

MODELS FOR IDENTIFYING AND ASSESSING INDIVIDUAL POTENTIAL

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Abstract

Identifying individual potential is an important task in education, human resource management, professional development, and organizational planning. Traditional assessment methods often emphasize current performance, qualifications, and observable achievements, which may not fully reflect an individual's capacity for future growth. This article examines conceptual and analytical models for identifying individual potential through a combination of cognitive abilities, motivation, adaptability, creativity, problem-solving skills, and learning capacity. It discusses the advantages of multidimensional assessment, data-driven evaluation, and artificial intelligence-assisted analysis. The article also highlights the importance of fairness, transparency, and continuous development when interpreting assessment results. A comprehensive approach to individual potential assessment can help institutions recognize diverse abilities, identify development needs, and create more effective opportunities for personal and professional growth.

Keywords: individual potential, assessment models, talent identification, analytical methods, artificial intelligence, professional development, competency assessment.

Introduction

Individual potential refers to a person's capacity to develop new skills, adapt to changing circumstances, solve complex problems, and achieve higher levels of performance over time. Understanding this potential is valuable for educational institutions, employers, public organizations, and professional development programs. However, identifying potential is challenging because current achievement does not necessarily indicate future capability. An individual who

performs moderately in a particular environment may demonstrate considerable ability when provided with appropriate training, resources, and support.

Therefore, assessment models should consider not only existing knowledge and performance but also the characteristics that influence future development. Silzer and Church (2009) emphasize the importance of understanding different dimensions of potential rather than relying on a narrow definition of talent.

Main Discussion

A comprehensive model for assessing individual potential should incorporate several complementary dimensions. The first is cognitive ability, including analytical thinking, reasoning, comprehension, and problem-solving. These characteristics can be examined through structured tasks, practical exercises, and standardized assessments appropriate to the relevant context.

The second dimension is motivation and learning orientation. Individuals who actively seek feedback, demonstrate persistence, and engage with unfamiliar challenges may show strong capacity for development. These characteristics should be assessed through multiple sources of evidence rather than subjective impressions alone.

The third dimension involves creativity and adaptability. In rapidly changing professional environments, the ability to generate alternative solutions and respond constructively to new circumstances can be as important as existing technical knowledge. Behavioral observations, simulations, and project-based tasks can help identify these capabilities.

A fourth dimension is interpersonal competence, including communication, collaboration, and conflict resolution. These skills are particularly relevant to leadership and teamwork. Nevertheless, their assessment should account for cultural differences, individual communication styles, and the specific requirements of the role.

A practical assessment model can combine these dimensions using a structured scoring framework. For example, each dimension may be evaluated

through several indicators, with weights assigned according to the purpose of the assessment. A weighted model can be represented as follows:

$$P = w_1C + w_2M + w_3A + w_4I$$

Here, P represents the overall potential indicator; C denotes cognitive ability; M represents motivation; A refers to adaptability and creativity; I represents interpersonal competence; and the weights reflect the relative importance of each dimension. The weights should be established through expert consultation and validated against relevant outcomes. This formula is an illustrative framework, not a validated predictive instrument.

Artificial intelligence can further support assessment by identifying patterns across structured test results, learning histories, project performance, and other relevant information. Machine learning methods may help detect relationships that are difficult to identify through manual analysis. However, the reliability of these methods depends on data quality, sample representativeness, and appropriate model validation.

Professional potential assessment using multicriteria methods, such as the AHP-ELECTRE-TRI approach, demonstrates how multiple criteria can be organized into a structured evaluation framework (Sagawe et al., 2022). Such methods can improve consistency, although they do not eliminate the need for expert judgment.

Ethical considerations are equally important. Assessment systems should avoid discrimination, protect personal information, explain their criteria, and allow individuals to challenge inaccurate evaluations. Potential should also be understood as dynamic rather than fixed. Results should guide development opportunities instead of permanently labeling individuals as talented or unsuccessful.

Conclusion

Identifying individual potential requires a multidimensional approach that combines measurable competencies with evidence of motivation, adaptability,

creativity, and learning capacity. Structured assessment models can support more consistent and informed evaluations, while artificial intelligence can assist in analyzing complex information. Nevertheless, assessment results should not be treated as definitive judgments about a person's future. Transparent criteria, human oversight, regular validation, and opportunities for development are essential. When applied responsibly, individual potential assessment can help institutions recognize diverse abilities, improve professional development, and support informed decisions about education, employment, and career progression.

References

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