

# **Effectiveness of Diversity and Inclusion Interventions for Enhancing Organizational Innovation – a Systematic Literature Review**

Master Thesis

Social Challenges, Policies, and Interventions

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\*This thesis has been written as a study assignment under the supervision of an Utrecht University teacher. Furthermore, this thesis has been assessed by two Utrecht University teachers. However, the thesis has not undergone a thorough peer-review process so conclusions and findings should be read as such.\*

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## **Abstract**

This thesis focused on what kind of diversity and inclusion (D&I) interventions are effective in enhancing organizational innovation. Through a systematic literature review 15 studies were selected for full-text screening. These studies have been analyzed on the many forms of diversity, the interventions that were discussed and whether these contributed to organizational innovation. No answer on the research question can be drawn because the articles did not discuss connections between intervention and organizational innovation. Furthermore, while interventions were found to have both visible and invisible diversity differences, visible differences were highlighted more explicitly. It was not indicated whether different types of diversity and innovation are related. The included articles did not cover all aspects of a planned analysis however, the literature consistently recommended a systematic approach to develop and implement D&I interventions based on six crucial elements. Further research should focus on verifying this methodical approach and its effect on organizational innovation.

Keywords: diversity, inclusion, interventions, organizations, innovation

## Introduction

Organizations constantly strive to innovate to remain competitive and ensure sustainable growth. In this context, diversity and inclusion (D&I) within organizations is increasingly recognized as a crucial factor for fostering innovation. However, creating cohesive policies that provide everyone with a sense of worth and inclusion remains a challenge for modern organizations, due to the complex nature of D&I (Cletus et al., 2018). A well implemented D&I policy presents opportunities in terms of innovation, creativity, performance, and reputation (Cletus et al., 2018; Steward and Valian, 2018; Basset Jones, 2005; Peart, 2021). Conversely, a lack of awareness of D&I policies can lead to prejudice, discrimination, and exclusion (Peart, 2021). Therefore, knowing best working interventions is crucial. In this way, organizations can turn wise investments into successful interventions.

Human diversity is a complex topic, as all individuals differ in various ways. Moreover, diversity is not easily objectively defined since it is context dependent, selective, and relative (Moore, 1999). Currently, diversity is often associated with differences in gender or ethnicity (Coleman, 2012). However, it also includes a wide range of characteristics related to visible differences (such as race, disability, etcetera) or less visible differences (such as beliefs, values, skill set, etcetera) (Coleman, 2012). Although D&I are related, they are not synonymous. Being diverse means that groups of individuals encompass a range of different social identities. Inclusion, on the other hand, accentuate that people with different background and identities feel like valued members of a group (Grindstaff, 2021). Diversity can provide a broad range of perspectives and ideas, while inclusion fosters an environment in which these different ideas can flourish. Since a sense of belonging is the foundation of inclusion given that it differs for each individual. Therefore, it is challenging to quantify and compare inclusion. Contrarily, diversity is more based on the quantifiable similarities and differences that unite individuals, making them more comparable to each other. D&I are essential topics for understanding sociological behaviors such as social inequalities, group dynamics and the impact of different identities on interactions. In addition, diversity can also affect individual behavior, social dynamics and mental health. Comprehending psychological processes aids in the creation of interventions that reduce discrimination and enhance well-being.

D&I opportunities influence the degree of organizational innovation. Organizational innovation is known as gaining a competitive advantage over its competitors by implementing a new or significantly improved product, method, or organizational strategy in business processes that permits flexibility and change in the organization (Dutta & Lanvin, 2012; WIPO & INSEAD, 2012). Organizational innovation shall henceforth be referred to as innovation. According to Kahn (2018), organizations often use the term innovation in their vision, mission, and objective statements. Organizations have come to realize the importance of innovation to remain competitive and ensure sustainable growth. Innovation often requires a multidisciplinary approach, integrating insights from

different fields to develop new solutions. Even though business administration is the field that encompasses innovation the most, it interacts with economics, sociology, and technology. D&I has the potential of yielding greater productivity and competitive advantages resulting in a significant effect on innovation.

A diverse workforce is one of the drivers for innovation (Kemeny, 2016; Basset-Jones, 2005). A diverse workforce contains a larger variety of information, knowledge, and perspectives (Yang et al., 2011). Bringing different and new ideas to the table might result in new products, methods, or organizational strategies which can be seen as a source of innovation and creativity that provides organizations with a competitive advantage (Kemeny, 2016; Basset-Jones, 2005). Additionally, a diverse workforce and diverse practices minimize biases and discrimination, leading to innovation and productivity (Forbes, 2021). Important aspects of D&I are belongingness and uniqueness. Unique talent and perspectives in the workplace raise self-worth and perceptions of belongingness (Boekhorst, 2014; Van Woerkom & De Bruijn, 2016). When inclusion practices generate a sense of fairness, belongingness, uniqueness, and diverse climate and culture among employees, fostering innovation in the workplace (Jones et al., 2021). Organizations hiring and integrating diverse workforces ameliorate innovation (Chaudhry et al., 2021). However, diversity characteristics differ in their effectiveness in improving innovation. For example, gender, ethnicity, disability or caregiving responsibilities have not been shown to affect innovation. (Chaudhry et al., 2021). Consequently, it is important to know what kind of D&I interventions target which kind of diversity and inclusion and their effectiveness for enhancing innovation.

Interventions come in a variety of different forms. Two types of interventions are: organizational-level interventions, which are focused on the health and well-being of a large group of workers uniformly (e.g. job design, training, and education) and individual-level interventions, which focus on problems and needs of individual workers (e.g. through counseling or therapy) (Cox et al., 2010). Regrettably, interventions, particularly those implemented at the organizational level, frequently fall short of the intended results (Cox et al., 2010). Despite the difficulty of successfully implementing interventions new ones are constantly developed. Consequently, rather than concentrating on developing numerous new interventions that will not work, it is critical to identify what kinds of interventions have a high chance to be implemented successfully.

To assess which D&I interventions are most beneficial for enhancing innovation, this article provides an extensive in-depth analysis by using a systematic literature review. A systematic literature review aims to incorporate all published evidence on the subject and evaluates their quality to evaluate scientific information in a transparent and repeatable manner to address the research question. This helps to identify and analyze different types of interventions and their effect on innovation. Given that a wide body of interventions have already been discussed in scientific literature, a systematic

literature review is the most appropriate method for this thesis. Nevertheless, there is no summary of the effective and ineffective interventions. This overview is produced with the aid of this research methodology, which is a great addition to both organizational studies and the scientific field of D&I. The research question that will be answered is: “What organizational diversity and inclusion interventions are effective in enhancing organizational innovation?”

The primary objective of this thesis is to identify the different D&I interventions and to advise organizations on their effectiveness in enhancing innovation. By conducting a systematic literature review, this thesis provides valuable insights to scholars as well as practitioners – in this case, organizations. For example, this thesis gives an overview of already existing interventions, and a clear overview of which strategies organizations should or should not implement in their organizational policies. In addition, this review contributes to the development of guidance for organizations striving to establish an inclusive culture and encourage innovation. For modern organizations, this is essential criteria to succeed and last. This thesis also contributes to promoting equality, equity, and well-being both within and outside the workplace. Consequently, this contributes to an inclusive and resilient society.

## Method

This systematic review focusses on organizational D&I strategies. The goal is to determine which interventions best enhance innovation. Data was gathered using a systematic approach and Preferred Reporting Items for Systematic Reviews (PRISMA, 2020) standards, which outlined the procedures required to perform a literature review. PRISMA is the recognized method for presenting evidence in systematic reviews and meta-analyses. It includes a flow diagram that will be used in this review as well as a checklist. The procedure for this review is established using the PRISMA checklist (PRISMA, 2020). In this systematic literature review interpreting selected studies are used as participant sample.

### Search strategy

To address the research question, a keyword search was conducted in Web of Science and Scopus to identify related articles. Using terms from this thesis' research question, a keyword search was done to provide a precise response to research question. Keywords included: diversity AND organizations AND interventions AND innovation or inclusion AND organizations AND interventions AND innovation. Each search term was conducted twice in each database (see Table 1). To ensure quality, inclusion were based on four criteria: (1) solely peer-reviewed articles; (2) published in the past ten years (2014-2024); (3) focused on workplace- or organizational context; (4) containing terminology related to D&I in their titles, abstracts, or keywords. Articles that failed to meet this requirement were excluded.

### Study selection

The database search yielded a total of 623 records. The flow of research through each stage of the review process is visually represented using the PRISMA Flow Diagram, shown in Figure 1. After removing records that did not include all search terms in title, keywords or abstract, a sample of 52 articles was obtained. After a thorough abstract review on topic match and duplicate deletion, 15 distinct papers were chosen for full-text screening. Table 1 provides an illustration of the screening process.

**Table 1**

*Screening process of keyword search, number of hits for each search in each database and articles included*

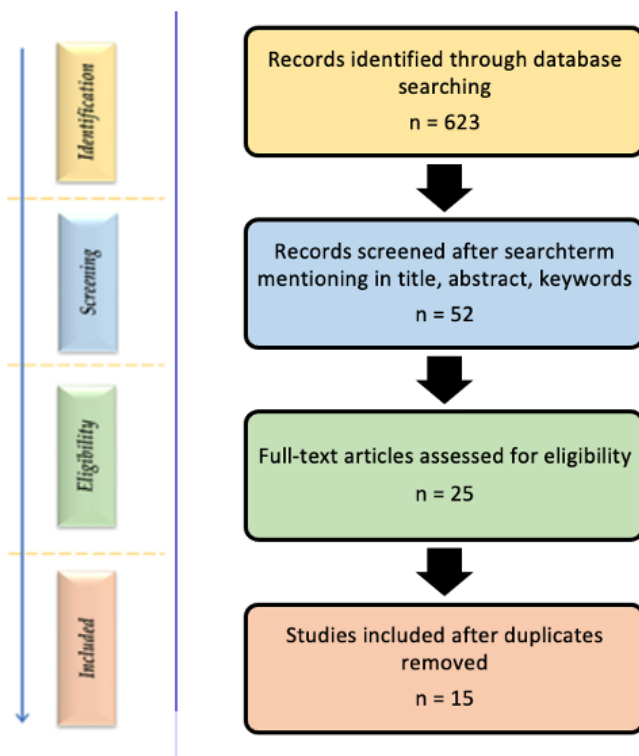
<i>Database</i>	<i>Key words</i>	<i>Number of hits</i>	<i>Number included</i>
<i>Web of Science</i>	Diversity AND organizations AND interventions AND innovation	120	7

Scopus	Inclusion AND organizations AND interventions AND innovation	246	7
	Diversity AND organizations AND interventions AND innovation	127	6
	Inclusion AND organizations AND interventions AND innovation	130	5
Total		623	15*

*\*Note: The total number of items included differs from the actual number of articles selected because of duplicates.*

**Figure 1**

*PRISMA Flow Diagram*



Note: study selection for each step of selection process visually presented

### Coding strategy

Data was collected using full-text screening of fifteen articles. Each article was coded based on three different lenses: diversity, innovation, and interventions.

- 1) Interventions: Finding out which kind of interventions is highlighted in each article is one of the thesis's goals. Additionally, the level at which the intervention is targeted is also considered.

- 2) Diversity: diversity is a complex concept with a wide range of definitions and characteristics. The primary focus lies on diversity because it is more quantifiable and comparable than inclusion. Determining the kinds of diversity recognized in D&I interventions is one goal of this study while taking into account visible (such gender, color, or disability) and invisible (like beliefs, values, or skill set). Different forms of diversity are examined in each article, as well as stated explicitly or implicitly.
- 3) Innovation: Innovation addresses change through the adoption of novel products, methods and procedures. This thesis examines the connection between interventions and the occurrence of new procedure, method, or product and if this is stated explicit or implicit and clearly or subtly.



## Results

This thesis was based on 15 scientific articles (Table 2) and twelve were published in the last five years. In addition, the studies came from a variety of scientific disciplines. Social science (nine articles), business administration (seven articles), and health sciences (four articles) were the most common disciplines. Almost all articles included data from multiple disciplines. Eight concentrated on non-profit organizations, seven on commercial and non-profit organizations and none on commercial organizations exclusively. Furthermore, the majority of research was conducted in North America, with one or occasionally two articles covering other continents (South America, Europe, Africa, Asia, and Australia). Most articles offered an intervention as guidance for implementation rather than an aspect that has undergone extensive testing.

### Interventions

A common theme emerged throughout all fifteen articles: to successfully implement a D&I intervention, a systematic approach must be followed (Weech-Maldonado et al., 2018; Simmons et al., 2022; Silverstein et al., 2022). Crucial components of this systematic approach are: (1) awareness and education; (2) creating a safe environment; (3) identifying ambassadors; (4) involving stakeholders; (5) developing and implementing interventions; and (6) monitoring and evaluation. Next to creating, this approach is also used to improving D&I interventions. For interventions to be effective, this approach must be iterative. Furthermore, the efficacy of interventions is dependent upon their integration across the organization and their capacity to mutually reinforce one another (T8). Most articles focus on one or more aspects of this systematic approach, although two articles (T2; T15) explicitly address each of these processes. The ensuing section will cover each of the previously listed elements in detail. Following the description for each component is a list of the interventions that are highlighted. Table 3 visually presents all found interventions for each article.

#### *Awareness and education*

Awareness of diverse attitudes, implicit biases, and ethnic identification are crucial to D&I (T2; T4). The four primary components of attitudes toward diversity are: knowledge (stereotypes and information about differences), understanding (empathy), acceptance (tolerance and respect), and behavior (interaction patterns, flexibility, and openness) (T4). Employees can become more self-aware of these unconscious biases by participating in D&I orientation sessions and development workshops (T3; T8) This is beneficial for employees and managers (T14).

**Table 2:**

*Summary of most important features of the results of the systematic literature review*

<i>Nr.*</i>	<i>Publ. year</i>	<i>Title</i>	<i>Journal</i>	<i>Author(s)</i>	<i>Discipline</i>	<i>Organization</i>	<i>Continent</i>	<i>Keyword(s) (defined by authors)</i>
1	2022	Developing inclusive and healthy organizations by employing designated lived experience roles: Learning from human resource management innovations in the mental health sector	The International Journal of Human Resource Management	Wang et al.	Business administration, psychology, sociology	Non-commercial	Australia	Lived experience; human resource management; mental health; diversity management; leader commitment; role clarity; social integration
2	2021	Building a Networked Improvement Community: Lessons in Organizing to Promote Diversity, Equity, and Inclusion in Science, Technology, Engineering, and Mathematics	Frontiers in Psychology	Noble et al.	Educational science, Psychology, sociology	Non-commercial	North America	Networked Improvement Community; diversity; STEM; faculty careers; shared knowledge
3	2019	Faculty Equity, Diversity, Culture and Climate Change in Academic Medicine: A Longitudinal Study	Journal of the National Medical Association	Wingard et al.	Health sciences, Sociology	Non-commercial	North America	Diversity; climate; equity; faculty development; underrepresented minorities
4	2018	Hospital cultural competency as a systematic organizational intervention: Key findings from the national centre for healthcare leadership diversity demonstration project	Health Care Management Review	Weech-Maldonado et al.	Health sciences, healthmanagement, health policy	Non-commercial	North America	Cultural competency; diversity climate; diversity management
5	2017	Advancing inclusive science and systemic change: the convergence of national aims and institutional goals in implementing and	BioMed Central	Hurtado et al.	Educational science, social science	Non-commercial	North America	-

		assessing biomedical science training						
6	2017	Balancing cognitive diversity and mutual understanding in multidisciplinary teams	Health Care Management Review	Mitchel et al.	Business administration	Non-commercial	-	Interprofessional; team dynamics
7	2023	Enabling gender and social inclusion in climate and agriculture policy and planning through foresight processes: assessing challenges and leverage points	Climate policy	Marty et al.	Social sciences	Commercial and non-commercial	Africa, Latin America, South-East Asia	Foresight; climate change; gender; social inclusion; stakeholder engagement; scenario planning
8	2020	Cracking the culture code: a tri-level model for cultivating inclusion in organizations	Applications of social psychology	Schmader et al.	Social sciences, social psychology	Commercial and non-commercial	-	-
9	2019	Sustainable Human Resource Management: How to Create a Knowledge Sharing Behavior through Organizational Justice, Organizational Support, Satisfaction and Commitment	Sustainability	Cugueró-Escofet	Business administration	Commercial and non-commercial	Europe	Knowledge sharing; sustainable human resource management; organizational justice; perceived organizational support; job satisfaction
10	2015	Conflicts in innovation and how to approach the “last mile” of conflict management research – a literature review	International Journal of Conflict Management	Vollmer	Business administration, psychology, sociology	Commercial and non-commercial	-	Conflict; literature review; intervention; conflict management; innovation; constructive controversy
11	2020	Diversity management as navigation through organizational paradoxes	Equality, Diversity and Inclusion	Nadiv et al.	Business administration	Commercial and non-commercial	Asia	Diversity; diversity management; diversity managers; paradox
12	2024	The three levels of organizational change to build future potential organizations	International Journal of Innovation Science	Krajcsák et al.	Business administration	Commercial and non-commercial	-	Organizational change; paradigm change; organizations with future proof potential;

13	2021	Women in leadership and their influence on the gender diversity of academic plastic surgery programs	Plastic and Reconstructive Surgery	Keane et al.	Medical sociology, health sociology	Non-commercial	North America	commitment; innovation; culture -
14	2022	Developing leaders for disruptive change: an inclusive leadership approach	Advances in Developing Human Resources	Simmons et al.	Organization psychology, business administration	Commercial and non-commercial	-	Inclusive leadership; inclusivity; diversity; equity; accessibility; disruptive change
15	2022	Global community of practice: A means for capacity and community strengthening for health professionals in low- and middle-income countries	Journal of Global Health	Silverstein et al.	Health sciences	Non-commercial	South America, Africa	-

*\*Note: All intext references (T1-T15) refer to Table 3.*

Awareness and education emerged in ten articles (T1; T2; T3; T4; T8; T10; T12; T13; T14; T15). The interventions that were discussed mostly use trainings, workshops, events, and meetings to raise awareness (of implicit prejudices, amongst other things) and create knowledge, understanding, and identification of values. Inviting individuals with lived experience who can share their stories and motivate others can be helpful in this situation (T1; T2). Self-awareness about personal attitudes toward D&I is also important for leaders (T14). To foster an environment where everyone feels supported and appreciated, it is critical for leaders to be cognizant of individual preferences, assumptions, and expressions.

### ***Creating a safe environment***

Employees are more likely to be devoted to the company and contribute their knowledge and skills if they feel comfortable and supported (9). If employees feel safe, they are more likely to share knowledge, which is crucial to improving an organization's sustainability (T2; T15). Organizations can gain a competitive advantage by fostering innovation and creativity within their business through information sharing and diverse perspectives. Organizations are more productive, fair, engaged, and employee-supportive when they provide a safe and happy work environment. This in turn promotes the personal growth of employees. Positive interactions between groups also lessen intergroup bias (T8). Promoting diversity and providing chances for the underrepresented is crucial in an environment that is encouraging and supportive (T5).

The significance of establishing a safe atmosphere is emphasized in seven articles (T1; T2; T8; T10; T12; T13; T15). Everyone should feel respected, listened, and supported in a safe environment. Establishing a positive culture, promoting respect and understanding amongst people, and avoiding groupthink are all crucial (T8; T10; T12; T13). According to two articles (T2; T15), creating communities is one approach to accomplish this. In a community, people can come together, share their experiences, and support each other. This is potentially an effective method for establishing a safe environment.

### ***Identifying ambassadors.***

Ambassadors act as role models other employees can learn from. They promote and foster an intervention, support D&I and inspire others to get involved (T15). The role of ambassador can be taken by management and motivated staff members who want to see an intervention through to completion. Choosing ambassadors who have lived experience is one example (T1). An inclusive work culture can benefit from an individual's ability to share personal stories to foster empathy and increase awareness of issues related to D&I. In addition, a leader must use leader engagement to communicate a good attitude towards D&I to positively influence employees' views toward D&I (T1). Being an ambassador as a leader can increase this attitude.

Eight articles highlight the importance of identifying ambassadors (T1; T2; T5; T7; T8; T10; T13; T15). Five articles focus on a particular aspect of the concept of ambassadors, while the remaining three articles discussed ambassadors in-depth. Interchangeable terms for ambassadors include “mentor” and “role model”. An ambassador can be based on those in positions of leadership, but it can also be people who want to advocate for and advance D&I; consider minority groups (T1; T10; T13). Individuals who have lived experience can also contribute significantly to encouraging and helping others by sharing their personal stories, which foster empathy (T1). Choosing an inclusion expert is another way to mold an ambassador (T7; T8; T13). An inclusion expert is hired or holds a position that monitors D&I and acts as a consultant should problems or challenges arise.

### ***Involving stakeholders***

Planning for D&I interventions with stakeholders in mind maximizes the effectiveness of interventions. (T7). Here, involving marginalized groups is more effective than a top-down approach. This can be achieved by assembling a group of interested parties who have a shared goal (T2; T7; T15). A community can act as a bridge between various groups, creating stronger cooperation, lowering professional isolation, and improve knowledge (T15). It is critical to establish a safe space, treat people with respect, designate ambassadors, conduct frequent evaluations, and adjust to the demands of stakeholders in these kinds of communities.

Stakeholder involvement in the development, process and implementation of D&I interventions is emphasized in six articles (T2; T4; T5; T7; T14; T15; T16). Stakeholders are communities or individuals wanting to think alongside the intervention process. Here, it is critical to combine viewpoints and opinions and make decisions using a shared leadership style (T2; T14). The Networked Improved Community (NIC), which unites a varied group of stakeholders in various roles with a distinct goal, is an example of a community (T2). Innovations can be expedited through systematic, ongoing development, execution, and improvement with the use of a NIC. Because all stakeholders have different sources of information, different perspectives will be brought to the table (T2; T7). As a result, a NIC has a positive impact on shared leadership, inclusion, context variation and acceleration of implementation of interventions and therefore innovation.

### ***Intervention development and implementation***

Changes in organizational policies and procedures are most prominent to implement D&I interventions. Policies should prioritize fostering equitable treatment of all workers, fostering a healthy work environment, and supporting workers' personal growth (T9).

Fourteen articles discuss interventions that are used to encourage D&I. Three themes emerge: (A) changes in policies and procedures, (B) facilitating and encouraging discussions, and (C) appointing a D&I officer. (A) Changes to policies and procedures. Many examples of policy changes mentioned

include inclusive and diverse human resource management, involving actively seeking out diverse employees and keeping them on board through talent development initiatives or promotions (T14). In addition, family-friendly regulations can be drafted, and mandatory bias training given to a selection committee (T3). (B) it is important to facilitate open discussions and debates (T6; T9; T10). Knowledge sharing is a crucial component of an open discussion (T9). Various and diverse knowledge and ideas are brought to the table through a debate (T6; T10). An open and encouraging team environment is crucial during a debate (T10). Discussing the benefits and drawbacks of various viewpoints and ideas enhances a team's trans-specialist knowledge (topic-specific shared knowledge) (T6). Research indicates that teams possessing a high degree of trans-specialist knowledge exhibit a more robust and positive correlation between diversity and debate. In turn, debate is a valuable tool for encouraging creativity in groups. Thus, one intervention improves the connection between diversity and innovation is debate. Therefore, it is wise to promote conversation and debate at work. (C) Lastly, assigning a D&I officer is also a good intervention because the officer monitors diversity closely and ensures an inclusive work environment (T8; T13).

### ***Monitoring and evaluation***

A crucial element of an intervention's efficacy is the monitoring and evaluating of the intervention (T7). Organizational climate and culture surveys on a regular basis and sharing results are connected to improvements in behavior, equity, and diversity because of the awareness raised (T3).

The significance of tracking and assessing D&I and the outcomes of interventions is emphasized in seven papers (T2; T3; T4; T5; T7; T12; T15). D&I is fostered by establishing a yearly moment of focus to this topic by gathering and sharing annual demographic data. Analyzing unsuccessful strategies and effective interventions is also crucial to learn (T2). In this manner, efforts that are successful are recognized and proceeded to enhance and execute (T5). Successful interventions are designed by examining the most successful ones, learning from their best features, and discarding their less successful approaches. This often does not happen overnight but takes longer. However, this is an important step in making an intervention effective in the long run.

In addition to the different types of interventions, Table 3 shows the level of focus. All intervention are only focused on the organizational level (nine articles) or on both the individual and organizational level (six articles). Not a single intervention is only limited to the individual level.

**Table 3**

*Overview all interventions of included articles*

	<i>Awareness and Education</i>	<i>Creating a safe environment</i>	<i>Identifying ambassadors</i>	<i>Involving stakeholders</i>	<i>Intervention development and implementation</i>	<i>Monitoring and evaluation</i>	<i>Level</i>
1	People with lived experience sharing stories	Promote social inclusion	Top leader commitment  Lived experience people	-	Role clarity	-	Organizational
2	My voice, my story (bringing lived experiences together)  Inclusion-workshops (promote knowledge and understanding)	Establish a community (share experiences, support, unite)	Peer mentoring (learning from experienced mentors)	Shared leadership model  Community engagement	Conversations about diversity  Recruit without bias (establish general characteristics for job and select accordingly)	Analyze failed strategies	Individual & organizational
3	Organizing D&I workshops, meetings, events	-	-	-	Family-Accommodation-Policy  Mandatory bias training for recruitment members  Leadership development	Annual measurement of demographic data (and sharing)  Conduct salary equity studies  Conduct organizational climate surveys	Organizational



4	awareness D&I training	-	-	Community engagement	Department specialize in D&I	Evaluations	Individual & organizational
5	-	-	Mentoring programs	Partnership with communities	Coaching executives Program renewal	Investigate and continue to improve and innovate	Individual & organizational
6	-	-	-	-	Encourage open discussion and debate	-	Organizational
7	-	-	Appoint gender and social inclusion expert as consultant	Actively engage stakeholders	Facilitate shared knowledge Innovative methods: role plays, discussions, individual writing down ideas	Monitoring and assessing interventions	Organizational
8	Raising awareness of prejudice	Promote positive intergroup contacts (mutual understanding & respect)	-	-	Integrate gender-social inclusion considerations into policies Policy changes D&I officer	-	Individual & organizational
9	-	-	-	-	Focus policies: - Promoting fair treatment. - Creating positive work environment	-	Organizational

					- Encourage development		
					Open discussions and debate		
10	Training	Create supportive team environment	Leadership supports and encourages diversity	-	Knowledge sharing Stimulate discussions	-	Organizational
					Setting shared goals		
		Prevent groupthink			Group reward systems		
11*	-	-	-	-	-	-	Organizational
12	Identify individual & organizational values	Cultivate positive organizational culture	-	-	Organizational adjustments	Risk analyses	Individual & organizational
13	Awareness raising campaigns	Creating inclusive and supportive culture	Appointing women as role models/mentors	-	Recruit female employees	-	Organizational
					Mentoring programs for women		
					Define fair promotion criteria		
					Offer leadership training		
					Support family responsibilities		
					D&I officer		

14	Increase self-awareness of leaders (personal preferences, assumptions, overstatements)	-	-	Different voices and perspectives in decision-making bodies	Promote open communication and debate  Implement, develop, promote inclusive practices  Actively recruit diverse employees  Promotion or talent development	-	Individual & organizational
15	Promote inclusivity and show respect	Creating a community  Sharing knowledge	Identifying ambassadors	Community engagement	Using translation services at major events  Program adaptations to needs	Frequently evaluating	Organizational

*\*Note: one article did not include any interventions but gave other useful information*

## Diversity

Articles mostly discuss diversity as a general concept. Nine articles made explicit mentions of diversity, three made implicit allusions and the remaining articles included both explicit and implicit mentions. The articles that mentioned diversity explicitly specifically focus on D&I and its promotion. While "diversity" was frequently used in this context, other phrases were employed including "gender diversity", "cognitive diversity", "professional diversity", "cultural diversity" and "inclusive leadership." Among the implicit allusions to diversity, diversity was acknowledged and named however not specifically addressed or viewed as a distinct issue (T9; T12; T15). This mostly entails appreciating and making use of the various backgrounds and skills of each individual employee. The article of Cugueró-Estcofet (2019) referred to diversity as part of a broader Human Resource Management (HRM) practice. Articles mentioning diversity both explicitly and implicitly, the phrase "diversity" was primarily integrated into practice, policy, and culture, thus inferred. A summary of the diversity data for each coded item is presented in Table 4.

Nine articles covered both visible and invisible differences, whereas three articles concentrated solely on visible differences and four on invisible differences. Gender, race, ethnicity, cultural background, socioeconomic background, experience, attitude, and identity were the diversity types used in this thesis. Another important aspect that emerged is the importance of a diverse workforce in organizations because of the consequential creative problem solving, innovation (T8) and the importance of inclusive leadership in dealing with diversity (T14). Inclusive leadership helps increase employee engagement, encourages innovation and creating a culture of trust and respect. Organizations that embrace diversity, equity, inclusion and accessibility are more equipped to face challenges and disruptive change which is crucial for innovative modern organizations. In conclusion, interventions focus on both visible and invisible differences, but the type of diversity targeted in the intervention is not explicitly highlighted in each article.

**Table 4**

*Overview diversity results*

	<i>Visible</i>	<i>Invisible</i>	<i>Expressed* (implicit/explicit)</i>
1	-	Perception, attitudes, personal experience	Explicit
2	Gender, race	Socio-economic background, personal experience	Explicit
3	Gender, ethnicity	-	Explicit
4	Gender, race, ethnicity, age	Implicit bias, attitudes, identity	Implicit & explicit
5	Gender, race, ethnicity, cultural background	Socio-economic status, education background,	Explicit

		geographic background, experience, perspective	
6	-	Cognitive diversity	Explicit
7	Gender, age, people with disabilities	Socio-economic status, dominant position, social- and cultural motive	Explicit
8	-	Gender *, Social identity	Explicit
9	Physical characteristics, cultural background	Socio-economic status	Implicit
10	Age, citizenship	Cognitive diversity, personal attributes, thought styles	Implicit & explicit
11	Gender, ethnicity, religion, cultural background	-	Implicit & explicit
12	-	Capacities, needs, participation, achievements	Implicit
13	Gender	-	Explicit
14	Gender	Perspectives, skills, experience	Explicit
15	Language, geographic, cultural background	Experience, education background, training level, professional discipline	Implicit

*\*Note: expression of diversity refers to implicitly and explicitly mentioning of diversity in used articles.*

## Innovation

Eleven articles (T1; T2; T3; T4; T5; T6; T7; T8; T9; T10; T15) recognized a new item, process, or approach. Instead of producing a new product, most of the interventions improved processes, procedures, and mostly HRM practices (T9). The interventions, according to the remaining four studies (T11; T12; T13; T14), were more concerned with organizational change than with developing new goods, techniques, or protocols. A summary of the innovation data for each coded article is presented in Table 5.

The term "innovation" was explicitly mentioned nine times (see Table 5). Implicitly in four articles and both explicit and implicitly in two articles. When innovation is specifically highlighted, it usually happened infrequently and did not occur as consequence of the intervention. While mentioning innovation, several publications concentrated more on interventions and variables that encourage knowledge sharing. Although it is not mentioned explicitly, it is implied that increased knowledge exchange can lead to innovation (T9). The publications did not address whether the interventions discussed resulted in increased innovation.

**Table 5**

*Overview innovation results*

	<i>Innovative</i>	<i>New product</i>	<i>New method</i>	<i>New procedure</i>	<i>Expressed* (implicit/explicit)</i>
<i>I</i>	Yes	Yes	Yes	No	Explicit

2	Yes	Yes	No	No	Explicit
3	Yes	Yes	No	Yes	Implicit
4	Yes	No	No	Yes	Implicit
5	Yes	No	No	Yes	Implicit & explicit
6	Yes	No	Yes	No	Explicit
7	Yes	No	Yes	Yes	Explicit
8	Yes	Yes	Yes	No	Implicit & explicit
9	Yes	No	Yes	Yes	Implicit
10	Yes	No	Yes	Yes	Explicit
11	No	No	No	No	Explicit
12	No	No	No	No	Explicit
13	No	No	No	No	Implicit
14	No	No	No	No	Explicit
15	Yes	No	No	Yes	Explicit

\*Note: expression of innovation refers to implicitly or explicitly mentioning the term innovation in used articles.

A comparison of Table 3 and Table 5 is shown in Table 6 indicating which of the six components are discussed in each article regarding interventions. Empty boxes suggest that this article makes no mention of this component. "Yes" or "No." suggests if the article mentions innovation. All articles makes no mention of any relationship between the intervention that is mentioned and innovation. In all articles it is evident that innovation is mentioned five or six times for each component and even more in just the development and implementation of interventions.

**Table 6**

*Comparison interventions in articles and explicitly mentioning of the term innovation*

	<i>Awareness and education</i>	<i>Creating a safe environment</i>	<i>Identifying ambassadors</i>	<i>Involving stakeholders</i>	<i>Intervention development and implementation</i>	<i>Monitoring and evaluation</i>
1	Yes	Yes	Yes		Yes	
2	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes				Yes	Yes
4	Yes			Yes	Yes	Yes
5			Yes	Yes	Yes	Yes
6					Yes	
7			Yes	Yes	Yes	Yes
8	Yes	Yes			Yes	
9					Yes	
10	Yes	Yes	Yes		Yes	
11						

12	No	No			No	No
13	No	No	No		No	
14	No			No	No	
15	Yes	Yes	Yes	Yes	Yes	Yes
Total*	7	5	6	5	11	6

\*Note: the total number on the last row refers to the number of 'Yes' in that component

### Paradox of managing diversity

Analyzing the 15 articles reveals, in addition to the three lenses (diversity, innovation, and intervention), three paradoxes of managing diversity because Encouraging of diversity in the workplace presents obstacles for companies. Despite organizations investing in diversity management, the results are often mixed and sometimes not as effective as was expected (11). Promoting diversity comes with three paradoxes:

1. *Paradox of necessary change versus desire for stability:* it requires significant organizational change to promote diversity, but there is resistance to change, which creates a cycle of continuous efforts to promote diversity.
2. *Paradox of bureaucratic control versus flexible procedures:* tension exists between the desire to exert control through formal procedures and the need for flexibility to address the unique challenges of diversity management.
3. *Paradox of long-term business gains versus short-term losses:* diversity management aims for long-term gains but its implementation can create short-term conflicts and losses, which increases the need for renewed efforts to promote diversity.

Thus, these contradictions must be considered while managing diversity and putting interventions into practice.

## Discussion

This review focused on what kind of D&I interventions are effective in enhancing innovation. A thorough search of the literature produced 15 articles that were chosen for full text screening. Three perspectives—diversity, innovation, and interventions—were applied to each article. Based on the findings, a six-step methodical approach is required for D&I interventions to be implemented successfully. Even though these six steps are discussed extensively throughout the fifteen articles, there is no clear mention of innovation and their relationship. However, given how frequently these procedures are mentioned, it might be expected that implementation will result in success. Therefore, organizations need to make investments in these six steps if a organization wants to innovate.

It is challenging to form a definitive conclusion on which of the six elements, for creating and executing a D&I intervention, has the most impact on innovation because the papers rarely, if at all, discuss whether the intervention genuinely fosters innovation. Thus, it is up for interpretation as to whether the intervention promotes innovation. Comparing data from Table 3 and Table 5, it was discovered that the articles discuss innovation at every stage of the methodical process for creating and implementing a D&I intervention (see Table 6). However, only mentioning innovation does not equate to claiming that the component intervention promotes innovation. Innovation is spoken of when the intervention leads to a new product, method or procedure. Not every item and, hence, not every intervention fits this description. Instead, an intervention is usually mentioned as advice at the end of an article while not been research further. Therefore, this thesis did not specifically investigate if the mentioned intervention promotes innovation. The term "innovation" is used imprecisely and rarely evident in the articles. This is a challenging since it is impossible to adequately address the research topic, stopping from drawing conclusions on the effect of intervention on innovation. There is a lack of knowledge on this topic in the existing literature, therefore further research is worthwhile. Since businesses increasingly recognize the value of innovation in maintaining their competitive edge and securing long-term success, it is helpful to understand what kinds of interventions foster innovation inside their own organizations.

Furthermore, it can be interpreted from the results that the most used visible diversity indicators were age, gender, and ethnicity. Even though Table 4 displays both visible and invisible differences, reading the articles made the obvious differences considerably more apparent than the invisible ones. The invisible differences often emerged implicitly and were thus interpreted as such. Research has demonstrated that distinct forms of D&I make distinct contributions to enhancing innovation (Chaudhry et al, 2021). Thus, the effects of invisible variations can vary. It is imperative that future study emphasize the significance of invisible variations and do it in a more transparent manner.

Finally, given the existence of paradoxes, controlling diversity and implementing an intervention does not always appear to be successful. Due to these paradoxes, an intervention may appear ineffective at



first yet end up being skewed. This could be the reason for the findings of Cox et al. (2010) that interventions often fail to produce the desired effects, especially when applied at the organizational level. These paradoxes are likely to be avoided if an organization gives such an intervention more time and properly follow the systematic approach of six steps listed above.

One of the research's limitations is that the interventions discussed are primarily centered at the organizational level. Interventions at the individual level can also have a direct or indirect impact on organizational creativity, diversity, and inclusion. The usage of the search phrase "organizations" is most likely the reason individual level interventions do not or scarcely occur in the chosen 15 fifteen publications. It would be fascinating to find out whether individual level D&I interventions can enhance innovation. The fact that most of the publications in this research concentrate on nonprofit organizations like healthcare facilities is another limitation. Therefore, little can be said about commercial organizations because the interventions are mostly focused on non-commercial groups. The conclusions drawn from many articles on non-commercial organizations, however, can be applied to different circumstances and different kinds of organizations, since they mention this explicitly. This means that both commercial and non-commercial entities can use the research's findings. However, determining whether these interventions are similarly effective in commercial organizations should be the focus of more future research. The primary limitation of this study is the absence of a concrete answer to the research question. There was insufficient evidence in the publications to draw any conclusions regarding the relationship between D&I interventions and innovation. Therefore, it is crucial to investigate this relationship and determine the impact of D&I interventions listed above on innovation for future research. Organizations benefit from this because it has made them realize how crucial innovation is to maintaining their competitiveness and ensuring long-term success. To make informed intervention investments, organizations are keen to learn what D&I interventions best support innovation.

A strong point of this research is that of interdisciplinarity. The data used in this thesis is derived from several disciplines, including business administration, the health sciences, and the social sciences. This combination of disciplines results in a higher degree of interdisciplinarity. The 15 papers are drawn from these diverse fields. Furthermore, most of the publications date back five years or less. This strengthens the research by offering updated information and data. By using a systematic literature review a good overview of already existing interventions in scientific literature could be made. This allowed a nice 6 step plan to be made which can act as advice for organizations. This is a strong basis for an organization to invest in D&I.

To conclude, is the relationship between the D&I interventions and their impact on innovation not well-represented in the data. Despite, previous research found a relationship between a diverse workforce and innovation (Kemeny, 2016; Basset-Jones, 2005). It might be argued that D&I

interventions indirectly enhance organizational creativity because they have led to an increase in D&I. However, the chosen papers in this systematic literature review do not provide a direct correlation between the interventions and innovation. Consequently, it can be said that there isn't currently enough scientific data to adequately address the research question. Further research into the relationship between each intervention and innovation is required. The articles do present a comprehensive theme together with actionable methods to improve the chances of an intervention's effectiveness. It is unclear if taking these actions will then encourage innovation. However, given that the six components appear frequently, it is advised that D&I interventions be developed and implemented in a systematic manner. By doing this, bias, discrimination, and exclusion inside a company can be prevented, and prospects for innovation, performance, reputation, and creativity can be fully realized.

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