

Evaluating Mentoring Outcomes Using the Borich Model

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Mentoring supports individual development and organizational success, yet many programs lack structured methods to evaluate outcomes. This study applies the Borich Needs Assessment Model to identify gaps between the perceived importance and actual performance of mentoring-related competencies. Originally developed for teacher training, the model uses dual-scale ratings and Mean Weighted Discrepancy Scores (MWDS) to highlight areas of greatest need. Using synthetically generated data from 100 participants, ten key competencies such as problem solving, communication, and goal setting, were rated on 5-point Likert scales. Discrepancy scores were calculated, and MWDS was used to prioritize competencies with the highest developmental need. The results indicated that competencies which participants considered highly important but felt less confident or effective in, particularly problem solving and communication, stood out as the top priorities for targeted mentoring interventions. This demonstration illustrates how institutions can use the Borich model to assess mentoring needs and design targeted programming. As a replicable, data-driven approach, the model enables organizations to allocate resources strategically and align mentoring efforts with participant needs. Although based on simulated data, the findings mirror known mentoring challenges and point to a promising strategy for improving mentoring outcomes. Future research should apply this model to real-world data to evaluate its broader utility and effectiveness across diverse contexts.

Keywords: Mentoring, Borich Needs Assessment Model, discrepancy scores, synthetic data, professional development, mentor training

Introduction

Mentoring has long been recognized as a critical factor in promoting both individual success and organizational effectiveness. Whether through formal programs or informal developmental relationships, mentoring contributes to skill development, career advancement, job satisfaction, and improved collaboration within teams (Ragins & Kram, 2007). Despite this, evaluating the true impact of mentoring remains a challenge for researchers and practitioners alike. Traditional assessment approaches often lack the structure necessary to identify specific areas where mentoring adds the most value or where gaps still exist (Allen, Eby, & Lentz, 2006; Crisp & Cruz, 2009; Ehrich, Hansford, & Tennent, 2004).

One promising tool for addressing this challenge is the Borich Needs Assessment Model, a systematic method originally developed in the early 1980s by Gary D. Borich in the context of teacher training to identify professional development priorities. The model has since been widely applied and cited in education and workforce development research, and its validity has been supported through repeated use in various contexts to systematically compare perceived importance and self-assessed competence levels. The Borich Needs Assessment Model compares participants' perceptions of the importance of specific competencies, typically from the perspective of mentees or program

participants, with their self-assessed current levels of performance in those same areas. By calculating the discrepancy between how important a competency is perceived to be and how well it is currently performed or supported through mentoring, the model produces a Mean Weighted Discrepancy Score (MWDS). This score helps rank training or development needs by highlighting competencies that are considered critical but insufficiently developed. In mentoring contexts, the model can be applied to mentees' self-assessments to identify gaps where mentoring support should be strengthened or to mentors' self- or mentee-assessments to evaluate mentor competencies and inform targeted professional development. While the Borich model has been widely used in educational research, it remains underutilized in mentoring and organizational development contexts.

This paper explores how the Borich model can be applied to assess individual mentoring-related competencies and identify developmental needs that may contribute to improved organizational performance and growth. Using simulated data to demonstrate the model's implementation, we identify key competency gaps and discuss how this methodology can inform the design and refinement of mentoring programs.

Literature Review

Mentoring has consistently been associated

with a broad range of positive outcomes across both individual and organizational domains. At the individual level, mentoring has been shown to enhance communication skills, leadership development, goal setting, and self-efficacy (Allen et al., 2004; Eby et al., 2013; Kram, 1985). It also plays a vital role in promoting career growth, professional identity formation, and psychological wellbeing (Chun, Sosik, & Yun, 2012; Haggard et al., 2011). From an organizational perspective, mentoring supports knowledge transfer, innovation, team collaboration, employee engagement, and long-term talent retention (Allen, Eby, & Lentz, 2006; Lunsford, 2012; Ragins & Kram, 2007).

Given these multi-level benefits, institutions across industries increasingly invest in formal and informal mentoring initiatives. However, despite growing adoption, evaluating the effectiveness of mentoring programs remains a persistent challenge. Many assessments rely on self-reported satisfaction (Ehrich, Hansford, & Tennent, 2004), frequency of meetings (Crisp & Cruz, 2009), or loosely defined success criteria that fail to capture actual developmental outcomes or skill acquisition (Crisp & Cruz, 2009; Ehrich, Hansford, & Tennent, 2004).

A growing body of scholarship underscores the importance of structured evaluation tools that go beyond anecdotal or perception-based feedback (Fletcher & Mullen, 2012). One such approach is the Borich Needs Assessment Model, which provides a quantitative framework to identify gaps between participants' perceived importance of specific competencies and their self-assessed current levels of performance in those same competencies. For example, a mentee might rate "communication skills" as highly important for their development but rate their current skill level lower, revealing a developmental need in that area. Originally developed by Borich (1980) for use in teacher training, the model employs this dual-rating system and calculates the Mean Weighted Discrepancy Score (MWDS) to prioritize professional development areas based on need. Since then, it has been widely applied in fields such as education, agriculture extension, and health training (Franz, 2003; Garlick & Lang, 2007; Witkin & Altschuld, 1995).

While the Borich model has proven useful in structured training environments, its application in mentoring, particularly within organizations, has been limited. This presents a clear opportunity for innovation. Given the diverse goals, relationships, and contexts that mentoring encompasses, integrating a structured needs assessment approach like Borich can provide organizations with a replicable, data-driven method to evaluate outcomes, align mentoring with institutional goals, and identify areas of targeted improvement (Lunsford & Baker, 2016).

Methodology

This study uses a simulation-based approach

with synthetic data to demonstrate how the Borich Needs Assessment Model can be applied to evaluate mentoring's impact on individual and organizational performance. Although no actual participant data were collected, the synthetic dataset was generated to mimic realistic survey responses and illustrate the model's implementation and potential usefulness for real-world mentoring program assessments. The use of synthetic data allows for a controlled demonstration while protecting confidentiality and overcoming data availability constraints.

Competency Framework

Ten core competencies commonly associated with successful mentoring relationships were selected based on a review of the literature. These included both individual-level outcomes such as communication skills, leadership development, and problem-solving and organizational-level outcomes such as teamwork, knowledge sharing, and innovation support. Each competency was defined in simple terms suitable for self-assessment by employees, who would also be the mentees.

Survey

In alignment with the Borich model, a dual-scale survey instrument was designed to assess developmental needs across various competencies. Participants were asked to rate each competency using two separate 5-point Likert scales: one for importance, "How important is this competency for your success or well-being?" and one for performance, "How well do you currently perform in this area (or how well is this supported through mentoring)?" Discrepancy scores were then calculated by subtracting the performance score from the importance score for each competency. A positive discrepancy score indicates a developmental need, signaling that the competency is deemed important but is not currently being performed at a satisfactory level.

Synthetic Data Simulation

To simulate the survey responses, synthetic data were generated for 100 participants using Python. Importance scores were skewed slightly higher (typically ranging from 3 to 5) to reflect findings from existing mentoring research indicating that key competencies are generally perceived as important by participants (e.g., Allen et al., 2006; Ragins & Kram, 2007). Performance scores ranged more widely from 2 to 5 to represent typical variability in self-assessed skill levels or mentoring support reported in prior studies. These ranges were selected to create a realistic distribution of responses that illustrate common gaps between perceived importance and performance, enabling demonstration of the Borich model's application. The discrepancy

between importance and performance was computed as: $\text{Discrepancy} = \text{Importance} - \text{Performance}$. The Mean Weighted Discrepancy Score (MWDS), which prioritizes areas with the highest need, was calculated as: $\text{MWDS} = \text{Importance} \times \text{Discrepancy}$. Average MWDS values for each competency were then used to rank and prioritize development needs.

Data Aggregation and Analysis

Once the dataset was generated, descriptive statistics were calculated to summarize the average importance, performance, discrepancy, and Mean Weighted Discrepancy Score (MWDS) for each of the ten mentoring-related competencies. The MWDS for each competency was derived by multiplying the importance rating by its corresponding discrepancy ($\text{Importance} - \text{Performance}$). These scores were averaged across all participants to determine which competencies exhibited the largest perceived gaps between value and execution. Competencies were ranked based on their MWDS, providing a prioritized list

of areas where mentoring support may be most urgently needed. The top three competencies identified are: Problem Solving (MWDS = 3.07), Communication Skills (MWDS = 2.88), Goal Setting (MWDS = 2.56).

A sample of the simulated dataset is presented in Table 1, illustrating the structure of responses used to compute discrepancy and weighted scores across participants and competencies. These computations serve as demonstration outputs that form the basis for the subsequent analyses and visual interpretations, providing a compelling framework for identifying strategic focus areas within mentoring programs. They illustrate how the Borich model can transform qualitative feedback into generalizable insights for assessing mentor performance and planning mentor development. To support analysis and enhance interpretability, several visualizations were generated using Python's matplotlib library. These graphical outputs, presented in the Results section, help clearly communicate patterns in importance, performance, and discrepancy scores across the full set of competencies.

Table 1

Sample Data Showing Importance, Performance, Discrepancy, and Weighted Score

Competency	Participant ID	Importance	Performance	Discrepancy	Weighted Score
Leadership Development	1	5	5	0	0
Leadership Development	2	3	5	-2	-6
Leadership Development	3	5	5	0	0
Leadership Development	4	5	4	1	5
Leadership Development	5	3	4	-1	-3

Results

The analysis, based on synthetically generated responses from 100 participants, revealed notable discrepancies between the perceived importance and current performance of key mentoring-related competencies. These gaps were quantified using the Mean Weighted Discrepancy Score (MWDS), which combines the size of the perceived shortfall with the competency's rated importance. Higher MWDS values indicate greater perceived need for development and thus serve as a prioritization metric for mentoring interventions.

Ranking of Mentoring Needs

Among the ten competencies assessed, Problem Solving emerged as the highest-priority area, with an MWDS of 3.07. This was followed by

Communication Skills (MWDS = 2.88) and Goal Setting (MWDS = 2.56). These three competencies consistently receive high importance ratings, yet participants reported comparatively lower levels of performance. This suggests that while these skills are recognized as essential for personal and professional growth, they are not being adequately addressed through existing mentoring structures.

The full ranking of all ten competencies based on MWDS is shown in Table 2, providing a data-driven overview of mentoring priorities based on perceived importance and performance gaps. Interestingly, even competencies with relatively favorable performance ratings, such as Workplace Satisfaction and Organizational Commitment, still exhibit moderate gaps, highlighting the potential for ongoing enhancement even in areas of relative strength.

Table 2

Ranked Summary of Mentoring Competencies by Importance, Performance, and MWDS

Competency	Importance	Performance	Discrepancy	MWDS
Problem Solving	3.88	3.31	0.57	3.07
Communication Skills	4.03	3.47	0.56	2.88
Goal Setting	3.86	3.42	0.44	2.56
Knowledge Sharing	4.01	3.53	0.48	2.52
Organizational Commitment	3.97	3.57	0.4	2.36
Innovation Support	3.99	3.6	0.39	2.3
Leadership Development	3.98	3.62	0.36	2.07
Team Collaboration	3.83	3.48	0.35	2.06
Workplace Satisfaction	3.93	3.53	0.4	2.06
Career Planning	3.98	3.66	0.32	1.93

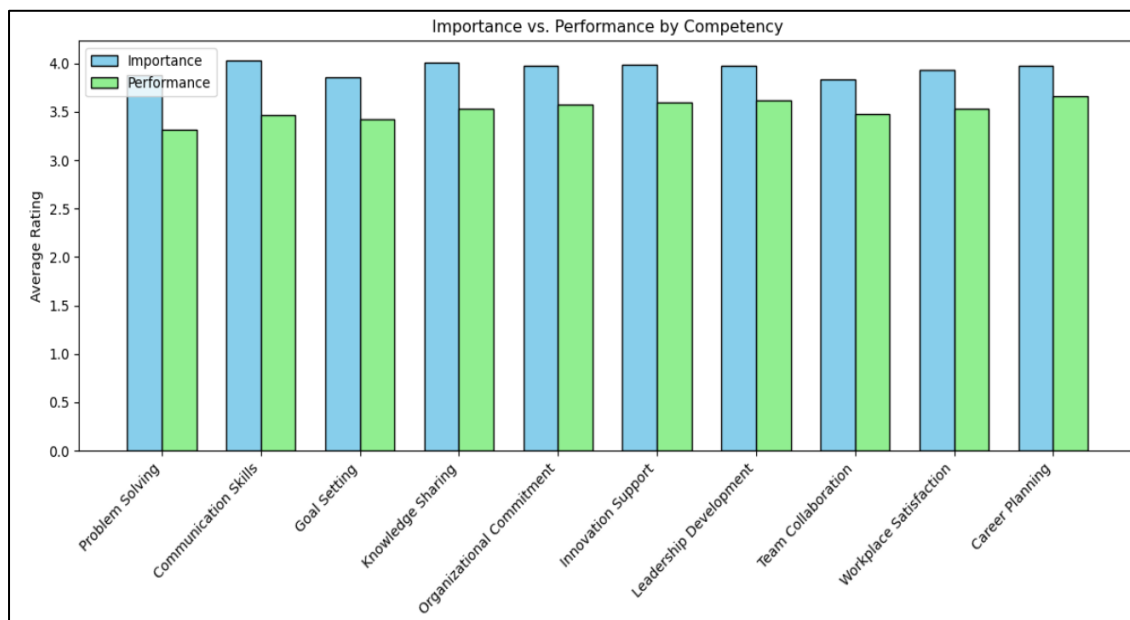
Importance vs. Performance Patterns

Figure 1 presents a grouped bar chart comparing the average importance and performance scores for each competency. A consistent trend

is observed: across nearly all competencies, performance ratings fall short of importance ratings. The largest disparities are found in competencies related to leadership, strategy, and personal development, domains often cultivated through intentional mentoring efforts.

Figure 1

Importance vs. Performance by Competency

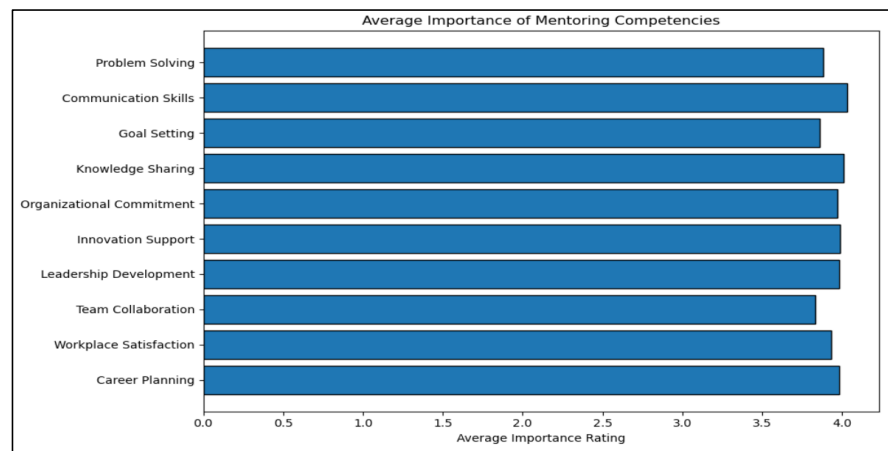


This pattern supports the conclusion that, while mentoring programs may be effective in fostering general engagement or satisfaction, they may not be sufficiently structured to cultivate targeted, high-impact skills critical to long-term individual and organizational advancement.

Figure 2 displays the average performance scores by competency. While competencies such as Organizational Commitment and

Workplace Satisfaction received relatively high ratings, others, most notably Problem Solving, Innovation Support, and Career Planning were rated significantly lower, underscoring their need for focused development support.

Figure 2
Average Importance by Mentoring Competency



These findings highlight the strategic value of using the Borich model to inform mentoring program design. By identifying competencies with the greatest perceived shortfalls, organizations can more effectively allocate resources and shape mentoring interventions that directly address the most pressing developmental needs. This approach supports the creation of high-impact mentoring networks aligned with individual growth and organizational success.

Discussion

The results of this simulated needs assessment underscore the value of applying the Borich model to evaluate mentoring outcomes in a structured, data-driven way. By identifying discrepancies between the perceived importance and performance of key competencies, mentoring program leaders can better target interventions, such as mentor training workshops, resource allocation, or competency-specific coaching to the areas of greatest need. The findings suggest that competencies like problem solving, communication skills, and goal setting are not only viewed as essential by participants but are also areas where they feel under-supported or underperforming, making them prime targets for mentoring development.

These outcomes are particularly relevant in the context of developmental networks and organizational wellbeing. Developmental networks, complex webs of mentoring and support relationships, function most effectively when they are aligned with the actual developmental needs of individuals. A tool like the Borich model allows institutions to bridge the gap between mentoring intentions and mentoring impact by making these needs visible and actionable.

Furthermore, the flexibility of the model means it can be tailored to a wide variety of institutional settings, including higher education, nonprofits,

and corporate organizations. Mentoring programs can adapt this methodology to routinely assess participant needs, prioritize programming, and even track improvements over time. By using data to guide mentoring efforts, organizations are better positioned to foster the growth, satisfaction, and retention of their people, benefiting both the individual and the institution.

Conclusion

This study highlights the Borich Needs Assessment Model as a practical, evidence-based framework for evaluating mentoring outcomes and identifying developmental gaps. By applying this model to simulated mentoring data, this work demonstrates the ability to pinpoint competencies, such as problem solving, communication, and goal setting that participants perceive as highly important yet insufficiently supported or developed through their current mentoring relationships. These findings suggest that mentors may require additional training or resources to better foster these key areas, making them actionable targets for interventions aimed at promoting individual wellbeing, leadership, and organizational growth.

While the results provide compelling insights, they are based on synthetic data and thus may not fully reflect real-world conditions. The selected competencies were informed by literature but not validated through empirical testing or expert review. Additionally, the model relies on participants' self-assessment, which may introduce bias or inaccuracies. Future work should involve real participants across varied mentoring environments to assess the model's generalizability and impact. Longitudinal applications, integration of qualitative insights, and comparative analysis between mentors and mentees can further enhance its utility. Ultimately, the Borich model offers a scalable, data-informed approach to making mentoring

more strategic, effective, and aligned with developmental needs.

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