedler, M. (2009), "Leadership development in small- and medium-sized enterprises: the case for action learning", *Action Learning: Research and Practice*, Vol. 6 No. 3, pp. 201–208, doi: 10.1080/14767330903299399.
- Turner, S.L., Tesson, S., Butow, P., Vachan, B., Chan, M.-K. and Shaw, T. (2022), "Integrating Leadership Development into Radiation Oncology Training: A Qualitative Analysis of Resident Interviews", *International Journal of Radiation Oncology*Biophysics*Physics*, Vol. 113 No. 1, pp. 26–36, doi: 10.1016/j.ijrobp.2021.09.051.
- Valerio, E., Spence, R. and Adapa, S. (2024), "Women's leadership development in agricultural research: an empirical study in Southeast Asia and the Pacific", *Cogent Education*, Vol. 11 No. 1, p. 2351240, doi: 10.1080/2331186X.2024.2351240.

- Vetter, T.R. and Schober, P. (2018), "Regression: The Apple Does Not Fall Far From the Tree", *Anesthesia & Analgesia*, Vol. 127 No. 1, pp. 277–283, doi: 10.1213/ANE.00000000000003424.
- Vogel, B., Reichard, R.J., Batistič, S. and Černe, M. (2021), "A bibliometric review of the leadership development field: How we got here, where we are, and where we are headed", *The Leadership Quarterly*, Vol. 32 No. 5, p. 101381, doi: 10.1016/j.leaqua.2020.101381.
- Wei, J. (2024), "Reflective learning: a new leadership development framework driving engineering innovation", *Reflective Practice*, Vol. 25 No. 3, pp. 352–377, doi: 10.1080/14623943.2024.2320141.
- Zulfqar, A., Valcke, M., Quraishi, U. and Devos, G. (2021), "Developing Academic Leaders: Evaluation of a Leadership Development Intervention in Higher Education", *SAGE Open*, Vol. 11 No. 1, p. 215824402199181, doi: 10.1177/2158244021991815.

Appendix A: Survey Questions

No.	Questions for Survey of Middle Managers
<i>Section 1: Demographic Information</i>	
1	What is your age? <ul style="list-style-type: none"> • < 30 • 31 – 35 • 36 – 40 • 41 – 45 • > 45
2	What is your gender? <ul style="list-style-type: none"> • Male • Female • Prefer to not say
3	How many years of experience do you as a middle manager? <ul style="list-style-type: none"> • Less than a year • 1 – 3 years • 4 – 6 years • 7 – 10 years • More than 10 years
4	What industry do you work in? <ul style="list-style-type: none"> • Manufacturing • Technology • Healthcare • Finance • Other (please specify)
5	In which region do you work? <ul style="list-style-type: none"> • North America • Europe
<i>Section 2: Participation in Leadership Training & Motivation and Perception Pre-Training</i>	
6	What type of leadership training have you participated in within the past 12 months? (Select all that apply) <ul style="list-style-type: none"> • Classroom Training • Executive Coaching • Online Learning • Case Study Discussion • Group Project • Simulation • Role Play • Leadership Workshop • Other (please specify)
7	Before undertaking the leadership training, how motivated were you to participate in the programme? <ol style="list-style-type: none"> 1. Not motivated at all 2. Slightly not motivated

	<ol style="list-style-type: none"> 3. Neutral 4. Slightly motivated 5. Highly motivated
8	<p>Before undertaking the leadership training, how valuable do you perceive leadership training to be for your personal and professional development and growth?</p> <ol style="list-style-type: none"> 1. Not valuable at all 2. Slightly not valuable 3. Neutral 4. Slightly valuable 5. Highly valuable
<i>Section 3: Effectiveness of Training Methods</i>	
9 – 16	<p>For each of the methods that you have experienced, please rate its effectiveness level on a scale of 1 to 5:</p> <ul style="list-style-type: none"> • Classroom Training • Executive Coaching • Online Learning • Case Study Discussion • Group Project • Simulation • Role Play • Leadership Workshop
<i>Section 4: Motivation & Perception Post-Training</i>	
17	<p>After undertaking the leadership training, how motivated are you as a leader and participant in applying the knowledge and skills that you might have acquired?</p> <ol style="list-style-type: none"> 1. Not motivated at all 2. Slightly not motivated 3. Neutral 4. Slightly motivated 5. Highly motivated
18	<p>After completing the leadership training, how valuable do you perceive leadership training to be for your personal and professional development and growth?</p> <ol style="list-style-type: none"> 1. Not valuable at all 2. Slightly not valuable 3. Neutral 4. Slightly valuable 5. Highly valuable
19	Please describe any changes in your motivation levels after completing the leadership training. (Open-ended response)
20	Please describe any changes in your perception of the value of leadership training after completing the programme. (Open-ended response)
21	What aspects of leadership training did you find most beneficial? (Open-ended response)
22	What aspects of leadership training did you find least beneficial? (Open-ended response)
23	Do you have any suggestions for improving leadership training programmes in general? (Open-ended response)