



Design Thinking–Driven Leadership in the Digital Age: Capabilities, Constraints, and Organizational Impact

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ABSTRACT

Design thinking skills are a major part of management skills and leadership approaches. In the 21st century, design thinking skills help leaders find the best possible solution to particular issues. It becomes a major role of a leader to pursue design thinking skills to improve the overall performance of a business organization. On the other hand, the leader faces various issues and challenges in adopting design thinking skills, and the skills are; Empathy, emotional intelligence, consensus building, user research, journey mapping, and brainstorming. The key purpose of this research work is to understand the role and importance of design thinking skills in an organization and its limitations/cons. Along with this, this study will discuss various methods of improving design thinking skills by eliminating weaknesses and enhancing strengths. The primary data collection method has been followed, and interviews have been done with six experienced managers from various sectors (Engineering, Construction, and Healthcare) in the UAE. The findings outline that design thinking skills directly impact organizational performance and the business. Potential benefits of business innovation and creative solutions are gained from the successful implementation of the design thinking process which can be enhanced for optimum advantages by using the appropriate tools and practicing a good leadership style. However, there are various obstacles that lead to producing biased decisions that can be eliminated by continuous learning and training and following rigid strategies.

1. INTRODUCTION

Many researchers have discussed the key role of designing thinking skills in managing an organization. According to Schumacher & Mayer, S. (2018) designing thinking skills are a core aspect of leadership as it helps in project management and innovation. On the other hand, Elsbach & Stigliani (2018) have stated that designing the thinking skills of a leader in an organization helps in digital transformation in the 21st century, and it plays a crucial role in bringing innovation. Chindarkar, Howlett & Ramesh (2017) have stated that designing thinking skill helps in developing effective organizational policy that improves the

overall performance of a business organization.

1.1. Problem statement

According to Cankurtaran & Beverland (2020), it has been stated that design thinking is considered a skill of a leader through which they can solve certain issues and meet the need of consumers and other stakeholders. Designing thinking skills have both positive and negative impacts on the business organization (AlAmiri et al., 2024; Hanaysha et al., 2021; AlQassem et al., 2024). According to Clegg, Pitsis & Mount (2021), designing thinking skills is a new approach aiming to develop new innovative products and find a solution to diverse issues.

Design thinking is challenging as it involves something more fundamental than managing change. Carlgren, Elmquist & Rauth (2018) have stated that designing thinking creates challenges in the industry.

The researchers have highlighted five key themes, user focus, the problem of framing designing thinking, highly diverse workplace, experimentation, and visualization (Kabiraj et al., 2011; Joghee et al., 2021; Rosmadi et al., 2025). That means design thinking skills do not always have positive outcomes. Other researchers have talked about the limitation of designing thinking skills: Lack of involvement, Lack of effective leadership skills, short-term thinking, Lack of collaboration, Lack of resources, and fear in the mind of a leader. These are the limitations and cons while adopting design thinking skills.

1.2. Hypothesis

H₁ Design thinking skills **empower the business innovation, and leadership position of a manager** which can be **improved by collaboration and the adoption of the appropriate organizational strategies**.

H₂ Design thinking skills limitations prevent managers from potential benefits by **promoting biased decisions and empathy** which can be **eliminated by the use of various tools and training**.

1.3. Research questions

- What is the key concept of designing thinking skills and their importance in business organizations?
- How can design thinking skills be **improved** to empower managers to contribute to **critical business benefits**?
- What are the best practices implemented to **eliminate the weaknesses or the key disadvantages** related to designing thinking skills by a manager?

1.4. Research objectives

- To understand the key concept of designing thinking skills and its importance in the business organization.
- To understand how to **improve design thinking skills** to empower managers to contribute to critical business benefits.
- To highlight the best practices implemented to **eliminate the weaknesses or the key disadvantages related to designing thinking skills** by a manager.

2. LITERATURE REVIEW

2.1. Concept of Design Thinking

According to Tschimmel (2018), design thinking is an important skill for every leader. It is an approach to the problem-solving attitude in which the leader understands the potential products or services and the leader also understands goals, objectives, and aspirations (Alzoubi et al., 2024; Anifa et al., 2024; Shao et al., 2025). Some of the key skills that come under design thinking are; Empathy, emotional intelligence, consensus building, user research, journey mapping, and brainstorming. Design thinking is core to management practices as it helps to understand the need of employees and solve internal issues through journey mapping (creating awareness of specific issues, considering a possible solution to the issue, and deciding the best to proceed).

2.2. Design Thinking Process Models

IDEO's 3 I Model

IDEO's 3 I Model showed in Figure 1 has three phases: inspiration, imagination, and implementation. These three phases enable leaders to find out the solution to an issue or find innovative ideas. Inspiration defines how a leader identifies the design problem and opportunities and then designs a team. In ideation, the leader conducts a brainstorming and then implements the ideas.

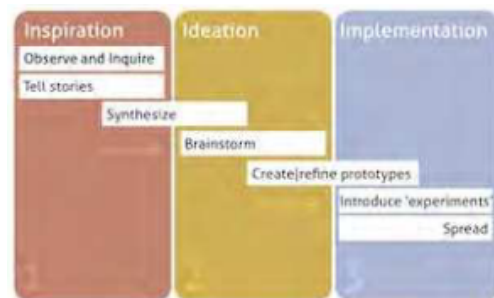


Figure 1: IDEO's 3 I Model
(Source: Vuillermin, & Huck-Sandhu, 2022)

IDEO's HCD Model

This model has talked about three steps or phases that help an individual leader manage and control the organization: hear, create, and deliver. The first stage of this model defines how leaders conduct field research by collecting information from the design team and then working together in a workshop to find solutions, opportunities, and

prototypes. The last stage is all about launching new solutions.

4 D or Double Diamond Model

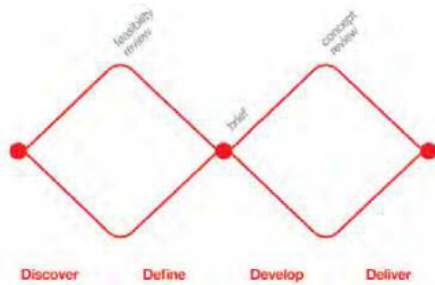


Figure: 4 D or Double Diamond Model

(Source: Vuillermin, & Huck-Sandhu, 2022)

The above model in Figure 2 has stated that there are four stages through which the leader could adopt design thinking skills: discover, define, develop and deliver. The leader finds new opportunities, information, trends, and insight in the first phase. In the second stage, the leader reviews the insight and selects and discards it. In the third stage, the leader develops a solution and tests the developed strategy with multi-disciplinary teams, and in the last stage, the leader implements the solution (Alzoubi et al., 2024; Pande et al., 2024; Al-Nakeeb et al., 2024).

2.3. Utilization of Design Thinking Skills in Organizations

Nowadays, many organizations are moving towards the adoption of design thinking skills, which leads to the raised interest of managers across different industries. Design thinking improves the development of various products and services within public and private organizations. However, Dunne (2018) stated that design thinking may not provide the appropriate value to all organizations as it requires a comprehensive understanding. This is due to the challenges and problems that might be encountered (Yas et al., 2024; El Khatib et al., 2024; Alblooshi et al., 2025). Wrigley et al. (2020) revealed that prerequisites such as strategic goals, resources, cultural workforce, and directives are necessary for design thinking skills integration into an organization (Karthika et al., 2024; Naim et al., 2025; Murtaza et al., 2024). The organization must have clear and realistic long-term goals (Al-Qassem et al., 2021; Rana et al., 2025; Halder et al., 2024). In addition to the experienced workforce with the appropriate knowledge and the availability of suitable facilities

(AlShawabkeh et al., 2023; Shao et al., 2025; Ilyas et al., 2023). Moreover, guidelines and policies are essential to enhance the practice of design thinking within organizations (Khatib et al., 2024; Hanaysha et al., 2021; AlNajdawi et al., 2024).

2.4. Design Thinking Skills in Society, Industry, Innovation, and Business

According to Dunne (2018), design thinking helps in project management as it is based on human-centric approaches that it helps to develop ideas and solutions to the problem. Design thinking helps develop new products and ideas and adds value to customers. Therefore, the organization could earn more revenue. Design thinking is always user-centric. McGann, Blomkamp & Lewis (2018) have stated that design thinking skills help in the policy-making of a business organization and help in dealing with complex challenges and understanding the problem domain. Some of the key elements of design thinking skills are; human-centered, creative and playful, collaborative, and Prototype driven. Liedtka (2018) has stated that design thinking skills directly impact social innovation as it helps the management team understand consumers' actual needs and wants and thus bring new innovation to the market (Kanwal et al., 2023; AlMidfa et al., 2024; El Khatib et al., 2023).

2.5. Critical Benefits of Design Thinking Skills

Utilizing design thinking skills by managers influence creativity, efficiency, and innovation across different sectors to address complex situations. For instance, Altman et al. (2018) stated that design thinking skills applied by leaders are effective in the healthcare sector which enhances the understanding of various patients' and healthcare providers' needs and provides innovative solutions to current issues (Treacy et al., 2025; AlKatheeri et al., 2025; Shehab et al., 2023). Therefore, gaining potential benefits is the result of the successful implantation of this technique compared to traditional approaches. Moreover, Henriksen et al. (2017) mentioned that design thinking skills support dealing with educational problems by providing a rigid foundation for leaders to think of creative solutions. As a result of their investigation, empathy is considered a significant strategy to navigate problems (Kumar et al., 2024; Ahmed et al., 2024; Alshurideh et al., 2024).

2.6. Limitations and Key Reasons of Design Thinking

Skills Failure

According to Clegg, Pitsis & Mount (2021), it has been stated that it becomes challenging for leaders or managers to adopt design thinking skills. The researchers have discussed various limitations, such as lack of user focus, the problem of framing design thinking, a highly diverse workplace, experimentation, and visualization (Al-Qassem et al., 2024; Naim et al., 2024; AlKurdi et al., 2023). Design thinking requires the direct involvement of stakeholders who could put their own thinking, ideas, and position to make their own contribution. Therefore, lack of user involvement is a key challenge (Kharbat et al., 2017; Anifa et al., 2024; Salloum et al., 2024).

It sometimes becomes challenging for a leader to evaluate the performance of team members within a group, and another key limitation is the lack of homogeneity and harmony among team members. Cultural diversity is another limitation (Khan et al., 2023; Rosmadi et al., 2025; Kukunuru et al., 2019). Diversity means employees have different thoughts, ideas, and knowledge; thus, it becomes challenging for managers to bring diverse cultures into a centre, which leads to a lack of user centre approach (Joghee et al., 2024; AlShawabkeh et al., 2021; Joghee et al., 2021). On the other hand, another researcher has stated that siloed team structure is another key disadvantage (Alshurideh et al., 2025; Sihag et al., 2024; El Khatib et al., 2022). As because the experts are always scattered in different departments or locations, and thus, it helps to create a gap between a manager, other department employees, and subordinates (Joghee et al., 2018; Alzoubi et al., 2025; Som et al., 2023). Micheli et al. (2018) have some talk about some of the issues, such as; Lack of persistence, linear process, requiring long-run workshops, always being human-centric, and sometimes misalignment (Shwede et al., 2024; Khan et al., 2024; El Khatib et al., 2023). Another key barrier to design thinking skills is that it is always based on a user-cantered approach. User-cantered design is always an iterative design process that always focuses on the users and their needs. Lack of learning from the failure and diversity issues is another reason design thinking skills fail (Alzoubi et al., 2025; Ma'asor et al., 2023; Nuseir et al., 2021).

2.7. Improvements of Design Thinking Skills

Design thinking skills are widely used to approach issues and provide the best possible innovative

beneficial solutions. However, as mentioned by Wrigley & Straker (2017).

the huge interest in adopting innovation by non-professionals in design thinking requires training to apply the associated design thinking skills and methods in the most appropriate ways. Organizational leadership must use the appropriate tools for successful design thinking processes such as brainstorming, mind maps, and experiments (Alzoubi et al., 2025; El Khatib et al., 2024; Kanwal et al., 2023). Each tool is used based on the industry's needs (Micheli et al., 2018; Shwede et al., 2021; Shao et al., 2025; Kabiraj et al., 2009). Thus, a manager must learn the proper implementation of methods to enhance design thinking skills. Moreover, as explained by Micheli et al. (2018), a design-thinker manager must have the characteristics of teamwork, visualization, flexibility, and systematic perspective (Vij et al., 2025; Kharabsheh et al., 2024; Kabiraj et al., 2009). The characteristics are gained and enhanced by practice and dealing with sophisticated concerns. Weaknesses of applying design thinking skills can be minimized and strengths can be improved by exploring alternative solutions and ideas (AlHamadi et al., 2024; El Khatib et al., 2023; Khan et al., 2024). Also, learning from previous experience in the field and collaborating with experts can yield significant results (Alshurideh et al., 2022; AlNajdawi et al., 2024; Ma'asor et al., 2023). Finally, managers must refer to the strategies and policies of an organization to adopt the most suitable solutions in the design thinking process.

3. RESEARCH METHODOLOGY

Interpretivism research philosophy has been chosen (Alharahsheh & Pius, 2020). **Qualitative method** used to conduct interviews. The **inductive approach** was used in this research study. For this particular research study, an **explanatory research design** has been followed as there are some previous journal studies have been analyzed and evaluated. The qualitative research method has been chosen as interview session were conducted (Flick, 2017). There are **18 interviews**, and **six managers** from Engineering, Construction, and Healthcare sectors have been chosen for the interview session (AlShawabkeh et al., 2018; Joghee et al., 2023; Sun et al., 2016). The interview session has been done through telephone conversation, and the responses were recorded,

analyzed, and interpreted. The primary data collection method has been followed (Neyara Radwan et al., 2025; El Khatib et al., 2022; Joghee et al., 2020). The primary data collection method is a technique or process of collecting raw data from real-world sources, and in this case, managers are the real-world sources (Samer Hamadne et al., 2023; Alshurideh et al., 2022; Tangri et al., 2023). The research scholar has considered key ethical considerations in doing this research study. Some ethical considerations include voluntary participation, informed consent, and confidentiality.

4. EMPIRICAL ANALYSIS

4.1. Managers' perspectives to design thinking

From the perspective of Manager 1, it has been stated that the key perspective of design thinking skills is to solve the problems of the consumer and understand their actual needs. And Manager 2 stated that it is used as a problem-solving method by creating brainstorming sessions. Also, Manager 3 related the design thinking concept to its role as it is used to understand goals and take appropriate actions. In addition, all healthcare industry managers discussed the concept of design thinking as a solution-based approach to satisfy the needs by understanding the issue and comparing possible solutions. Hence, it is deduced that all managers agreed that there are advantages and disadvantages.

4.2. Design thinking skills based on managerial roles

Sense of creativity, problem-solving attitude, leadership skills, collaboration, effective communication, analytical thinking, conflict management, emotional intelligence, brainstorming, and user research are the skills and competencies of design thinking. On the other hand, Manager 2 has highlighted Empathy, emotional intelligence, consensus building, user research, journey mapping, ideating, prototype, collaboration, creativity, and brainstorming as important skills to adopt the design thinking process in his role. Whereas Manager 3 emphasized that collaboration, teamwork, and critical thinking are the main driving skills in the construction environment. Similarly, the skills required for design-thinkers in the medical sector can be adopted by managers in all other fields.

All the respondents agreed on the key steps of the design thinking process which are; empathize, define, ideate, Prototype, and test. Therefore, all

managers across different industries follow the same process in adopting design thinking skills.

4.3. SWOT Analysis (Strengths, Weakness, Opportunities, Threats)

From the managers' perspective, design thinking skills have both strengths and weaknesses. Therefore, SWOT analysis is considered to identify the strengths, weaknesses, opportunities, and threats (Yasir et al., 2024; AlKatheeri et al., 2025; Rana et al., 2025). According to Manager 1, the strength of design thinking skills is improving creativity and problem solving, the weaknesses are diversity and lack of cooperation, the opportunity is the improve new products or services, and only a human-centric approach is the threat (Tanveer et al., 2025; Kofinas et al., 2016; El Khatib et al., 2024). On the other hand, Manager 2 highlighted that design thinking skills improve the sense of empathy, creativity, problem-solving and positive attitude which are considered potential strengths. Whereas the weaknesses are lack of user focus, experimentation, and visualization. Siloed team structure is one of the major threats and strategy development, conflict resolution, and effective organizational structure is the resulting opportunities. However, from the perspective of Manager 3, meeting the needs and improving performance are the key strengths in the construction environment (AlHamadi et al., 2024; El Khatib et al., 2023; Nuseir et al., 2019). Whereas the lack of resources to adopt innovative thinking creates threats such as over-expectation. However, if innovation transformation, effective strategies, and policies are developed huge opportunities are created. In general, healthcare sector managers agreed on the improvement of creativity, strategic thinking, and solving organizational issues as advantages of the design thinking process. Whereas, the lack of cooperation, fear of change, and limited knowledge are identified as major weaknesses. However, similar opportunities and threats are created by the design thinking process across managers in various sectors as stated above.

4.4. Failure of design thinking skills

Interviewed managers discussed about how Design thinking fails. The reasons are unrealistic expectations and a lack of persistence and vision. Other reasons are diversity issues, lack of resources, and only focusing user-centered approach. In addition to the limited knowledge acquired by some managers. Moreover, managers

in the medical industry mentioned that failure of understanding the requirements caused by inappropriate problem framing leads to the wrong implementation of design thinking skills.

4.5. *Challenges of design thinking skills implementation*

Internal organizational conflict, lack of resources, and lack of effective leadership are the challenges faced by managers in implementing design thinking skills. On the other hand, people's desirability, lack of learning from failure, and complex innovative solutions are also key reasons as per the managers dealing with Engineering and Construction fields. However, the healthcare industry manager stated that cultural issues, short-term thinking, ineffective tools, and the need for quick decisions are the main challenges encountered in the medical field.

4.6. *Improvement of design thinking skills*

Managers have stated that design thinking skills could be improved by Increasing observation power, continuous training, and a good leadership style. Good leadership style, collecting feedback, learning from an expert, learning from the past, and brainstorming could improve design thinking skills and generate excellent results in the Engineering and construction sectors (Anifa et al., 2022; Al-Kassem & A. H., 2021; Kurdi et al., 2025). In addition, Healthcare managers emphasized the importance of following the process of design thinking skills properly, conducting intensive brainstorming sessions, and following transformational leadership approaches to enhance the design thinking results.

4.7. *Eliminating threats created by the adoption of design thinking skills*

As per the respondents, to reduce the weaknesses of the design thinking process, it is recommended to have direct involvement with employees, stakeholders, and customers. Manager 2 explained that the use of various tools such as brainstorming, empathy maps, and keeping a record of all the evidence supporting the generated solutions to resolve issues is essential. Recruiting experienced and critical thinkers is effective as well. In addition to having the required training on how to adopt the design thinking process to eliminate associated risks is a significant technique in the construction industry (AlShawabkeh et al., 2021; El Khatib et al., 2023; Pande et al., 2024). Also, managers from the health industry suggested the use of policy

documents that states efficient methods to deal with concerns to avoid weak solutions. Moreover, collaborating with experts by sharing experiences in the same industry reduces the disadvantages of the design thinking process.

4.8. *Design thinking skills features for organizations and leadership development*

Solving customer requirements, tackling challenging issues, and creating innovative solutions are the key features of design thinking skills according to all the managers.

As stated by Manager 1, design thinking skills helps to develop empathy which is considered a good quality of a leader, and Manager 2 stated that design thinking skill helps to engage the workforce, listening to their needs and cultivating Empathy. Therefore, Manager 3 deduced that design thinking skills improve the attitude toward team members. Along with this, design thinking skills help to develop positive organizational culture, and it helps to grow, innovate and improve financial performance (Alshurideh et al., 2024; Alblooshi et al., 2025; AlQassem et al., 2025). Moreover, design thinking empowers leaders to become significant problem solvers by facilitating innovation and fostering the growth of leadership qualities as well as providing opportunities to enhance core values adopted by a manager in solving organizational concerns.

4.9. *Business Innovation*

According to Manager 1, designing thinking skills help create a solution for a problem, understand human needs, and create collaboration between team members. Manager 2 stated that designing thinking skills help in understanding stakeholder requirements, leadership approaches, risk management, negotiation, and conflict management. And Manager 3 mentioned that strong innovative work can be produced using the design thinking process. Furthermore, design thinking brings solutions to the business by understanding the needs of the medical industry as per the manager working in the health sector. And it helps in creating value for the business (Maydybura et al., 2024; AlQassem & A. H., 2024; Khan et al., 2024).

4.10. *Value-based leadership*

According to the managers, design thinking skills support value-based leadership by keeping customers as the first priority, productive collaborations and listening to team members.

Moreover, considering customer feedback encourages innovation and creativity and encourages employees to deal with challenges with creative ideas. Moreover, design thinking supports the understanding of the core industry and organization's issues according to healthcare managers.

4.11. *Design Thinking solves issues*

The manager provided different opinions when it comes to the statement of design thinking skills are the only solution to all problems in the organizations. Manager 1 disagreed with the statement and expressed that is only an innovative strategy. However, Manager 2 and Manager 3 agreed with the proposed statement and emphasized that design thinking skills are providing effective solutions to all Engineering and construction-related issues. Whereas healthcare managers provided different points of view, some agreed and considered it an effective tool for all industry-related concerns (Alshurideh et al., 2025; Khatib et al., 2024; AlKurdi et al., 2025). In contrast, the statement was not valid for one of the managers as he mentioned, design thinking skills help in product development only.

4.12. *Impact on society, industry, innovation, and business*

Design thinking skills have a direct impact on society, industry, innovation, and business. Manager 1 stated that design thinking skill helps to understand the need of consumers and bring innovative products and services. Whereas Manager 2 discussed the impact of creating innovative solutions on the organization and the industry as well. Thereby, bringing potential benefits to society (AlNajdawi et al., 2024; AlShawabkeh et al., 2013; Yas et al., 2024). Furthermore, healthcare managers agreed on the great impact of design thinking skills on providing creative business ideas, enhancing industry innovation, and supporting business continuity.

4.13. *Impact of technology on design thinking skills*

According to all the managers, technology enhances the use of the design thinking process. AI is used in design thinking skills such as machine learning, cloud computing, and many more, and artificial intelligence automated design thinking skills are part of business management activities. As mentioned by Manager 3, technology enhances collaboration between members to come up with

creative solutions. Along with other managers who stated that technology enhances the decision-making process by simulating human intelligence.

5. DISCUSSION

From the above findings (interview session and secondary data), it could be found that design thinking skills are most important at the corporate level. On the other hand, there are various limitations to design thinking skills. Design thinking skills directly impact leadership because; it creates a better solution to the problem with an effective leadership style. On the other design thinking skills have a greater contribution to project management because the managers have stated that design thinking skills are based on human-centric approaches, and managers could understand the actual problem of the society. Moreover, it brings more creativity and innovation to the project (Sihag et al., 2024; Treacy et al., 2025; El Khatib et al., 2023). The managers have talked about some of the key competencies and skills that are associated with design thinking skills, and these are a sense of creativity, problem-solving attitude, leadership skills, collaboration, effective communication, Empathy, emotional intelligence, consensus building, analytical thinking, conflict management, emotional intelligence, brainstorming and user research (Prud'homme van Reine, 2017). It is clearly obvious that managers across different industries apply matching skills through the implementation of the design thinking process (Al-Kassem et al., 2022; Kharbat et al., 2021; Shwedehe et al., 2024).

Design thinking skills have a direct impact on the organization as it helps to solve the needs and wants of customers. It has also been found that the manager could adopt design thinking skills by identifying the issues and challenges and thus create innovative solutions (Shwedehe et al., 2023; AlQassem, 2022; Kofinas et al., 2016). For example, emotional intelligence means a leader's self-awareness, self-regulation, and social skills help to manage the employees in an organization and encourage them to work and collaborate. Moreover, journey mapping can help the employees visualize the process to accomplish the goal. It starts by compiling a series of user actions into a single timeline. This timeline helps further to create a narrative view (Alzoubi et al., 2024; El Khatib et al., 2023; Joghee et al., 2024). On the other

hand, creative and brainstorming ideas also help the business organization generate fruitful ideas to tackle crucial problems. Eventually, this can help the organization immensely to achieve the desired goal (Kupp, Anderson & Reckhenrich, 2017).

As per the findings and reviews, various steps to initiate and implement the design thinking process within an organization, such as empathizing and defining the problem properly are the initial steps. Further, ideating and making prototypes, i.e. making a simulation version of the final product, is the next crucial step used for testing the product before market launch. Design thinking skills are very crucial for management within an organization. Its main strength is that it helps to improve creativity and acts as a problem-solver within an organization (Joghee et al., 2020; AlQassem, 2022; Karthika et al., 2024). Moreover, it can also help the business organizations to generate empathetic behavior within the employees and allows them to build a positive attitude. Design thinking skills also have the opportunity to improve the services or the product of any organization and also can create an effective organizational structure. Along with its significant contribution to project management, innovation transformation, and the development of effective organizational policies (AlMidfa et al., 2024; Naim et al., 2024; Khan et al., 2023).

However, it is only human-centric, and a lack of cooperation might hamper the operation design thinking skills can solve the requirement of customers and helps the company tackle unforeseen issues by creating innovative solutions (Prud'homme van Reine, 2017).

Another significant contribution of design thinking skills is that it helps to develop a positive environment within the organization. It enables the company to tackle financial problems by improving market performance (Vrana & Singh, 2021). The primary personal needs of implementing design thinking skills are Empathy, co-creation, and experimentation by trial and error approach (Razmak et al., 2018; Murtaza et al., 2024; Yasir et al., 2024). According to the above findings, these needs are the most crucial. According to both managers (Bason & Austin, 2019). However, it could be said that there are a lot of problems based on the perception of the three managers about the reason for the failure of design thinking skills (AlShawabkeh et al., 2016;

AlKatheeri et al., 2025; Naim et al., 2025). The most vicious is the unrealistic expectations and lack of long-term vision (Strakhovich, 2018). Furthermore, the lack of adequate resources and diversity problem is other major problem that hinders such practical skills. On the other hand, internal conflict and lack of people's desirability are some significant challenges managers face during design thinking implementation. In addition, the findings reveal that inappropriate problem framing, lack of understanding, and lack of collaboration and the major reasons for the unsuccessful implementation of design thinking skills (Som et al., 2023; El Khatib et al., 2023; Shwede & F., 2022).

It could be found that design thinking skills help create viable solutions, collaborate with co-workers, understand stakeholders' requirements, and maintain risk issues within an organization to help accomplish the organization's goals. It also helps to reduce uncertainty, and the managers also get to know the actual need of the business. Making customers the first priority and considering all customers' feedback certainly helps the manager get the desired revenue and growth of the company (Alshurideh et al., 2022; Joghee et al., 2018; Kumar et al., 2024).

Design thinking skills may help managers to improve their observation power. It also helps to enhance leadership styles by collecting feedback and getting expert training. It could be found some managers found design thinking skill is the only solution to every problem. While others consider design thinking as providing innovation for product development. The manager also discusses another innovative strategy along with design thinking skills to get the actual outcome. The tools also play a crucial role in design thinking (AlShawabkeh et al., 2023; Shwede et al., 2024; El Khatib et al., 2024). AI-based design thinking skills could solve problems more effectively. It is also noted that, along with AI, machine learning and cloud computing also plays an equal role in the implementation process.

• **Recommendation**

The study presents several recommendations:

- Design thinking skills need to be improved in terms of experience, knowledge, and leadership skills.
- The manager needs to gain more

knowledge to adopt the design thinking process in the appropriate ways.

- it is also very important to recruit experienced employees and managers with design thinking competencies to handle organizational issues.
- It is recommended to use policy documents to follow the same procedures when dealing with the complex issue to avoid weak solutions.
- Effective implementation of design thinking skills contributes to innovation thereby successful business continuity and industry improvement are assured.
- The use of the technological tool could support the effective implementation of the design thinking process and leverage associated skills.
- It is crucial for a manager to allow employees to participate in decision-making because decision-making helps bring new and creative ideas.
- Managers must refer to the organization's policies and strategies to implement suitable solutions and reduce weaknesses.
- Organizational leadership must use the appropriate tools of the design thinking process to improve the creation of creative solutions.
- It is important for leaders to improve emotional intelligence skills as it would help them understand employee and self-goals, the desire to do something new, and challenges on an intimate, personal level.
- Moreover, the leader has to improve creativity and innovation so that employees can engage themselves in doing something new for the organization.
- Understanding the need of stakeholders is also very important as it enables leaders to frame strategies about how to meet the need of the stakeholders, such as customers.
- **Limitations**

The study has some limitations:

- Findings are only based on managers' interviews; a survey could have been done to get accurate views.
- The research did not cover employee-centric views. Therefore, the interview part could have been biased and might be

doubtful.

- More managers, such as finance managers, customer relationship managers, and many more, could have been selected for interview sessions to get diversified views.
- No organization is taken into consideration. Therefore, the practical usage of design thinking skills is not explicit.
- The sources were minimal while conducting the literature review for a lack of resources and journals.

6. CONCLUSION

- From the above finding and analysis, it has been found that design thinking skill has both positive and negative aspect in terms of organizational performance and positive output.
- Moreover, design thinking skills have a direct impact on businesses and leaders.
- Design thinking skills enable managers to find out the best possible solution to meet the need of the customers.
- Innovation is the key output of design thinking skills.
- The leader uses various skills like emotional intelligence, leadership skills, consensus building, journey mapping, and brainstorming to understand organizational behaviour and culture.
- Furthermore, design thinking skills have various limitations, diversity issues, lack of coordination among the higher management teams, user center approach, lack of experiences of higher employees, and more.
- Therefore, training, practice, and gaining knowledge could support the effective implementation of the design thinking process for managers.
- Also, adopting a good leadership style and following rigid strategies and organizational policies maximize the design thinking skills strengths.

7. Future research

- This research topic is not limited to a specific area. There are opportunities to find out how design thinking skills are induced by leadership approaches and their relationship with leadership style.
- Moreover, the adoption of survey sessions

and secondary data collection methods will support an in-depth understanding of the topic.

- In addition, studying a specific industry or an organization will provide an opportunity to compare the use of design thinking skills by managers across various UAE sectors.
- In a future research study, the area could be widened to other topics regarding design thinking skills, such as an effective leadership approach to adopting design thinking skills.

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