

## Performance Assessment Centers and Human Resources Competency Development in the Light of Artificial Intelligence

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**Abstract:** The role of conscious management in performance appraisal centers and human resource development by managers in increasing organizational productivity is undeniable. However, it is important to note that this argument will not be made in a theoretical vacuum. The researcher must consider reviewing sensitive theoretical concepts and previous findings. In this context, the current applied research aims to provide a comprehensive narrative of recent years research findings on the opportunities and challenges of performance appraisal centers influenced by developments in artificial intelligence. This research takes an idea-based approach to enhance the knowledge of human resource managers at both individual and organizational levels. In order to examine the reliability and validity of the data, information was obtained from websites approved by the Ministry of Science and Research. According to Strauss, Corbin, and Glasser, this approach is reassuring in ensuring the reliability, transferability, and validity of the research findings. This article introduces readers to evaluation centers and their significance in organizational management. This study can assist public sector human resources specialists in evaluating the alignment of decision-making areas within evaluation centers.

**Keywords:** Human Resource Management, Competency Assessment and Development Center, Artificial Intelligenc.

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### Extended Abstract

#### Introduction

Assessment and development centers play a crucial role in identifying behaviors related to competencies that lead to excellent performance in employees. By identifying these behaviors, organizations can take steps to cultivate them in alignment with organizational goals and results. Additionally, assessing the competencies of managers and employees through assessment centers helps in selecting the most qualified individuals for key positions within the organization (Kharub et al.,

2025b). On the other hand, with the expansion of smart and digital online technologies and the direction of many work areas towards online platforms, we are witnessing a wider community of employees, workers, and ready-to-work forces that can be used to properly direct human resources in line with the national needs of the country on the path of development by using the capacity of evaluation and development centers (Sadek & Karkoulia, 2025).

Most successful companies in the world, including almost all Fortune 500 companies, have integrated the concept of competency into all human resource management processes. Competency-based human resource management has become a paradigm in the field of human resources. Identifying and evaluating competencies in employees and planning for their development and growth is considered a priority in leading companies' human resource management (Stone et al., 2024).

However, there are still organizations that are not familiar with the nature of human resource assessment and competency development centers and even mistakenly believe that these centers are only responsible for punishment, reward, and human resource control. Some assessors feel stressed and anxious before entering the center due to their unfamiliarity with the assessment center and its methods and functions. It may be difficult for assessors to complete exercises and tests. Unless they know in advance what types of exercises and tests, they should do on the day of the center and how to prepare themselves. The purpose of this article is to clear up any confusion and share successful experiences about advice for assessments and how an assessment center works.

This lack of knowledge and awareness prevents organizations from benefiting from the capacities of these centers. But this is a big challenge because this is the era of the artificial intelligence revolution, and ignoring the nature of assessment centers and, as a result, ignoring the use of artificial intelligence in these centers is considered one of the fundamental risks for organizations. Considering these issues, the present study aims to theoretically redefine the path of transition from evaluation to development by understanding the basic concepts of the evaluation and development center and artificial intelligence and to be able to identify the capacity of artificial intelligence in achieving the goal above and define a new way to use it to pave the path of development.

### **Theoretical framework**

Today's leaders are defined by the quality of their performance and reactions in competitive environments. This makes the future challenging for organizations (Bhatia et al., 2024). Increased competition and the need to achieve higher levels of quality, productivity, and competitiveness require that the future human resources of organizations be more capable, talented, and competent (Padhi et al., 2023a). One of the human resources challenges that has been a concern of organizations and institutions for years is identifying the talents and potential of individuals for planning and development. Improving human resource productivity relies on recognizing key employees and their talents, understanding their competencies, and placing them in appropriate positions (Setiawati & Mujanah, 2025).

In this regard, assessing and developing human resource competencies, especially those of managers who are key individuals in an organization, is particularly important. With organizations requiring capable managers and employees, the necessity of utilizing modern management techniques in the process of assessing and developing human capital competencies is more crucial than ever (Kharub et al., 2025b).

In this environment, the role of managers in organizational progress is undeniable. No organization can move forward without knowledgeable, competent, and up-to-date managers (Mohammad, 2025) But how can an organization ensure the effectiveness of its managers and human resources?

The answer lies in the Assessment and Development Centers, which evaluate managers and their human resources from various aspects and assess their competence in different fields. So, we are faced with another question: What exactly is the Manager Evaluation Center, and how does it contribute to an organization's growth and development?

Global reports suggest that the Evaluation and Development Center method is the most reliable approach for recognizing individual competencies (Kharub et al., 2025b). Its results predict up to 70 percent of an individual's general behaviors and future performance. On the other hand, considering that the education process is also affected by smart areas in many ways, the implementation process of development centers can be accelerated by using it. Artificial intelligence has a growing trend in its outlook based on the development of algorithms and programming languages of artificial intelligence. Using this tool in the service of the country's human resource assessment and development centers can create a fundamental change in the country's national development process by reducing costs and time, as well as guiding the workforce to the right position based on their capabilities. Also, by identifying weaknesses, the workforce can be directed towards the training they need in the same context, and in this way, trained human resources can be employed in workplaces much faster than before (Hossaini, 2019).

### **Methodology**

The present research is applied and descriptive, utilizing the library method and based on content analysis. Library research is a systematic and step-by-step process used to gather information for writing an article or presenting a seminar. Throughout the library study process, the researcher must review, manipulate, adjust, and rewrite previous information (B. Jovari, 2024b). The primary process in content analysis involves coding and classifying raw data, extracting main concepts and categories, and examining the relationships between them within the framework of a theory developed by the researcher based on the research's conditions and situation (B. Jovari, 2024a).

The selection of documents for this study was purposeful and theoretical. The researcher prioritized examining the results of the latest scientific research, focusing on documents from the period 2023-2024. Sample determination was conducted simultaneously with other aspects of the research, concluding when theoretical saturation was reached. Approximately fifty scientific articles and documents were collected and categorized for analysis.

For the analysis of sentences and phrases, the collected documents were reviewed word by word and line by line. Each text provided a wealth of data that needed to be studied to extract research themes. Words and phrases with similar themes that recurred throughout the sentences were grouped and coded. The data were sourced from reputable scientific databases such as Google Scholar, Scopus, ScienceDirect, and ScienceHub, ensuring the reliability, transferability, confirmability, and believability of the research findings in terms of validity and reliability (B. Jovari, & Yeganegi, K, 2024).

### **Discussion and Results**

A professional management assessment center is a valuable tool for organizational growth, but it may encounter various challenges. Being aware of these challenges can help in overcoming them. Poor and Inappropriate Planning: One challenge faced by the center is inadequate planning. Lack

of agreement on methods, results, and evaluation processes in assessor selection can hinder the center's effectiveness. **Incorrect Job Analysis:** Proper analysis of assessment results and interview questions is crucial for progress. This analysis identifies managers' competencies and provides growth solutions. **Incorrect Selection of Appraiser:** Another challenge is selecting the wrong appraisers. The appraiser plays a vital role in the appraisal process. Choosing the wrong appraiser can waste efforts and not yield positive results. Competence in management is also important, as the focus on competence management is more prevalent in the private sector than in the public and government sectors (Sidki et al., 2024). Some scholars view competence management as a way for government organizations to transform their bureaucracies into efficient and flexible units (Ingaggiati et al., 2024). Therefore, the emphasis on this issue in the government sector has increased, as countries need managers and employees who can provide better services based on their competence and societal interests, adapting to the evolving landscape of changes (David et al., 2024). educating and training future executive managers to align with knowledge orientation and meritocracy based on professional ethics in appointments and promotions (Douglas, 2024). This aims to enhance the competence of the country's managers, establish a platform for knowledge orientation, meritocracy, and professionalism in managerial roles, identify and develop employee capacities, and motivate capable experts through a competitive and fair selection process (Bautista et al., 2024). While various methods exist for assessing employee capabilities, the Center for Evaluation and Development approach is considered the most reliable and predictive (Yaghoubi et al., 2024).

This approach, based on competency-based assessment, offers programs for developing an organization's most valuable asset - its employees (Sharma & Malodia, 2022). By hiring candidates with the necessary competencies and implementing targeted development programs for average-performing employees, organizations can enhance overall performance and promote growth within the organization. Establishing assessment and competency centers within organizations is a key policy to support these initiatives (Zhang et al., 2024).

## **Conclusion**

The measures mentioned in this research have been somewhat effective and efficient as initial steps toward making the evaluation center smarter and developing managers. However, for the evaluation process to truly become smarter and yield valuable results, all stages must be implemented in an integrated and systematic manner utilizing information technology. This will ensure that progress continues as intended and leads to highly beneficial outcomes. AI has significantly contributed to learning management systems, learning experience platforms, and learning analytics. However, the adoption of AI has not been without challenges. First, the technology behind AI has not yet advanced enough for widespread use. Furthermore, R&D teams lack the maturity to integrate AI into their work effectively.

## **Introduction**

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However, there are still organizations that are not familiar with the nature of human resource assessment and competency development centers and even mistakenly believe that these centers are only responsible for punishment, reward, and human resource control.

Some assessors feel stressed and anxious before entering the center due to their unfamiliarity with the assessment center and its methods and functions. It may be difficult for assessors to complete exercises and tests. Unless they know in advance what types of exercises and tests, they should do on the day of the center and how to prepare themselves. The purpose of this article is to clear up any confusion and share successful experiences about advice for assessments and how an assessment center works.

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But this is a big challenge because this is the era of the artificial intelligence revolution, and ignoring the nature of assessment centers and, as a result, ignoring the use of artificial intelligence in these centers is considered one of the fundamental risks for organizations.

Considering these issues, the present study aims to theoretically redefine the path of transition from evaluation to development by understanding the basic concepts of the evaluation and development center and artificial intelligence and to be able to identify the capacity of artificial intelligence in achieving the goal above and define a new way to use it to pave the path of development.

## **Literature Review**

Today's leaders are defined by the quality of their performance and reactions in competitive environments. This makes the future challenging for organizations (Bhatia et al., 2024). Increased competition and the need to achieve higher levels of quality, productivity, and competitiveness require that the future human resources of organizations be more capable, talented, and competent (Padhi et al., 2023a). One of the human resources challenges that has been a concern of organizations and institutions for years is identifying the talents and potential

of individuals for planning and development. Improving human resource productivity relies on recognizing key employees and their talents, understanding their competencies, and placing them in appropriate positions (Setiawati & Mujanah, 2025).

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In this environment, the role of managers in organizational progress is undeniable. No organization can move forward without knowledgeable, competent, and up-to-date managers (Mohammad, 2025) But how can an organization ensure the effectiveness of its managers and human resources?

The answer lies in the Assessment and Development Centers, which evaluate managers and their human resources from various aspects and assess their competence in different fields.

So, we are faced with another question: What exactly is the Manager Evaluation Center, and how does it contribute to an organization's growth and development?

Global reports suggest that the Evaluation and Development Center method is the most reliable approach for recognizing individual competencies (Kharub et al., 2025a). Its results predict up to 70 percent of an individual's general behaviors and future performance.

On the other hand, considering that the education process is also affected by smart areas in many ways, the implementation process of development centers can be accelerated by using it.

Artificial intelligence has a growing trend in its outlook based on the development of algorithms and programming languages of artificial intelligence. Using this tool in the service of the country's human resource assessment and development centers can create a fundamental change in the country's national development process by reducing costs and time, as well as guiding the workforce to the right position based on their capabilities. Also, by identifying weaknesses, the workforce can be directed towards the training they need in the same context, and in this way, trained human resources can be employed in workplaces much faster than before (Hossaini, 2019; Shirani, 2025).

### **Assessment Center**

An assessment center is an event where multiple candidates participate in a series of exercises or tests and are assessed for competency by trained assessors. The participants' overall scores are combined during a consensus meeting between the assessors. An assessment center does not have physical locations but rather uses a structured combination of assessment techniques to provide a thorough and accurate assessment of each participant (Odedokun, 2024; Pillay et al., 2025).

The assessment center is a method that has been around for over half a century and has evolved significantly in recent years. Many organizations, both domestically and abroad, have experienced its benefits Thornton III & Rupp, 2006 *Manager Assessment Center: A Ladder of Success*

Managers drive businesses and organizations, influencing their success or failure. Without competent managers, the best employees cannot be recruited, hindering economic growth and overall progress. The Manager Assessment Center serves as a guide to help make informed choices and support managers effectively (Pillay et al., 2025).

A management assessment center is a group of assessors who evaluate managers in various fields (Jackson et al., 2025b). They use tests, exercises, and interviews to measure managers' potential abilities and determine their suitability for management positions.

With precise criteria appropriate for management roles, assessors not only evaluate managers but also provide suggestions for enhancing and improving their performance (Thornton III & Rupp, 2006). The assessment center is a powerful tool for human resources and general managers to hire the best candidates and guide their managers toward development. This may also involve an assessment test based on the specific position (Jackson et al., 2025a).



Figure 1. Objectives of establishing an assessment center (Source: By author)

#### Assessment Center Events

Assessment centers typically begin with a candidate orientation. The assessors or company representative may brief candidates on what will happen during the day and what to expect. Any required documents may be provided and attendees may be identified. Detailed instructions will be provided at the beginning of each test, and any questions candidates may have will be answered. Once questions or concerns have been addressed, the test or exercise will begin (Thornton III & Rupp, 2006).

#### Assessment Center Exercises

The type of tests, level of difficulty, and duration vary depending on the position for which the assessment center is being held. It also depends on the area of expertise involved. For example, sales and marketing positions may require more verbal, presentation, and situational skills tests and exercises, while analyst positions may require more numerical and case study tests and exercises. Generally, a written or computer-based test, if available, is administered first. This is followed by communication and verbal exercises such as group exercises and role-playing, and finally, a face-to-face interview (Bray, 1982; Lievens & Thornton III, 2017).

#### Commonly used focus group exercises include

##### *Psychometric tests*

Psychometric tests may be used to analyze the skills and abilities of an applicant and their match with the requirements of a job position. These tests are designed to select the right candidate for a particular job. Psychometric tests may be administered in written or online form, which may help companies find the right candidate for the job. The medium used to administer these tests may be online or written (Riggio et al., 2025b). We can divide psychometric tests into the following two categories:

### *Aptitude and Ability Tests*

Aptitude and ability tests are designed to measure logical reasoning or thinking performance and are standardized tests that include multiple-choice questions and are administered under rigorous conditions. There are hundreds or even thousands of aptitude and ability tests on the market. Popular tests include: verbal ability, numerical ability, abstract reasoning, spatial reasoning, mechanical reasoning, and error/data analysis tests.

### *Personality Tests*

Personality tests are standardized questionnaires that reveal aspects of an applicant's personality. They are used to determine an applicant's typical reactions to various situations. Employers look at several factors during the hiring process, including how you get along with others, how you react in stressful situations, and other forms of attitude toward work and non-work situations.

### *Role-playing exercises*

During a role-playing exercise, applicants are expected to act out a scenario with a group of peers or just one or more interviewers/observers. Typically, these types of simulation exercises are situations that they might encounter while doing the job they are applying for, but this is not necessarily the case. Typical examples of scenarios might include handling a customer complaint or marketing a new brand. Applicants are asked to analyze a situation, propose or discuss solutions, and achieve a goal, taking into account various factors in the simulated environment. Prioritization and decision-making skills are key in this exercise.

### *Group exercises*

These types of exercises are commonly used in assessment centers and are similar in nature to group interviews. Group exercises are assessed discussions that usually involve a small group of job applicants (usually between 6 and 10 people) who respond to a question/statement posed by the assessor or recruiter. Group exercises are conducted in both assigned and unassigned roles, depending on the job role. Each applicant's performance is assessed and measured against performance criteria such as leadership and persuasiveness.

### *Presentation exercises*

Presentation exercises are used to analyze the communication, presentation, and persuasiveness skills of applicants. For example, applicants may be given a report and asked to give their opinions on the material. A number of questions are usually asked at the end of the presentation.

### *Group interviews*

Group interviews are similar in nature to regular interviews, except that instead of a single recruiter or panel member, there may be three to six people on the panel. The people on this panel depend on the business the recruiting agency is working in. They may be from HR, consultants, team members, or partners. At the beginning of the interview, the panel members introduce themselves and explain how the interview will be conducted.

## **Research background**

The aim of Sarlak and his colleague's study was to identify the indicators of staff competency development in the center of evaluation and development in the judiciary affiliated with the judiciary in Yazd province. This research is a descriptive study with an applied purpose and has been done in a mixed way (qualitative and quantitative). First, by reviewing the literature



on the subject of research and then by the Delphi method, indicators of employee competency development in order to create a center for evaluation and development are identified and in the next step, using interpretive structural modeling, relationships between dimensions and indicators are determined and analyzed. Is located. Based on the research literature and Delphi method, 7 dimensions and 32 indicators were identified. The main dimensions are structural factors, contextual factors, behavioral factors, factors related to the characteristics of evaluators, competency indicators, characteristics of those evaluated, and competency assessment tools. The results show that in model leveling, competency assessment tools were identified in the first level as a dependent variable and structural factors in the sixth level as an independent variable. It is suggested that the improvement of structural factors that are the basis of the model be given priority and by the set indicators, measurement tools be developed and used for the development of employees and managers (Sarлак et al., 2022).

The purpose of Fathi Vajargah and his colleague's study is to identify and model the challenges of effective use of the assessment center with the development approach in Tehran Oil Refining Company in the form of a qualitative research method. This research is of an applied type. Semi-structured interviews have been used as a data collection tool to identify the challenges. For this purpose, 10 trustees and members of the A&DC committee who were selected by purposive sampling were interviewed. Content analysis method was used for data analysis, interactive management (IM), and ISM software were used to determine the importance and model the findings. Findings showed that Tehran Oil Refining faces 15 challenges for the effective use of the Development Center, lack of organizational maturity, managerial changes, lack of legitimacy and transparency in executive guidelines, and deficiency in competency model are the most causal challenges (Fathi Vajargah et al., 2022).

Akbari and his colleagues in their research identify and prioritize the problems affecting evaluation and development centers to help organizations make use of these centers to achieve proper meritocracy. Having reviewed the literature and having interviewed the experts, the researchers identified 42 problems. Other problems were found by the Delphi panel. Then they were all prioritized. Among the 50 problems, 15 were identified to be the most important by the experts. They were proposed as the findings of this research. Weak support by the higher manager, meritocracy's models not being native, disregarding the evaluation center and looking at it as a fashion, no practice of the results in individual development, and particularity of the meritocracy model was identified as the five most important problems in evaluation and development centers (Akbari et al., 2016).

## **Research Methodology**

The present research is applied and descriptive, utilizing the library method and based on content analysis. Library research is a systematic and step-by-step process used to gather information for writing an article or presenting a seminar. Throughout the library study process, the researcher must review, manipulate, adjust, and rewrite previous information B. Jovari, 2024b. The primary process in content analysis involves coding and classifying raw data, extracting main concepts and categories, and examining the relationships between them within the framework of a theory developed by the researcher based on the research's conditions and situation (B. Jovari, 2024c).

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of the research, concluding when theoretical saturation was reached. Approximately fifty scientific articles and documents were collected and categorized for analysis.

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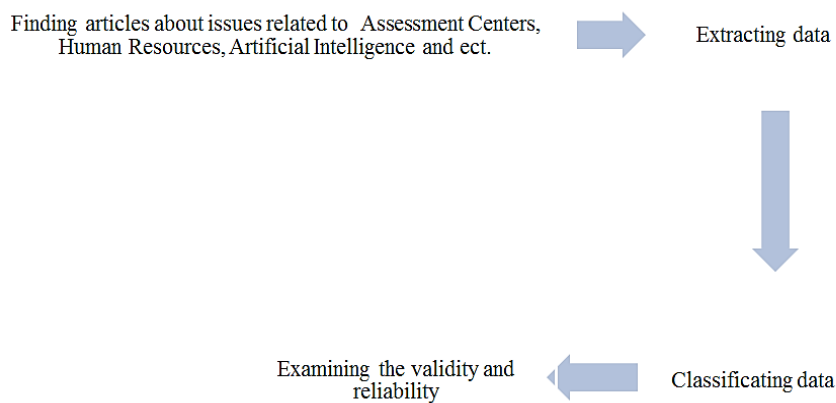


Figure 2. The steps of finding documentary research method process (Source: By author)

## Research findings

One of the main pillars of assessment centers is assessors, who, along with the appropriate design of the competency model and the design of competency assessment tools and exercises, play an important role in the success of conducting assessment and development centers.

### Main activities of assessors in the assessment and development center:

Assessors perform five main activities:

- *Observing behaviors in exercises and interactions*
- *Recording observed behaviors on standard forms*
- *Categorizing behaviors into competency dimensions*
- *Ranking individuals' competencies based on evidence*
- *Agreeing on competency rankings with other assessors*

Multiple assessors are utilized in assessment and development centers to avoid biases and ensure a comprehensive evaluation (Valerio & Etheridge, 2024).

### Types of Assessment Centers

There are three main types of assessment centers:

#### 1. *Assessment Center*

These centers are designed to make decisions regarding hiring or promotions. They focus on evaluating individuals for external recruitment or internal promotion opportunities (Bastida et al., 2025).

## 2. *Development Center*

Development centers are formed to identify an individual's strengths and areas for improvement. They serve as diagnostic tools to help individuals focus on their development. The main goal of a development center is to provide individuals with feedback on their capabilities and determine the necessary steps for their growth and success (Yenugula et al., 2024). The results of development centers are shared with organizations and individuals in the form of feedback, training programs, career paths, and more. The primary objective of a development center is personal and professional growth, rather than making decisions about accepting or rejecting individuals (Ahsan, 2025). In addition to assessment centers, organizations can implement mentoring, competency-based training, and designing competency-based human resource processes to complement the development process and enhance organizational success (Smirnova et al., 2025).

## 3. *Manager Assessment Center*

Successful organizations understand the importance of deeply understanding their managers to maximize their performance (Ibrahim & Rasheed, 2024). The Center for Manager Evaluation and Development has been an effective approach for recognizing and developing managers for over half a century. This approach involves evaluating managers' competencies through various exercises and tests conducted by professional evaluators (Hickey & Correia, 2024). The goals of the Center for Manager Evaluation include reviewing the competency of the organization's managers, identifying potential talents, ensuring intelligent succession in management positions, and providing suggestions to improve the management situation within the organization. Many companies utilize the Center for Manager Evaluation in their managers' employment interviews due to its effectiveness in identifying and developing managerial talent (Gruzina & Pererva, 2023).

### **Key elements of the assessment center**

#### *Volunteers, Competency model, tools and exercises*

Assessment and development centers have five main elements:

1. *Volunteers*: Volunteers are crucial in development centers as all elements are tailored to their conditions and characteristics (Sarver et al., 2024).
2. *Competency model*: This model includes a set of characteristics, abilities, and skills essential for successful job performance. Competencies are at the core of the assessment, with other elements designed around them (Jiang & Qu, 2024).
3. *Tools and exercises*: Various exercises and tests are used to identify competency levels in individuals. Examples include interviews, group work, case studies, and personality tests. Each competency should be assessed with at least two tools to gather sufficient evidence (Piwowar-Sulej & Bąk-Grabowska, 2024).
4. *Professional assessors*: Individuals within or outside the organization who understand competencies, observation methods, and assessment techniques are crucial in making accurate judgments about individuals (McAlpine, 2002; Rejeki et al., 2024).

### **The Importance and Benefits of Using an Assessment Center**

What are the guidelines for a management assessment center? The assessment center can serve a specific function within any organization, but generally follows these steps:

➤ *Job Analysis*

The first stage involves examining the abilities and competencies required for a manager's job position, as well as determining the evaluation criteria (Riggio et al., 2025a); For example, what characteristics should a human resources manager possess, and who is best suited for this position?

➤ *Competency Matrix Design*

A competency matrix is a tool used to determine the competencies and abilities needed for various manager and employee positions (Kaur et al., 2024).

➤ *Project Planning and Organization*

This section involves planning the performance evaluation project. the evaluation project's path is determined and initial measures are taken (Senses & Kumral, 2024).

➤ *Tests and Interviews*

During this stage, the assessment begins. The management assessment center tests managers through interviews, questionnaires, and other evaluation methods to measure them from various dimensions (Michelotti, 2024).

➤ *Analysis and Conclusion*

At the end of the assessment, the results from interviews and tests are analyzed and reviewed (Koutsoumpis et al., 2024).

➤ *Feedback to the Employer*

Once the results are obtained, feedback and evaluation results are shared with the main manager, who could be the general manager or the human resources manager (Salvadorinho et al., 2024).

➤ *Feedback to the Assessors*

Next, members of the assessment center provide their opinions, suggestions, and recommendations to the managers to help them address weaknesses and leverage strengths to perform better (Grunenberg, 2025).

### **The Role of Information Technology in the Management Assessment Center**

The competency assessment process in the assessment center consists of five stages, which fall under the assessors' responsibility. These stages include:

- *Observing the behavior of the assessee during the implementation of assessment tools*
- *Recording the observed behaviors*
- *Classifying the observations within the competency model and behavioral examples*
- *framework*

- *Ranking and scoring the classified behaviors*
- *Summarizing and reaching a final agreement with other team members on the final score (Cao, 2025).*

If these stages are carried out through integrated software and an intelligent, information technology-based process, the speed and accuracy of the assessment process will increase. This approach will also reduce assessment errors and enhance the validity of the assessment center results (Liu, 2024).

### **Information Technology and the Managers' Assessment Center**

The Managers' Assessment and Development Center is a process that necessitates the support of information technology in all circumstances (Sonmez Cakir et al., 2024).

As mentioned, in the assessment center, a large volume of data is collected in a short period of time, which reflects the assessment of human resource competencies and displays the current status of these competencies. It is clear that organizing, analyzing, and applying this data for intelligent decision-making to monitor and enhance competencies would not be feasible without the support and utilization of information technology; Through the use of information technology, a conducive environment is created for making the managers' assessment center and evaluation process more efficient (Paramesha et al., 2024; Vergara et al., 2024).

#### *The Development of Information Technology Has Had a Significant*

Impact on the design and implementation of assessment centers in both public and private organizations. Some of the activities in the competency assessment process are now conducted using information technology. A few examples include:

- *Conducting psychological and personality tests online*
- *Recording, classifying, ranking, and scoring behaviors with the help of information technology*
- *Utilizing appropriate software for statistical analysis to ensure the validity of assessment center results and to generate various reports*
- *Employing an intelligent system to create databases of assessments, talent pools, development programs, etcetal.*

### **Artificial Intelligence and the Center for Competency Assessment and Human Resources Development**

Controversial technological developments include Artificial Intelligence (AI). AI can talk with people like human beings and answer small and big questions by searching and analyzing the information and answers available on the internet (Zhou et al., 2023). AI increases efficiency and the capacity to do things, but it also has complex ethical issues. Ensuring the ethics of AI requires not only technologies but also decision-makers and developers, as well as laws and regulations that manage the implementation of AI. As every revolution in the world has had its effects on the skills and functions of the workforce, this is also true for the fourth industrial revolution (Chaka, 2023).

In the future, we will witness unanticipated and non-human ethical consequences of AI by providing solutions based solely on data. These super-intelligent tools and technologies think

instead of humans and monitor and control and make decisions better than them. For this reason, many knowledge-oriented workers such as journalists, marketers, and other professionals are worried about this technology replacing them and eventually becoming unemployed. Of course, these concerns are justified by the power and role-playing of these machines and robots; however, AI will create new jobs rather than cause the loss of several jobs. But in any case, due to various factors and cultural delays in the use of technologies, fear of technology and confusion is inevitable (B. Jovari, 2024a).

Artificial intelligence can significantly help improve the efficiency and accuracy of assessment centers (Burns et al., 2024).

By automating administrative processes, carefully screening candidates, designing customized tests, analyzing data, providing personalized feedback, and detecting fraud, AI can help focus assessments on qualified candidates and improve the overall assessment process (Chukwuka & Dibie, 2024).

However, the challenges associated with using AI and the need to ensure the accuracy and transparency of assessments must be addressed. Combining human knowledge and AI can lead to more efficient and fair assessment systems (Radonjić et al., 2024.)

At present, the place of artificial intelligence in the intelligent management of human resources of organizations has been neglected. It is as if intelligent systems such as attendance and absence systems, employment systems, performance evaluation systems, payment and reward systems, etc. They create an appearance, but they have not acted intelligently in providing vitality and true belonging to human resources (B. Jovari, 2024b). We will get to know these roles in the following.

### **Roles of Artificial Intelligence in Improving the Efficiency and Accuracy of Assessment Centers**

Today, assessment centers face numerous challenges, including a high volume of candidates, the need for accurate and fair assessments, and a shortage of time and resources. Artificial intelligence, as a powerful tool, can play a significant role in overcoming these challenges and improving the efficiency and accuracy of assessment centers. In this article, we will examine key roles of artificial intelligence in this regard (Chukwuka & Dibie, 2024).

#### *1. Automating administrative processes*

One of the most important roles of artificial intelligence in assessment centers is to automate repetitive and time-consuming administrative processes. This includes tasks such as scheduling interviews, sending invitations, collecting and organizing candidate documents, and managing assessors' calendars. By using chatbots and automated systems, these processes can be automated, freeing up valuable time and human resources. This allows assessors to focus more on the qualitative aspects of the assessment, increasing the accuracy and quality of the assessment. AI systems can effectively process large volumes of data, classify information, and eliminate irrelevant data, thereby increasing the overall speed and efficiency of the process (Chukwuka & Dibie, 2024).

#### *2. Optimization of scheduling and scheduling*

AI systems can optimally schedule interviews, tests, and other assessment steps, taking into account the capacity of assessors, the availability of candidates, the type of test, and the time required for each step. This avoids waste of time and potential conflicts and helps maximize the efficiency of the assessment process. Intelligent scheduling

algorithms can create realistic and flexible schedules that can adapt to sudden changes (Khakifirooz et al., 2024).

3. *Electronic document management and archiving*

AI can effectively manage candidate documents electronically. This includes secure storage, classification, and rapid retrieval of documents. AI can extract important information from paper documents using OCR technology and store them digitally. This saves space, reduces maintenance costs, and increases access to information. In addition, intelligent document management systems can automatically archive documents based on relevant laws and regulations (Gusain et al., 2023).

4. *Initial candidate screening*

AI can use machine learning algorithms to screen candidates based on predetermined criteria. These criteria can include educational background, work experience, skills, and abilities. By analyzing candidate resumes and information, AI can quickly and accurately identify candidates who best match the job requirements. This helps reduce the time and cost spent on manual screening and helps select qualified candidates for the next stages of evaluation. The use of natural language processing (NLP) systems can also be very useful in analyzing the text of resumes and cover letters, providing evaluators with valuable information (Ujlayan et al., 2023).

5. *Social network analysis:*

AI can analyze information contained in candidates' social network profiles. This analysis can help identify the personality traits, skills, and experiences of candidates and help the evaluator identify those who are most suitable for the job requirements. Of course, special attention should be paid to ethical and privacy considerations in this regard. The use of social media information should be done with the consent of the candidate and in compliance with relevant laws and regulations (Maghsoudi et al., 2023).

6. *Resume review and skills matching*

Artificial intelligence can analyze candidates' resumes using natural language processing (NLP) algorithms and compare their skills and experiences with the desired job requirements. This can help identify candidates who have the required skills effectively and quickly. This can effectively reduce the number of candidates who advance to the next stages of screening and optimize the time and cost of the evaluation process (Julian & Haripriya, 2024).

7. *Designing customized tests and assessments*

AI can analyze data and patterns to design customized tests and assessments tailored to the needs of each specific job. These tests can include multiple-choice questions, descriptive questions, work simulations, and simulated games. Using augmentation techniques, AI can improve tests and increase their accuracy and validity. AI can also dynamically adjust tests based on candidate performance, which leads to more accurate and fair assessments (Owan et al., 2023).

8. *Generating diverse and relevant questions*

AI can generate diverse and relevant questions for each job using vast databases, making tests more accurate and fair (Padhi et al., 2023b).

9. *Adjust the program level with the candidate*

With previous analysis, AI can automatically adapt the test level to each candidate, which leads to a more accurate and fair assessment (Mujtaba & Mahapatra, 2024).

10. *Data analysis and accurate reporting*

AI can analyze large amounts of data collected during the assessment and provide accurate reports to assessors and managers. These reports can include statistics on the performance of individuals, their strengths and weaknesses, and how their performance compares to other candidates. This data analysis helps the aspirant understand the candidates and make decisions related to the analysis. Also, this report can be used to improve the assessment processes in the future and identify areas that need improvement.

11. *Identify hidden patterns*

AI can identify hidden patterns given in the assessments that may be missed by a human aspirant, this leads to a better understanding of the selection process and its improvement (Shammi et al., 2024).

12. *Future Performance*

Using predictive algorithms, AI can predict the future performance of candidates based on assessment data, which helps in making more accurate hiring decisions (Geloune, 2024).

13. *Providing personalized feedback to candidates*

AI can provide personalized and accurate feedback to candidates using natural language processing algorithms. This feedback can include information about candidates' performance on tests, their strengths and weaknesses, and suggestions for improving their skills and capabilities. Personalized feedback can help to identify and prevent cheating on tests by using pattern recognition and behavior analysis techniques (B. Jovari, 2024d).

14. *Detecting cheating and maintaining test security*

AI can help to detect and prevent cheating on tests by using pattern recognition and behavior analysis techniques. This includes detecting abnormal patterns in candidates' responses and suspicious activities. By using online test monitoring systems, AI can enhance the security of tests and help maintain the accuracy and validity of assessments. This helps ensure that the selection and selection of qualified candidates is fair (Akbari et al., 2016; Gopane et al., 2024).

### **Challenges and considerations of the use of AI in assessment centers**

Despite its widespread use, the use of AI in assessment centers also comes with challenges. One of the most important of these challenges is the need for high-quality and sufficient data to train artificial algorithms. Insufficient data or biased data can lead to incorrect results and unfair decisions. Also, maintaining the privacy and security of candidate data should receive special



attention from the careful design and implementation of artificial systems. In addition, the need for training and empowerment in the use of AI tools is also important.

## **Discussion and conclusion**

The measures mentioned in this research have been somewhat effective and efficient as initial steps toward making the evaluation center smarter and developing managers. However, for the evaluation process to truly become smarter and yield valuable results, all stages must be implemented in an integrated and systematic manner utilizing information technology.

This will ensure that progress continues as intended and leads to highly beneficial outcomes. AI has significantly contributed to learning management systems, learning experience platforms, and learning analytics.

However, the adoption of AI has not been without challenges. First, the technology behind AI has not yet advanced enough for widespread use. Furthermore, R&D teams lack the maturity to integrate AI into their work effectively.

A professional management assessment center is a valuable tool for organizational growth, but it may encounter various challenges. Being aware of these challenges can help in overcoming them. **Poor and Inappropriate Planning:** One challenge faced by the center is inadequate planning. Lack of agreement on methods, results, and evaluation processes in assessor selection can hinder the center's effectiveness. **Incorrect Job Analysis:** Proper analysis of assessment results and interview questions is crucial for progress. This analysis identifies managers' competencies and provides growth solutions. **Incorrect Selection of Appraiser:** Another challenge is selecting the wrong appraisers. The appraiser plays a vital role in the appraisal process. Choosing the wrong appraiser can waste efforts and not yield positive results. Competence in management is also important, as the focus on competence management is more prevalent in the private sector than in the public and government sectors (Sidki et al., 2024). Some scholars view competence management as a way for government organizations to transform their bureaucracies into efficient and flexible units (Ingaggiati et al., 2024). Therefore, the emphasis on this issue in the government sector has increased, as countries need managers and employees who can provide better services based on their competence and societal interests, adapting to the evolving landscape of changes (David et al., 2024). educating and training future executive managers to align with knowledge orientation and meritocracy based on professional ethics in appointments and promotions (Douglas, 2024).

This aims to enhance the competence of the country's managers, establish a platform for knowledge orientation, meritocracy, and professionalism in managerial roles, identify and develop employee capacities, and motivate capable experts through a competitive and fair selection process (Bautista et al., 2024). While various methods exist for assessing employee capabilities, the Center for Evaluation and Development approach is considered the most reliable and predictive (Yaghoubi et al., 2024).

This approach, based on competency-based assessment, offers programs for developing an organization's most valuable asset - its employees (Sharma & Malodia, 2022). By hiring candidates with the necessary competencies and implementing targeted development programs for average-performing employees, organizations can enhance overall performance and promote growth within the organization. Establishing assessment and competency centers within organizations is a key policy to support these initiative (Zhang et al., 2024).

**Suggestions for Assessors on the Day of the Assessment Center**

1. Before the assessment day, consult with the center director regarding the participant you will be assessing. If you have any preconceived notions about a participant, it is best to allow other assessors to evaluate them.
2. Prior to each exercise, make sure to prepare yourself by filling out the behavior recording form with the names of the participants, listing the competencies to be assessed, and reviewing any necessary documentation.
3. If any changes need to be communicated, report them to the center director promptly and ensure that all tasks are completed on time.
4. During group activities, position yourself where you can observe the participants while maintaining a certain distance from them.
5. Avoid displaying any bias towards the participants. Refrain from making judgments about their strengths or weaknesses and focus on creating a comfortable environment for them.
6. Do not provide specific feedback on individual performances. If necessary, refer to the exercise without giving an evaluation.
7. Treat all participants equally and maintain professionalism by using a badge. Keep all interactions respectful and avoid singling out any one individual.
8. Make sure all forms and documentation are securely stored and not left behind .
9. Complete evaluation forms promptly, setting aside time after each exercise to do so.
10. Refrain from discussing participants' performance in detail with other assessors until the wash-up session to prevent any potential bias.
11. Limit the use of your mobile phone to breaks only and maintain a friendly yet professional demeanor with participants throughout the assessment exercises.
12. If you have any questions, do not hesitate to ask the center manager for clarification.
13. In conclusion, the role of trained and empowered evaluators is essential for ensuring the accuracy of assessment center results. Let us recognize and appreciate the importance of their contributions on evaluation day.

**Advice for Assesseees on the Day of the Assessment Center**

1. Know what to expect
2. Read your invitation to attend the assessment center carefully to learn the following:
3. What will happen on the day of the assessment?
4. What types of exercises and activities will you do?
5. Prepare to present at the center.
6. Prepare the required documents and take them with you.
7. Consult your organization's administrator for more information.
8. Search the Internet and ask others about the assessment center.

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## Conflict of interest

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