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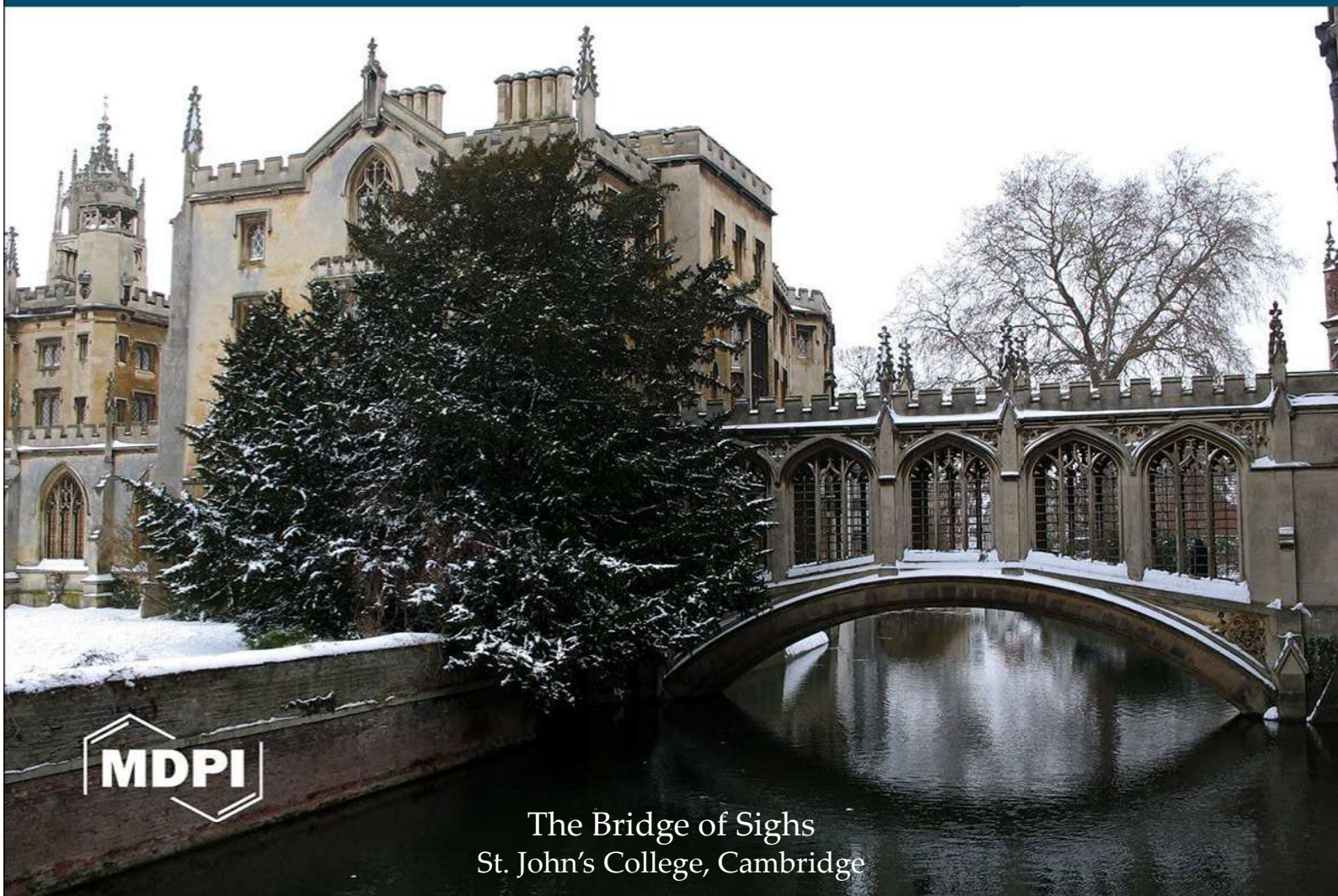
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Maximizing the Impact and ROI of Leadership Development: Theory and Evidence

Executive Summary

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The Bridge of Sighs
St. John's College, Cambridge

Cover article: Special Issue on Rethinking Leadership Development

Maximizing the Impact and ROI of Leadership Development: A Theory- and Evidence-Informed Framework

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The Executive Summary

The Cover Article for the Special Edition on [Rethinking Leadership Development](#) presents gold-standard evidence, innovative theory (novel models and frameworks), and a set of principles to maximize program impact and the return on investment (ROI). The content covers a wide range of aspects of leadership development and is intended to apply effectively to different contexts across regions and sectors.

The article's central framework, The Optimizing System, includes a robust set of 65 evidence-informed strategies that can be implemented as a foundation (9), and before (23), during (17), at the conclusion of (11), and sometime after (5), development programs.

Given the breadth of work presented, this executive summary was created to consolidate key content for quick reference, the details of which are described in the article, along with examples of practical application. The corresponding article page number and Optimizing System strategy ("OS") for each of the sections below are indicated as "BS p. XX, OS ZZ". When referencing, please cite the (full) article using the details at the bottom of this page.



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The Context: Leadership Development

The investment and rationale

Upwards of 60 billion USD is spent on leadership development every year¹. This investment is justified as a source of competitive advantage²⁻⁵, a key retention strategy⁶⁻¹⁰, and essential for optimal performance at every level^{2,11-13}.

The expectation of results

Consequently, funders expect that programs demonstrate worthwhile impact outcomes and a clear return on investment (ROI).

The two major problems

Despite evidence of successful interventions¹⁴⁻²⁵, many programs underperform or fail altogether^{3,26-34}, resulting in wasted time and money, and even potential harm³⁵⁻³⁹. Furthermore, it is largely unclear what works best, in which circumstances, and why^{25,34,37,39-42}, since the quality of research is predominantly anecdotal (low)^{15,43} and many seminal models are quite dated.



BS p. 3, 5

Our Purpose and Sources (Methodology)

Our purpose

This research focused on creating a novel framework and set of principles, informed by innovative theoretical models and gold-standard evidence of effective program design, delivery, and evaluation. The purpose was for these resources to support outstanding leadership through enhanced quality programs with maximum impact and clear ROI^{2,5,40,44-49}.

Our sources

To achieve our purpose, we combined three kinds of research (data sources):

- A forthcoming companion article (Geerts, 2024)⁵⁰ that established the theoretical and empirical foundation, including details of the novel models and frameworks,
- 4 distinct systematic literature reviews on leadership development for professionals in various sectors, guided by specialist librarians from the universities of Cambridge^{15,43} and Oxford¹⁴, and
- A literature review specifically on “training transfer”, or the application of learning to the workplace.



BS p. 8

Results

The evidence foundation

The evidence informing this study derives from an in-depth analysis of nearly 200 primary research articles ($k = 172$), including 30 gold-standard quality studies, as well as prominent literature reviews and large-scale meta-analyses^{3,24,33,36,51,52}. The unique set of gold-standard elements is presented in Table 1 below.

The theoretical foundation (novel models and frameworks)

The gold-standard evidence informed the creation of a complementary collection of innovative theory, including:

- Novel definitions of “leadership”, “management”, and other key terms,
- 11 principles of leadership development (Table 2),
- 8 unique models and frameworks,
- The main framework of 65 strategies, called the “The Optimizing System” (Table 3), and
- The concept of A Leadership Organization (ALO).

Each is presented below. These resources are intended to apply effectively to programs of different scopes and sizes in various contexts across regions and sectors^{15,53}. Given that leadership normally takes place in dynamic and complex environments, as noted in the Principles (Table 2), adapting leadership practice and development to the local context may be beneficial.



Definitions: Leadership, Development, and Integration

Defining “leadership”, “leadership development”, “integration”, etc., matters because these terms are used commonly, but inconsistently^{43,50}, and there is no definitive set of definitions³⁵. Extensive research informed the collection below.

Leadership

Leadership is the process of leaders and team members collaborating meaningfully and responsibly to realize a shared purpose and vision (True North). The opposite extreme is power, with management in the middle.

Power is the capacity to control others without their consent, including through force.

Management is the process of exercising authority to ensure others produce predictable, effective, and efficient results.

A **leader** is anyone who takes responsibility or is ultimately accountable for the process of realizing a shared purpose and vision (True North) in a given situation.

A **team member** is anyone who collaborates meaningfully and responsibly in the process of inspiring others to realize a shared purpose and vision (True North).

Development

Leader development is the intentional process of striving to enhance individuals’ leadership knowledge, capabilities, capacity, and performance.

Leadership development is the intentional process of striving to enhance collective leadership knowledge, capabilities, capacity, and performance in groups, such as teams, organizations, and communities.

Developmental activities refer to structured formal and informal experiences that are intended to facilitate development through enhanced knowledge, capabilities, capacity, and performance.

Leadership Integration

Talent optimization/management refers to the structured collection of formal human resources (HR) and organizational development (OD) strategies, requirements, and resources available to staff throughout their tenure, which are intended to maximize their engagement and performance.

Organizational culture refers to the explicit and implicit priorities, assumptions, expectations, values, norms, practices, language, and symbols in an organization that convey meaning and influence behavior⁵⁴.

True North elements refer to the collection of an organization’s ultimate *raison d’être*: its purpose, vision, mission, and values toward which the strategic plan and all other organizational functions should be directed. This also includes organizational standards of excellence.

A **Leadership Organization (ALO)** is a learning organization⁵⁵ in which leadership is an expectation of all staff, who are supported by specialized training, corresponding talent optimization, and a conducive organizational culture.



Gold-Standard Elements of Program Design, Delivery, and Evaluation

Each of the gold-standard elements in this unique collection is linked by evidence to improved outcomes at different levels. The collection derives from the only two systematic literature reviews in the field to isolate findings from top-quality studies using a validated instrument.

Table 1. Gold-standard elements of program design, delivery, and evaluation.

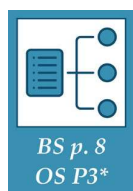
Category	Element ^a	Element Details
Design	Conduct a pre-program needs and gaps analysis	
	Apply an outcomes-based design approach	Please see Table 4 for an example
	Define explicit program goals	
	Have participants select personalized goals	
	Incorporate the principles of adult learning ⁵⁶	(Pre-program): Motivation to learn; 1. Self-directed; 2. Participants' experience as the basis; 3. Content that is practical and relevant to participants; 4. Outcomes-based
	Incorporate a leadership capability framework	For example, the LEADS in a Caring Environment framework
	Embed an application of the learning/training transfer strategy	
Calculate the return on investment (ROI)		
Personnel: faculty	Mixed	Internal/external to the organization; and experts/practitioners
Design: developmental activities	Individual	Multi-source feedback (MSF) and 360-assessments, psychometrics, goal setting, Leadership Development Plans (LDPs), certifications
	Educational	Lectures, webinars, small-group discussions, guest speakers, case study analyses, site visits, and assignments
	Experiential	Role play, simulations, training, impact projects, application exercises, internships, job shadowing, and presentations
	Relational	Individual and peer coaching, mentoring, networking, and engagement in a Community for Practice
	Resources	Readings, reflective journals, toolkits
Outcomes	Desired outcomes according to the Kirkpatrick (2006) framework ^b levels: Satisfaction (1), Attitudes and perceptions (2a), Knowledge and skills (2b), Subjective behavior change (3a), Objective behavior change (3b), Organizational change (4a), and Benefit to patients (4b)	For a revised framework of program outcomes, please see Table 5

Evaluation	<i>Focus</i> of evaluation: both the program and participant outcomes	
	<i>Type of data</i> collected: both quantitative and qualitative	
	<i>Type of data</i> collected: both objective and subjective	
	<i>Raters</i> : multiple	E.g., self, peer, program faculty, work-place supervisor
	<i>Control</i> group	
	<i>When</i> data were collected: pre/baseline ^c , post, and post-post	

^a “Elements” refers to components of leadership development programs from top-quality studies (k = 30) identified in Geerts et al. (2020)¹⁵ and Lyons et al. (2020)¹⁴

^b Kirkpatrick and Kirkpatrick’s (2006)⁵⁷ four-part model categorizing the reported outcomes of training programs

^c “Baseline” = at the program outset, “post” = at the program conclusion, “post-post” = sometime after the conclusion (6 – 9 months).

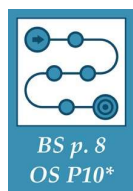


Principles of Leadership Development

The following 11 principles of leadership development represent overarching characteristics or tenets of optimal programs based on an extensive, multi-round, iterative analysis of all the theory and evidence.

Table 2. Principles of leadership development.

No.	Principle of Leadership Development
	Pre-program Motivated and invested personnel with shared accountability
1.	Timely, customized, co-created, contextual, and aligned with the organizational needs and opportunities, True North elements, including the strategic plan/priorities, the talent optimization strategy, and the organizational context
2.	Integrated, coordinated, and embedded in the organizational culture, system-wide, including in all aspects of talent optimization
3.	Evidence-informed (design), including regarding training transfer
4.	Experiential and application- and outcomes-based, as well as engaging, with full group participation
5.	Aligned with the principles of adult and professional learning, including being multi-faceted with optionality
6.	Capacity-growing through increased self-awareness, efficacy, and adaptability
7.	Evaluated (program and outcomes) and evolving (during and after)
8.	Explicit about prioritizing expertise and equity, diversity, inclusion, and accessibility (EDIA)
9.	Enduring (individual) and sustainable (organizational)
10.	Relational and community-centered



The Optimizing System Framework for Maximizing Leadership Development

The Optimizing System framework includes gold-standard program elements and 65 strategies for maximizing the impact and ROI of leadership development. These include a foundational set (F), and strategies that can be implemented before (P = Pre), during (D), at the conclusion of (C), and sometime after (A) programs and are categorized into those concerning design, delivery, personnel, direct application, evaluation, and organizational culture and support.

The “*” indicates strategies supported by gold-standard evidence and “ideally” indicates strategies pertaining to Leadership Organizations (ALOs).

Table 3. The Optimizing System Framework.

Foundations for Leadership Development Programs (“F”, $n = 9$)		
Type	No.	Strategy
Foundational models	F1 *	Have a shared leadership model and capability framework as the common conceptualization and language of leadership
	F2 *	Earn executive support for leadership development as a key strategic enabler and investment in their people
Organizational culture	F3 *	Embed leadership development as a key component of talent optimization, aligned with the overall organizational purpose, values, vision, mission, and strategy (True North)
	F4 *	Provide funding and/or resources and protected time for development
	F5	Ensure there is a safe culture of learning and leadership within the program and in the organization
Design	F6	Ideally, have developed a comprehensive ecosystem of leadership development interventions, experiences, and resources available to staff at all levels, aligned to career pathways
Leadership integration	F7	Ideally, have distributed leadership organization-wide, fully integrated into talent optimization, embedded in the organizational culture, and is an accountability expectation of all staff to develop and support others’ development
	F8	Ideally, synthesize graphically the various forms of leadership development and integration, as well as their interconnectivity to each other and to career pathways for all people, in a blueprint
Organizational support	F9	Develop a communications strategy for the program to relay progress and celebrate achievements
Pre-Leadership Development Strategies (“P”, $n = 23$)		
Type	No.	Strategy
Context and engagement	P1 *	Conduct a needs, gaps, opportunities, and strategic priorities analysis involving key affected parties (stakeholders) to inform program goals and to generate engagement and support
	P2 *	Determine the scale and scope of the program, with a preliminary consideration of return on investment (ROI)
Design	P3 *	Apply a robust outcomes-based design strategy, beginning with selecting explicit program goals
	P4 *	Select ensuing desired outcomes, including level of mastery, at various levels
	P5	Ensure that diversity, equity, inclusion, and accessibility (EDIA) are prioritized in the selection of participants, faculty, speakers, and content
Participants	P6 *	Select participants intentionally to address organizational needs and priorities
	P7 *	Address participants’ motivation to learn and ensure that they can commit fully to the program with supervisor and sponsor support
	P8 *	Have participants create a Leadership Development Plan (LDP) that includes personalized goals and desired outcomes aligned to their organizational plans and career pathways
	P9 *	Ideally, align programs to internal and/or external professional requirements (e.g., Maintenance of Certification), distinctions, or credentials
Design	P10 *	Select evidence-based program details (content, faculty, developmental activities, resources, structure, etc.) intentionally to achieve identified targets, customized for the participant group

Faculty and guest speakers	P11 *	For faculty and guest presenters, prioritize diverse, mixed teams (internal/external and experts/practitioners)
Design: curriculum	P12 *	Customize the curriculum according to pre-program engagement and the participant group, and embed the leadership model and capability framework
	P13	Reserve in-program time for emerging issues/topics
Design: developmental activities	P14 *	Select developmental activities according to their intended impact on desired outcomes and offer a variety
	P15 *	Embed activities in reflective or experiential learning cycles
Direct transfer strategies	P16 *	Ensure that application/transfer is included explicitly throughout
Design: structure and formal	P17 *	Select the optimal program structure and format
	P18 *	Incorporate the principles of leadership development and adult learning
Delivery	P19	For programs involving mixed participant samples, include designation-specific cohorts or syndicate sessions
	P20 *	Develop a robust evaluation framework for the program, including the ROI, and for participants, and consider a control group
Evaluation	P21 *	Establish relevant baseline measures
	P22 *	Conduct a barriers and enablers assessment and apply results to remove or circumvent obstacles and leverage enablers
	P23 *	Communicate explicitly the purpose, goals, content, outcomes, and evaluation framework of programs overall and individual components to establish a shared understanding and accountability among providers, faculty, participants, and other affected parties

During-Leadership Development Strategies (“D”, $n = 17$)

Type	No.	Strategy
Direct transfer strategies	D1	Have participants select and engage accountability teams
	D2	Host a program launch and orientation event with senior leader support to level set and introduce personnel
Design	D3 *	Provide networking opportunities with program colleagues and faculty, internal senior leaders, guest speakers, past program graduates, etc.
	D4	Immerse in an internal Community for Practice (when available) to discuss, share resources, and connect more widely
	D5 *	Communicate to faculty and participants the purpose, relevance, rationale, and evaluation of each session, as well as the connection to other sessions and components
Delivery	D6 *	Maximize participant engagement and hold them accountable for attendance, in-class participation, and application/asynchronous exercises
	D7 *	Demonstrate a personal interest in all participants and their individual learning and development, as well as actively incorporating their expertise
	D8 *	Embed discussions of experiences and lessons from application exercises regularly to enhance and extend learning, as well as promoting accountability
	D9	Highlight emerging key themes, learnings, tensions, and ongoing questions throughout through different lenses
Feedback and evaluation	D10 *	Ensure all participants are provided with formal performance feedback from several sources during the program
	D11	Routinely provide time for participants to self-evaluate their progress with respect to their LDPs, and have them share their results with their accountability teams and adjust their goals accordingly
	D12	Collect informal feedback regularly from participants regarding effectiveness and proposed improvements and adapt the delivery accordingly

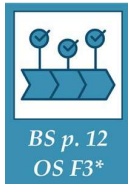
Design: curriculum	D13 *	Collect formal anonymous feedback regularly from participants on the program, communicate the results to relevant affected parties, adjust accordingly, and communicate adjustments to participants
	D14 *	Provide tools and resources (frameworks, checklists, models, technologies, services, etc.) that participants can sample in class and apply to their work
	D15	Engage with the dynamic and contextual nature of leadership and address emerging important internal and external issues as they arise
	D16	Gather input from participants and other affected parties on emerging priority topics and include them in the program as it develops
Direct transfer strategies	D17	Remind participants of the end-of-program culminating activity so they focus and prepare

Program Conclusion Leadership Development Strategies ("C", n = 11)

Type	No.	Strategy
Design	C1	In class, have participants reflect and provide feedback on each component of the program specifically to identify key learnings and ways to optimize, partly to prepare for the culminating activity
	C2	Celebrate participants through a formal event at the conclusion and invite senior leaders, supervisors, and sponsors, perhaps with past graduates, to cultivate a community
Direct application strategies	C3	Have a culminating activity whereby participants present their key learnings, program impact, and committed action items during the celebration event
	C4	Inform personnel of the post-program assessments
Design	C5	Extend development by having each participant update their LDP with post-program career and development goals and plans, aligned to talent optimization strategies
Evaluation	C6 *	Formally evaluate the program overall based on its goals, as well as its individual components and their link to outcomes
	C7 *	Evaluate participants' progress in relation to the desired outcomes and hold them accountable, recognizing successes and supporting improvement
	C8 *	Calculate the ROI of the program and communicate the results selectively
Organizational support	C9	Communicate the results of programs to affected parties within the organization to celebrate successes, justify the investment, and provide support for future programs
	C10 *	Ensure that there is adequate organizational support and resources to continue to facilitate further development
	C11	Review program results in the context of the Leadership Integration Blueprint and Roadmap, develop a community and culture of leadership, and build internal capacity

After-Leadership Development Program Strategies ("A", n = 5)

Type	No.	Strategy
Evaluation	A1 *	Evaluate the program, its components, and participant outcomes again from the perspective of sustained learning linked to application and results
Direct application	A2	Providers remind participants, their supervisors, and their sponsors in advance of the post-program ratings of participant outcomes
	A3	Have participants report results of their progress regarding post-program goals
Design	A4 *	Formally review the various forms of feedback and revise the program based on the feedback and evolving organizational needs
	A5	Sustain the program community of graduates, including through refreshers and involvement in future iterations of the program (e.g., as speakers, mentors, etc.)



BS p. 12
OS F3*

Talent Optimization Framework

To help structure and guide organizational people plans and/or talent optimization over employees' life cycles, the framework below includes an overall strategy, plus 8 elements:

- Talent *acquisition* (recruitment),
- Talent *integration* (onboarding),
- Talent *specialization* (identification),
- Talent *motivation* (engagement, rewards, retention),
- Talent *augmentation* (development)
- Performance *validation* (management),
- Talent *connection* (social), and
- Talent *continuation* (succession).

An advanced strategy is linking leadership development (augmentation) explicitly to other functions.



BS p. 16
OS P3*

Outcomes-Based Design Process

Applying a robust outcomes-based design process is optimal, since it ensures that choices align with the program's ultimate purpose and its desired impact and ROI. An example is the application of the Geerts et al. (2020) model¹⁵ (Table 4) to the design of the Inspire Nursing Leadership Program (INLP) by the Canadian College of Health Leaders (CCHL) and the Canadian Nurses Association (CNA)⁵⁸.

Table 4. Outcomes-based design process.

Steps	Details
1.	Conduct a needs, gaps, opportunities, and priorities analysis and establish an empirical foundation
2.	Select explicit program goals, customized for the purpose and participants, and aligned to the organization's True North elements
3.	Select ensuing desired outcomes , including level of mastery , at various levels
4.	Select participants intentionally to address the needs, gaps, opportunities, and priorities
5.	Select program details intentionally and incorporate evidence-based elements according to their suitability to achieve identified targets
6.	Develop a robust evaluation framework
7.	Embed an application of learning/training transfer strategy
8.	Consider calculating the return on investment (ROI)



A Framework Categorizing Leadership Development Program Outcomes

Drawing on Kirkpatrick and Kirkpatrick's (2006) model for training evaluation⁵⁷, the framework below categorizes program outcomes (subjective and objective) at 9 levels of increasing scope, as well as 3 core outcomes which transcend levels. Though most program evaluations focus only on participants – their satisfaction and individual outcomes – aiming beyond is vital.

Table 5. Categorizing leadership development program outcomes: a framework.

Scope	Level	Details
Individual		
	1	Satisfaction
Participant	2a	Attitudes and perceptions
	2b	Increased knowledge, skills, and capabilities
	2c	Paradigm/mindset shift
	3s ^a , 3o	Behaviour change and performance improvement (subjective/objective)
Beyond (Participants)		
Team/Department	4s, 4o	Team or departmental impact (subjective/objective)
Organization	5s, 5o	Organizational and staff impact (subjective/objective)
Beneficiaries ^b	6s, 6o	Beneficiary impact (subjective/objective)
Community	7s, 7o	Community impact (subjective/objective)
Region/nation	8s, 8o	Regional/national impact (subjective/objective)
International/global	9s, 9o	International/global impact (subjective/objective)
Core outcomes		
	Env.s, Env.o	Environmental sustainability impact (subjective/objective)
	EDIAs, EDIAo	Equity, diversity, inclusion, and accessibility (EDIA) impact (subjective/objective)
	Ec.s, Ec.o	Economic impact (subjective/objective)

^a "s" = subjective; "o" = objective;

^b "Beneficiaries" = those receiving services or products, such as clients, patients, etc.



Progressive Mastery: Concepts and Capabilities

Drawing on Dale's (1969) Cone of Experience⁵⁹ and Bloom's (1956) Taxonomy of educational objectives⁶⁰, models of progressive mastery of *concepts* (knowledge) and *capabilities*/skills are presented below, which can influence program goals, design, and evaluation. Each verb below follows, "The learner develops the ability to..."

Table ES 1. Models of progressive mastery: concepts (knowledge) and capabilities.

Progressive Mastery: Concepts (Knowledge)	Progressive Mastery: Capabilities
Initial	
Remember	Remember
Understand	Apply practically (and receive feedback)
Analyze critically	Reflect critically on experience and feedback
Apply (in theory or practice)	Adapt approaches
Reflect critically	Practice and develop as a habit
Contextualize	Contextualize and understand why different approaches are effective or not
	Analyze critically
Teach with expertise	Teach with expertise
Create new content	Create new content or approaches
	Experiment
Validate and refine	Validate and refine
Reproduce the creation and validation process successfully and reliably	Reproduce the creation and validation process successfully and reliably
Mastery	



Categories of Developmental Activities

For optimal results, developmental activities should be selected based on which, individually and collectively, can most effectively facilitate achieving specific program goals. Different activities are better suited for enabling certain types of outcomes and are more or less directly linked to workplace application. It is also important to offer a variety of activities and to provide participants with some optionality to accommodate different learning preferences.

The framework below provides five categories of development activities, distinguished according to their central features, purposes, functions, and connection to workplace application.

Table ES 2. Specializing Leadership Development: A Framework.

Type of Developmental Activity	Developmental Activities
Individual (providing focus and structure, and enhancing self-awareness)	Structured goal setting, career and leadership development planning Diagnostics: psychometrics, multisource feedback (MSF), and 360-degree assessments Performance feedback and debriefs Reflection and journaling exercises Credentialling and certification
Educational (content-based, typically formal and didactic)	Lectures Workshops Self-directed courses Guest speakers Site visits Case study analyses Journal club Degree, diploma, or certificate programs
Experiential (application-based, whether in practice or in real contexts)	Practice exercises: role plays and simulations Application (to work) exercises Action learning/impact projects Presentations Job rotations
Relational (communication- or dialogue-based with peers or experts)	Coaching (1:1, group, and peer) Mentoring Buddy systems/peer accountability In-session or online forum discussions Think tanks Ideation retreats Networking events Communities for practice
Resources (for heuristic learning or application guidance)	Readings (books, articles, etc.) and media Guides and handbooks Checklists Infographics Toolkits



Reflective and Action Learning Cycles (RLCs and ELCs)

Building on Kolb's (1984) model⁶¹, the impact of some developmental activities can be maximized when they are embedded in reflective or experiential learning cycles (RLCs and ELCs)^{2,45,52}. The sequence is:

- **Initial interest**/questions in the topic/activity focus, including a **self-assessment of baseline** knowledge and/or capability competence,
- **Goal setting** (desired learning and/or competence),
- The **activity/experience** (such as a workshop or simulation),
- **Performance evaluation** and/or **feedback** (experiential activities only) provided by the participant (self), faculty, workplace supervisors, and/or peers,
- **Discussion** of feedback, whether in-session or one-on-one,
- **Reflection** on the feedback and experience,
- **Revision of goals** for further learning/development,
- **Support**, such as from a mentor, coach, or peer, and
- **Repeat** the cycle to develop habits and mastery, even after correct performance (ELCs only).



Implications for Further Research and Practice

The Optimizing System and the other included innovative models and frameworks (collectively called "the theory" below) could inspire further research and practice, including:

- **Expanding** the pool of gold-standard elements of leadership development (Table 1),
- **Validating** the theory with practitioners and experts,
- Identifying and sharing **leading-practice examples** of how organizations have effectively applied the theory, including in different regions, sectors, and contexts,
- **Evaluating** the extent to which the theory can **impact** outcomes by directly comparing outcomes from programs that implemented them to the outcomes following similar interventions that did not,
- Considering how new **technologies**, such as simulators and Artificial Intelligence (AI), might be incorporated into development programs effectively,
- Investigating how various **talent optimization** functions can complement leadership development programs,
- Researching evidence-based strategies for deepening **leadership integration** across organizations and communities, toward the concept of A Leadership Organization (ALO),
- Exploring the role that leadership development and integration can play in positively impacting **social change** in communities and regions, and
- Studying how the theory can inform effective **leadership practice**.



Conclusions

The enormous investments in leadership development and the potential impact of programs, for better or worse, warrant evidence-informed approaches to maximizing the ROI. The stakes heighten in sectors where people's lives or well-being depend on effective leadership, development, and integration system wide.

For this reason, the Optimizing System and its companion innovative models and frameworks were created, based on gold-standard evidence and robust theory. The purpose is for these resources to assist governments, policymakers, providers, those funding development, and other affected parties in offering development that produces the desired results, maximizes the ROI, and potentially even contributes to social change across communities and regions.

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References

1. Yemiscigil, A.; Born, D.; Ling, H. What makes leadership development programs succeed? *Harvard Business Review*. 28 February 2023. Available online: <https://hbr.org/2023/02/what-makes-leadership-development-programs-succeed> (accessed on 9 May 2024).
2. Salas, E.; Tannenbaum, S.I.; Kraiger, K.; Smith-Jentsch, K.A. The science of training and development in organizations: What matters in practice. *Psychol. Sci. Public Interest*. **2012**, *13*, 74-101. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]
3. Blume, B.D.; Ford, J.K.; Baldwin, T.T.; Huang, J.L. Training transfer: A meta-analytic review. *J. Manag.* **2010**, *38*, 1065-1105. [[Google Scholar](#)] [[CrossRef](#)]
4. Day, D.V. Leadership development: A review in context. *Leadersh Q.* **2001**, *11*, 581-613. [[Google Scholar](#)] [[CrossRef](#)]
5. Amagoh, F. Leadership development and leadership effectiveness. *Manag. Decis.* **2009**, *47*, 989-999. [[Google Scholar](#)] [[CrossRef](#)]
6. Geerts, J.M.; Yiu, V. The Great Optimization: What Canada's health care leaders have learned about the new future of work-And what other companies can take away. *The Globe and Mail*, 19 November 2022; 8. [[Google Scholar](#)]
7. Udod, S.; MacPhee, M.; Baxter, P. Rethinking resilience: Nurses and nurse leaders emerging from the post-COVID-19 environment. *J. Nurs. Adm.* **2021**, *51*, 537-540. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]
8. Almost, J.; Mildon, B.; R-E-S-P-E-C-T: A key to nurse retention. *Nurs. Leadersh.* **2022**, *35*, 12-28. [[Google Scholar](#)] [[CrossRef](#)]
9. Cowden, T.; Cummings, G.; Profetto-McGrath, J. Leadership practices and staff nurses' intent to stay: A systematic review. *J. Nurs. Manag.* **2011**, *19*, 461-477. [[Google Scholar](#)] [[CrossRef](#)]
10. Hedenstrom, M.L.; Spiva, L.; Thurman, S.; Hale, R.L.; Toney, S.; Case-Wirth, J.; Kairu, M.; Sneha, S. Developing and evaluating the effectiveness of a nursing leadership mentoring pilot program. *Nurs. Adm. Q.* **2023**, *47*, 173-181. [[Google Scholar](#)] [[CrossRef](#)]
11. Day, D.V.; Fleenor, J.W.; Atwater, L.E.; Sturm, R.E.; McKee, R.A.; Advances in leader and leadership development: A review of 25 years of research and theory. *Leadersh Q.* **2014**, *25*, 63-82. [[Google Scholar](#)] [[CrossRef](#)]
12. McAlearney, A.S.; Fisher, D.; Heiser, K.; Robbins, D.; Kelleher, K. Developing effective physician leaders: Changing cultures and transforming organizations. *Hosp. Top.* **2005**, *83*, 11-18. [[Google Scholar](#)]
13. Sonnino, R.E. Health care leadership development and training: Progress and pitfalls. *J. Healthc. Leadersh.* **2016**, *8*, 19-29. [[Google Scholar](#)] [[CrossRef](#)]
14. Lyons, O.; George, R.; Galante, J.R.; Mafi, A.; Fordwoh, T.; Prich, J.; Geerts, J.M. Evidence-based medical leadership development: A systematic review. *BMJ Lead.* **2020**, *5*, 206-213. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]
15. Geerts, J.M.; Goodall, A.H.; Agius, S. Evidence-based leadership development for physicians: A systematic literature review. *Soc. Sci. Med.* **2020**, *246*, 1-17. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]
16. Gagnon, S.; Rithchie, J.; Lynch, A.; Drouin, S.; Cass, V.; Rinfret, N.; Rouleau, C.; Valois, M. *Job Satisfaction and Retention of Nursing Staff: The Impact of Nurse Management Leadership*; Canadian Health Services Research Foundation: Toronto, ON, Canada, 2006. [[Google Scholar](#)]
17. Arthur, W.J.; Bennet, W.J.; Edens, P.S.; Bell, S.T. Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *J. Appl. Psychol.* **2003**, *88*, 234-245. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]
18. Avolio, B.J.; Walumbwa, F.O.; Weber, T.J. Leadership: Current Theories, Research, and Future Directions. *Annu. Rev. Psychol.* **2009**, *60*, 421-449. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]
19. Burke, L.A.; Baldwin, T.T. Workforce training transfer: A study of the effect of relapse prevention training and transfer. *Hum. Resour. Manag.* **1999**, *38*, 227-243. [[Google Scholar](#)] [[CrossRef](#)]
20. Collins, D.B.; Holton, E.E., III. The effectiveness of managerial leadership development programs: A meta-analysis of studies from 1982 to 2001. *Hum. Resour. Dev. Q.* **2004**, *15*, 217-248. [[Google Scholar](#)] [[CrossRef](#)]
21. Husebø, S.E.; Akerjordet, K. Quantitative systematic review of multi professional teamwork and leadership training to optimize patient outcomes in acute hospital settings. *J. Adv. Nurs.* **2016**, *72*, 2980-3000. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]

22. Powell, S.K.; Yalcin, S. Managerial training effectiveness. *Pers. Rev.* **2010**, *39*, 227-241. [[Google Scholar](#)] [[CrossRef](#)]
23. Steinert, Y.; Naismith, L.; Mann, K. Faculty development initiatives designed to promote leadership in medical education. A BEME systematic review: BEME guide no. 19. *Int. J. Med. Technol.* **2012**, *34*, 483-503. [[Google Scholar](#)] [[CrossRef](#)]
24. Taylor, P.J.; Russ-Eft, D.F.; Taylor, H. Transfer of management training from alternative perspectives. *J. Appl. Psychol.* **2009**, *94*, 104-121. [[Google Scholar](#)] [[CrossRef](#)]
25. Orme, D.; Campbell, C. How leadership training saves money "service line leadership" at Nottingham University Hospitals. *BMJ Lead.* **2019**, *3*, 29-36. [[Google Scholar](#)] [[CrossRef](#)]
26. Georgenson, D.L. The problem of transfer calls for partnership. *Train. Dev. J.* **1982**, *36*, 75-78. [[Google Scholar](#)]
27. Kauffeld, S.; Lorenzo, G.; Weisweiler, S. Wann wird Weiterbildung nachhaltig? Erfolg und Erfolgsfaktoren bei Lerntransfer [When do further trainings become sustainable? Success and factors of success in transfer of training]. *Pers. Q.* **2012**, *64*, 10-15. [[Google Scholar](#)]
28. Pless, N.M.; Maak, T.; Stahl, G.K. Developing Responsible Global Leaders Through International Service-Learning Programs: The Ulysses Experience. *Acad. Manag. Learn. Educ.* **2011**, *10*, 237-260. [[Google Scholar](#)]
29. Saks, A.M.; Belcourt, M. An investigation of training activities and transfer of training in organizations. *Hum. Resour. Manage.* **2006**, *45*, 629-648. [[Google Scholar](#)] [[CrossRef](#)]
30. Avolio, B.J.; Avey, J.B.; Quisenberry, D. Estimating return on leadership development investment. *Leadersh. Q.* **2010**, *21*, 633-644. [[Google Scholar](#)] [[CrossRef](#)]
31. Kwamie, A.; van Dijk, H.; Agyepong, I.A. Advancing the application of systems thinking in health: Realist evaluation of the Leadership Development Programme for district manager decision-making in Ghana. *Health. Res. Policy Syst.* **2014**, *12*, 1-12. [[Google Scholar](#)] [[CrossRef](#)]
32. Malling, B.; Mortensen, L.; Bonderup, T.; Scherpbier, A.; Ringsted, C. Combining a leadership course and multi-source feedback has no effect on leadership skills of leaders in postgraduate medical education. An intervention study with a control group. *BMC Med. Educ.* **2009**, *9*, 1-7. [[Google Scholar](#)] [[CrossRef](#)]
33. Burke, L.A.; Hutchins, H.M. Training transfer: An integrative literature review. *Hum. Resour. Dev. Rev.* **2007**, *6*, 263-296. [[Google Scholar](#)] [[CrossRef](#)]
34. Gilpin-Jackson, Y.; Bushe, G.R. Leadership development training transfer: A case study of post-training determinants. *J. Manag. Dev.* **2007**, *26*, 980-1004. [[Google Scholar](#)] [[CrossRef](#)]
35. Kellerman, B. *Professionalizing Leadership*; Oxford University Press; New York, NY, USA, **2018**. [[Google Scholar](#)]
36. Cheng, E.W.L.; Hampson, I. Transfer of training: A review and new insights. *Int. J. Manag. Rev.* **2008**, *10*, 327-341. [[Google Scholar](#)] [[CrossRef](#)]
37. Kellerman, B. *The End of Leadership*; HarperCollins: New York, NY, USA, **2012**. [[Google Scholar](#)]
38. Pfeffer J. *Leadership BS*; HarperCollins: New York, NY, USA, **2015**. [[Google Scholar](#)]
39. Beer, M.; Finnström, M.; Schrader, D. Why leadership training fails-And what to do about it. *Harv. Bus. Rev.* **2016**, *94*, 50-57. [[Google Scholar](#)]
40. Straus, S.E.; Soobiah, C.; Levinson, W. The impact of leadership training programs on physicians in Academic Medical Centers: A systematic review. *Acad. Med.* **2013**, *88*, 1-15. [[Google Scholar](#)] [[CrossRef](#)]
41. DeRue, D.S.; Wellman, N. Developing leaders via experience: The role of developmental challenge, learning orientation, and feedback availability. *J. Appl. Psychol.* **2009**, *94*, 859-875. [[Google Scholar](#)] [[CrossRef](#)]
42. Cummings, G.G.; Lee, S.; Tate, K.; Penconek, T.; Micaroni, S.P.; Paananen, T.; Chatterjee, G.E. The essentials of nursing leadership: A systematic review of factors and educational interventions influencing nursing leadership. *Int. J. Nurs. Stud.* **2021**, *115*, 103842. [[Google Scholar](#)] [[CrossRef](#)] [[PubMed](#)]
43. Geerts, J.M. *Optimal Leadership Development for Professionals*. Unpublished Doctoral Thesis. University of Cambridge, Cambridge, UK, **2018**. [[Google Scholar](#)]
44. Boaden, R.J. Leadership development: Does it make a difference? *Leadersh. Organ. Dev. J.* **2006**, *27*, 5-27. [[Google Scholar](#)] [[CrossRef](#)]

45. Hughes, A.M.; Zajac, S.; Spencer, J.M.; Salas, E. A checklist for facilitating training transfer in organizations. *Int. J. Train. Dev.* 2018, 22, 334-345. [[Google Scholar](#)] [[CrossRef](#)]
46. Klimoski, R.; Amos, B. Practicing evidence-based education in leadership development. *Acad. Manag. Learn. Educ.* 2012, 11, 685-702. [[Google Scholar](#)] [[CrossRef](#)]
47. Pradairelli, J.C.; Jaffe, G.A.; Lemak, C.H.; Mulholland, M.W.; Dimick, J.B. Designing a leadership development program for surgeons. *J. Surg. Res.* 2016, 200, 53-58. [[Google Scholar](#)] [[CrossRef](#)]
48. Tracey, J.B.; Tews, M.J. Construct validity of a general training climate scale. *Organ. Res. Methods* 2005, 8, 353-374. [[Google Scholar](#)] [[CrossRef](#)]
49. Wakefield, N.; Abbatiello, A.; Agarwal, D.; Pastakia, K.; van Berkel, A. Leadership awakened: Generations, Teams, Science. Deloitte Insights. Available online: <https://www2.deloitte.com/insights/us/en/focus/human-capital-trends/2016/identifying-future-business-leaders-leadership.html> (accessed on 23 May 2018).
50. Geerts, J.M. Maximizing the impact and ROI of leadership development: theoretical and empirical foundations. 2024. [[Google Scholar](#)]
51. Brown, T.C.; McCracken, M.; Hillier, T.L. Using evidence-based practices to enhance transfer of training: Assessing the effectiveness of goal setting and behavioral observation scales. *Hum. Resour. Dev. Int.* 2013, 16, 374-389. [[Google Scholar](#)] [[CrossRef](#)]
52. Lacerenza, C.N.; Reyes, D.L.; Marlow, S.L.; Joseph, D.L.; Salas, E. Leadership training design, delivery, and implementation: A meta-analysis. *J. Appl. Psychol.* 2017, 102, 1686-1718. [[Google Scholar](#)] [[CrossRef](#)]
53. Edler, A.; Adamshick, M.; Fanning, R.; Piro, N. Leadership lessons from military education for postgraduate medical curricular improvement. *Clin. Teach.* 2010, 7, 26-31. [[CrossRef](#)]
54. Hatch, M. The dynamics of organizational culture. *Acad. Manage. Rev.* 1993, 18, 657-693. [[Google Scholar](#)] [[CrossRef](#)]
55. Garvin, D.A.; Edmondson, A.C.; Gino, F. Is yours a Learning Organization? *Harv. Bus. Rev.* Available online: <https://hbr.org/1993/07/building-a-learning-organization> (accessed on 12 March 2023).
56. Knowles, M.S. *Andragogy in Action*; Jossey-Bass: San Francisco, CA, USA, 1984. [[Google Scholar](#)]
57. Kirkpatrick, D.; Kirkpatrick J. *Evaluating Training Programs*, 3rd ed.; Berrett Koehler Publishers: San Francisco, CA, USA, 2006 [[Google Scholar](#)].
58. Geerts, J.M.; Udod, S.; Bishop, S.; Hillier, S.; Lyons, O.; Madore, S.; Mutwiri, B.; Sinclair, D.; Prich, J.C. Gold standard research and evidence applied: The Inspire Nursing Leadership Program. *Healthc. Manage. Forum* 2024, 37, 141-150. [[Google Scholar](#)] [[CrossRef](#)]
59. Dale, E. *Audio-Visual Methods in Teaching*, 3rd ed.; The Dryden Press: New York, NY, USA, 1969. [[Google Scholar](#)]
60. Bloom, B.S. Taxonomy of educational objectives: The classification of educational goals. In *Taxonomy of Educational Objectives: The Classification of Educational Goals*; Handbook I: Cognitive domain, Engelhart, M.D.; Furst, E.J.; Hill, W.H.; Krathwohl, D.R.; Eds.; David McKay: New York, NY, USA, 1956. [[Google Scholar](#)]
61. Kolb, D.A. *Experiential Learning: Experience as the Source of Learning and Development*. Prentice Hall: Englewood Cliffs, NJ, USA, 1984. [[Google Scholar](#)]

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