

# A conceptual model of intergenerational dynamics in software engineering teams



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# Outline

## Phase 1

**Perceived Diversity in Software Engineering:  
An Update and Extended Systematic Literature Review.**

## Phase 2

**A conceptual model of intergenerational dynamics in  
software engineering teams.**

Título	<b>Phase 1: Perceived Diversity in Software Engineering: An Update and Extended Systematic Literature Review</b>
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Curso	Doutorado
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Ingresso	08/2023
Qualificação	07/2025
Defesa	07/2027
Bolsa	CAPES

# What is Diversity?

- Innate aspects: gender, age, race, nationality, disability, and neurodiversity
- Aspects that are shaped through life experience and the social environment: cultural, ethnic, linguistic, religious, social, and sexual orientation.\* \*\*
- The diversity contribute differently in Software Engineering teams.
- Depending on the context and phase of the project.\*\*\*

\* Ely & Thomas, 2001;

\*\* Jehn et al., 1999;

\*\*\* van Knippenberg & Schippers, 2007

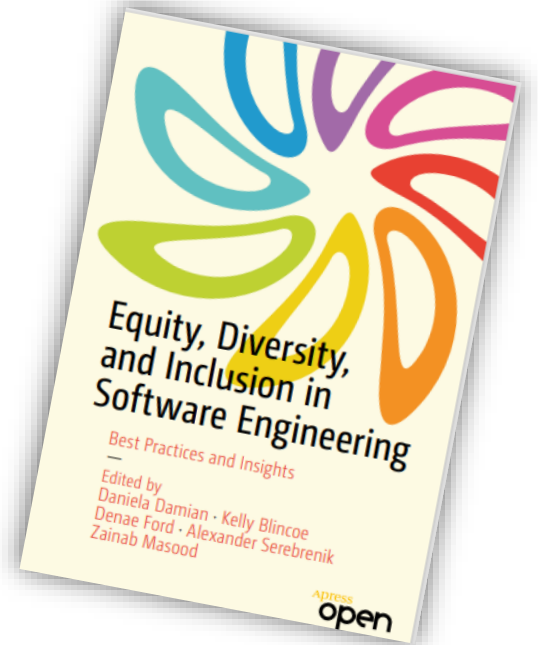


# Motivation

EDI (Equity, Diversity and Inclusion) has become increasingly relevant for companies;

In software engineering teams, diversity is a valuable tool for optimizing results and promoting greater innovation (Grundy et al., 2021);

Despite recent advances in research, there are still significant gaps in understanding the impact of diversity in the field of software engineering.



## My journey:

- Exploratory search of the literature on diversity in software engineering.
- Update and extend the Systematic Review with the highest number of citations and the highest number of diversities analyzed (2021).
- The update will include the diversities studied until 2021 - 2023.
- The extension will include new diversity categories not covered in the reference study.(2003-2023)

# Related Work (9 systematic mapping)

- A Systematic Mapping Study of Diversity in Software Engineering: A Perspective from the Agile Methodologies
- Attitude and usage of collaboration tools in GSE: A practitioner oriented theory
- Diversity Awareness in Software Engineering Participant Research
- Diversity in Software Engineering
- Gender Representation Among Contributors to Open-Source Infrastructure : An Analysis of 20 Package Manager Ecosystems
- Organizational Culture and Diversity Supporting Software Development
- Practicing Equity Diversity Inclusion (EDI) in Software Development Teams: A Systematic Literature Survey
- The Social Developer: The Future of Software Development [Guest Editors' Introduction]
- Women contributions to open source software innovation: A social constructivist perspective



# Goal

To investigate the impact of diversity on software engineering professionals, as well as to evaluate inclusion efforts and strategies to mitigate prejudice in the professional environment.



# Research Questions

**RQ1:** What are the types of perceived diversity research studies in SE?

**RQ2:** What the perceived diversity research has proposed to foster diversity-inclusiveness in SE?

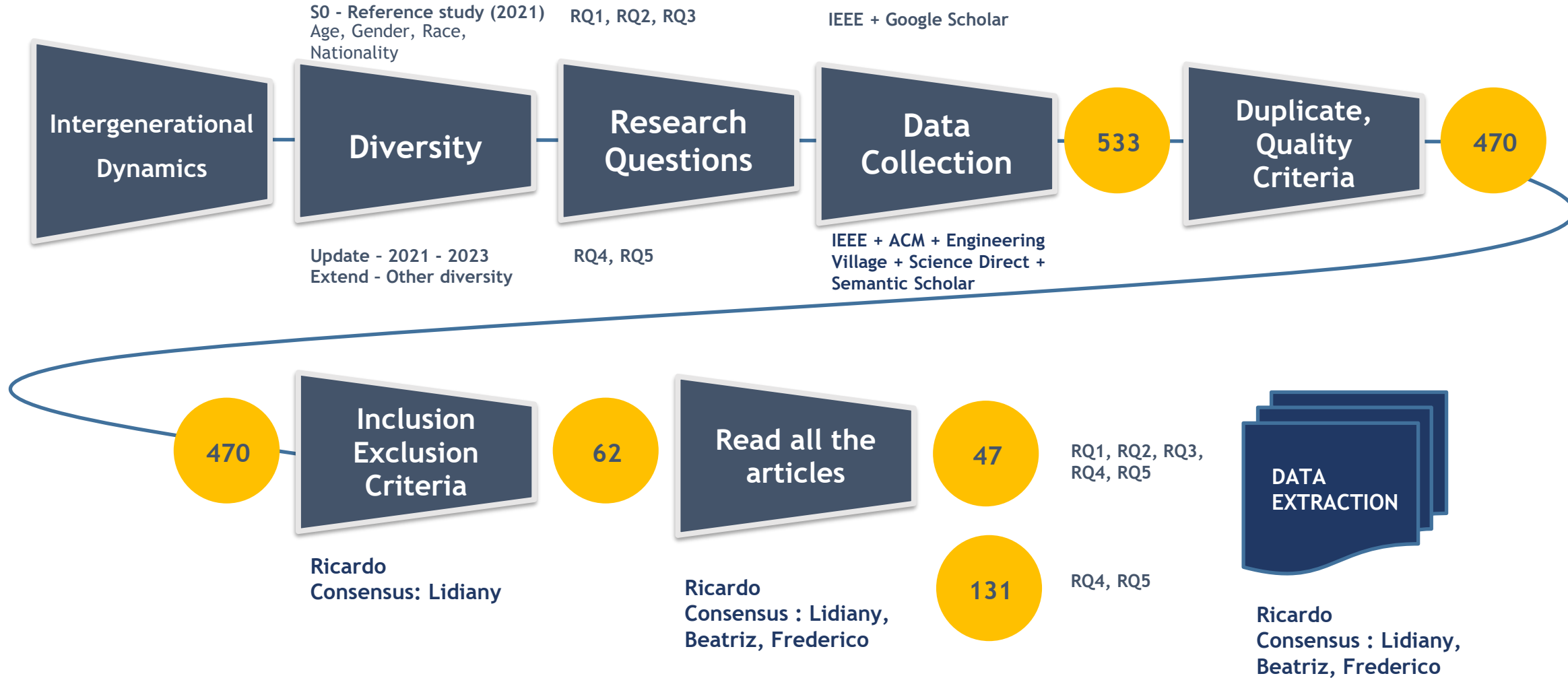
**RQ3:** What are the challenges faced by SE researchers when studying perceived diversity?

**RQ4:** What strategies does this article propose to mitigate prejudice and discrimination related to diversity in software engineering teams?

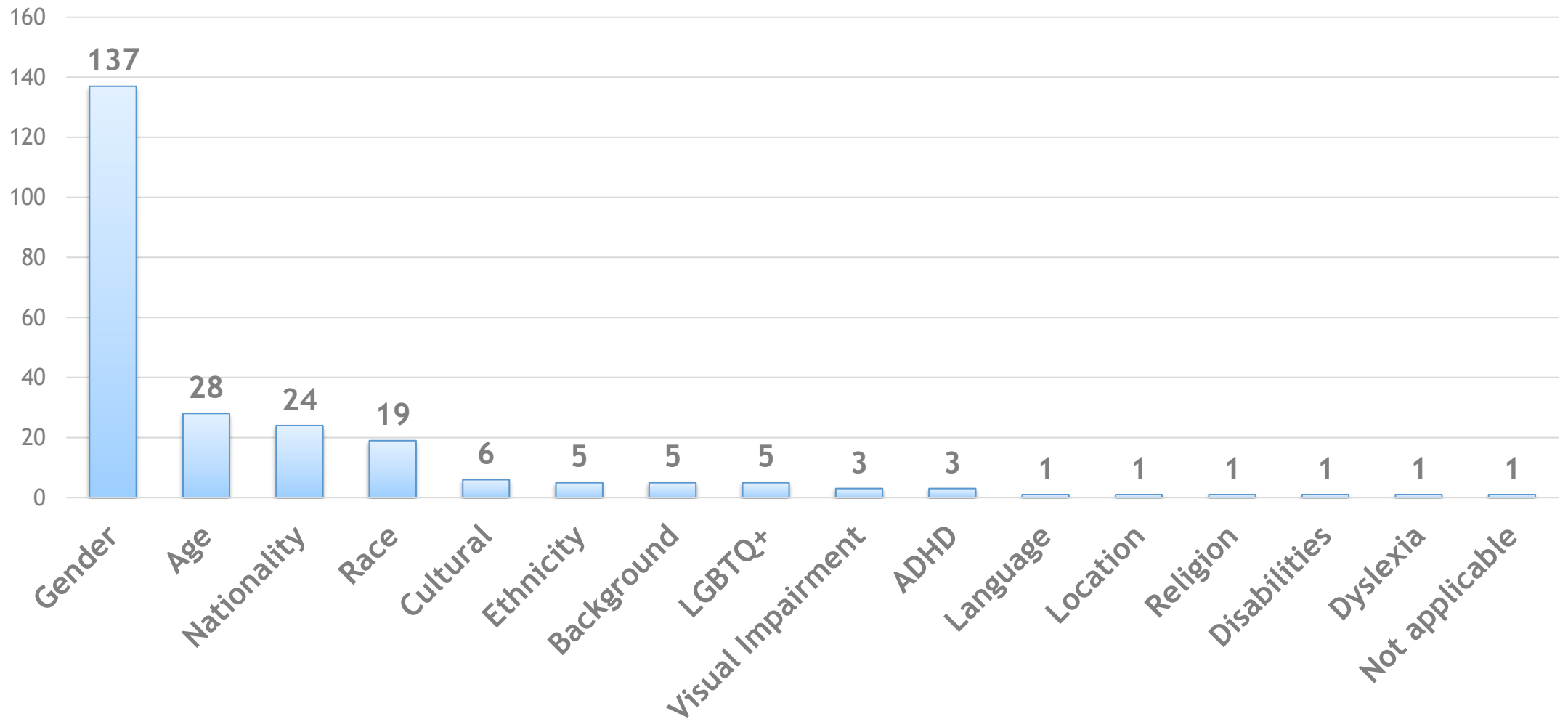
**RQ5:** What specific challenges are mentioned in this article by individuals from minority groups when participating in software engineering teams?



# Research Method



# Number of articles addressing each type of diversity

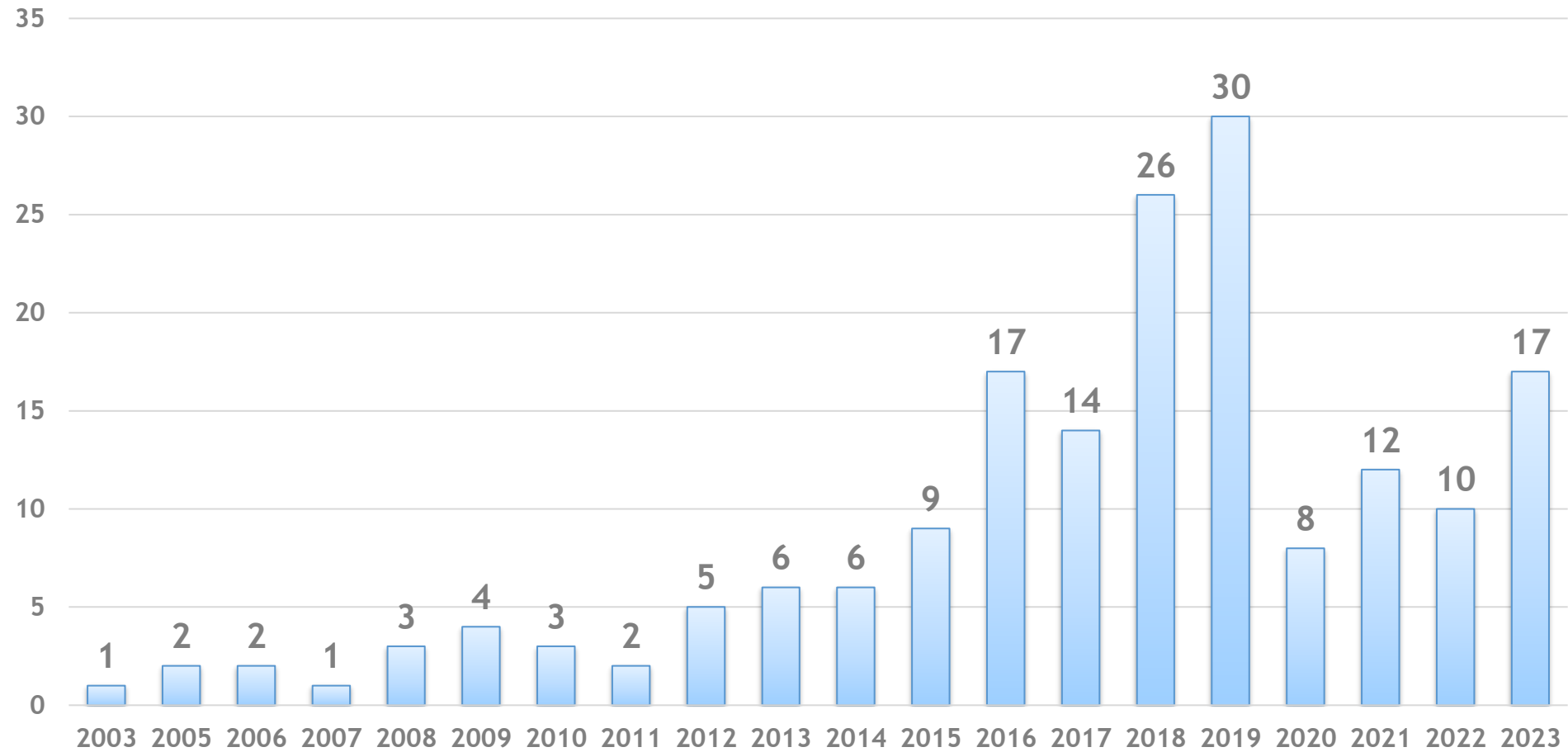


**RQ1:** What are the types of perceived diversity research studies in SE? (**First Findings**)

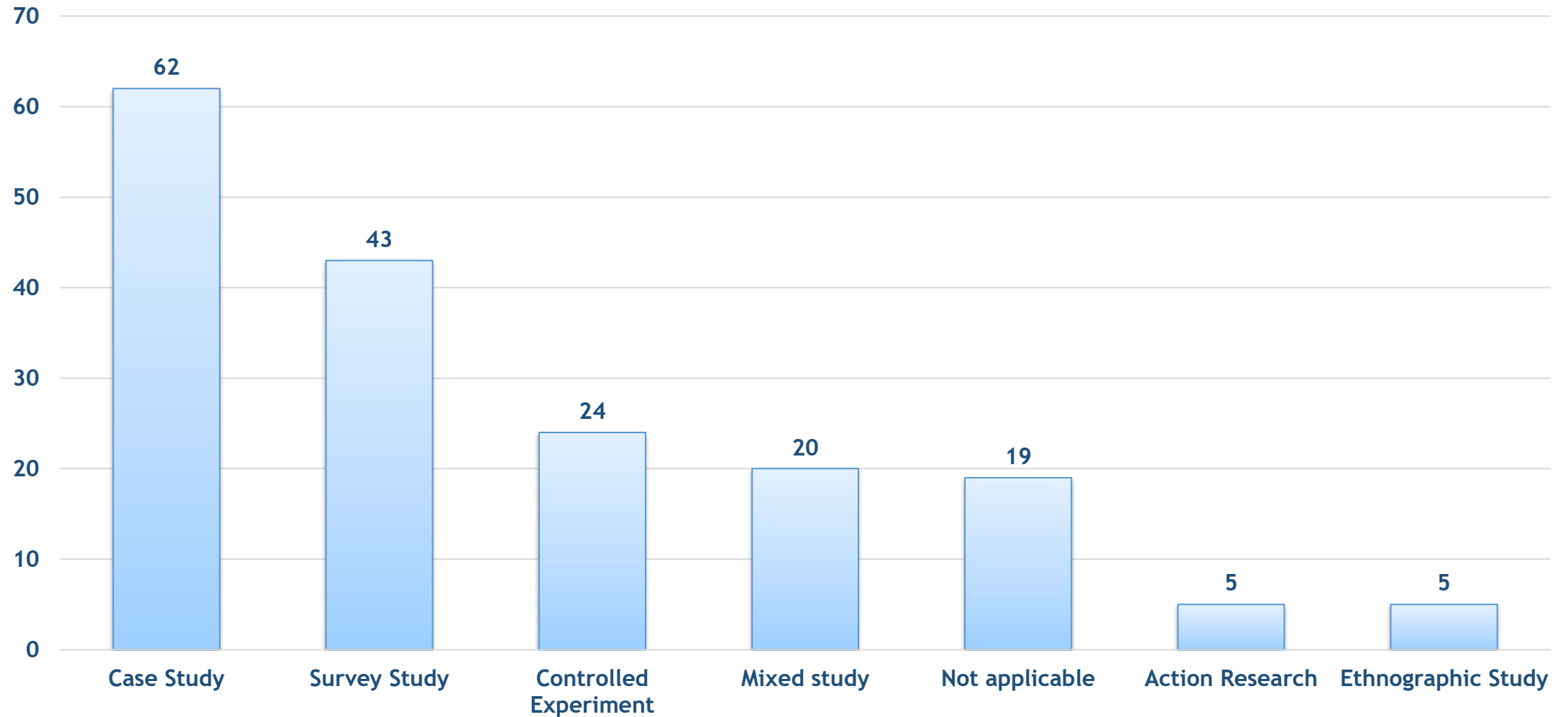
**Insufficient standardization of the types of diversity analyzed in the studies:**

- **Neurodiversity:** ADHD, dyslexia, autism, dyscalculia, dysgraphia, Tourette's syndrome, and other disorders;
- **Socio-behavioral:** education, personality traits, opinions, expertise, "cognition", psychological, thinking, functional, background, socioeconomic status;
- **Disability:** visual impairment, motor impairment, deaf/HoH, muteness.

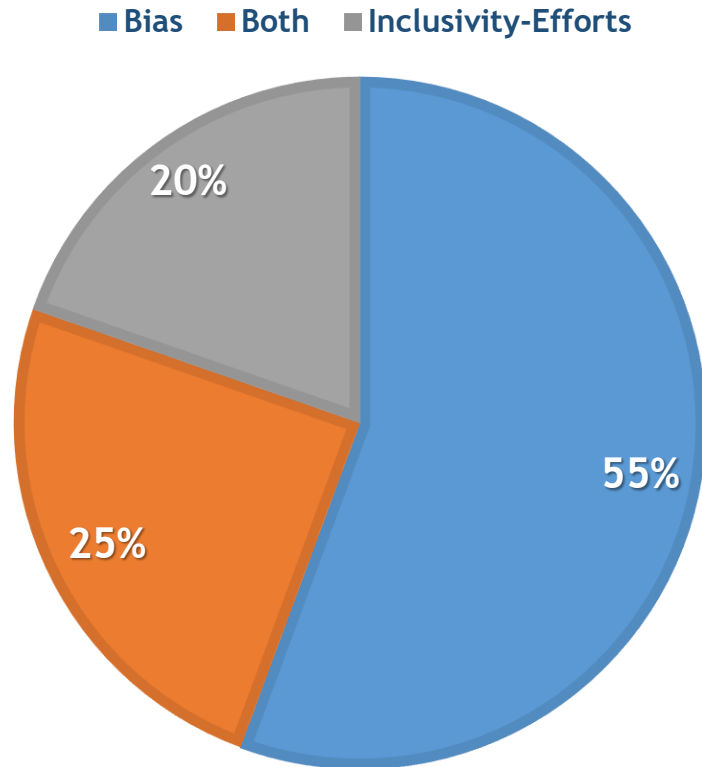
# Number of articles per year(131+47 = 178)



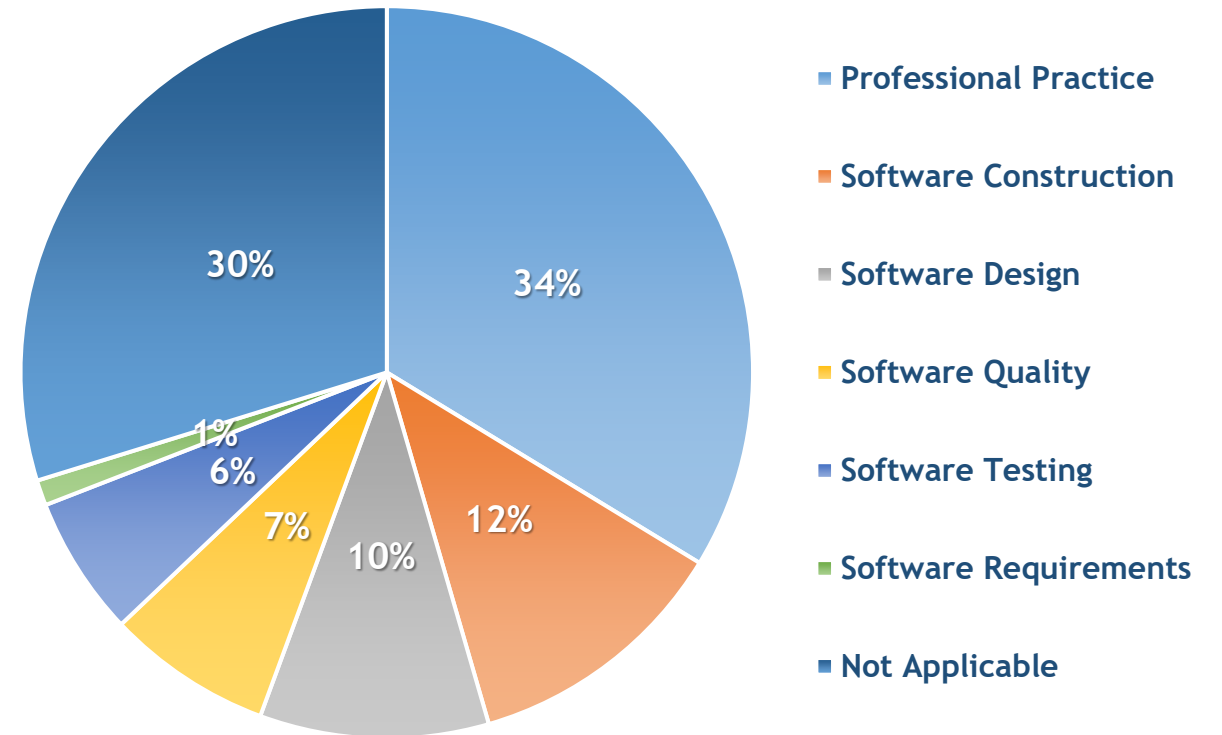
# Study Methodology



# Outcomes



# SWEBOK



# Schedule

	2023.2	2024.1	2024.2	2025.1	2025.2	2026.1	2026.2	2027.1
<b>Curricular components</b>								
<b>Activities</b>								
▪ Research Protocol I								
▪ Selection of articles								
▪ Data Extraction								
▪ Analysis of Results								
<b>Article I*</b>								
▪ Research Study Design (locus)								
▪ Collection instruments								
▪ Execution								
▪ Analysis of results								
<b>Article II**</b>								
<b>Qualification</b>								
<b>Thesis Presentation</b>								

\* International Conference on Cooperative and Human Aspects of Software Engineering (CHASE)

\*\* International Conference on Software Engineering (ICSE)

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