



Review

Education for democracy: a review of studies examining the effect of education on levels and distributions of democratic competences

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ABSTRACT

Growing concerns about democratic backsliding have renewed interest in how education fosters democratic competences. Existing reviews have summarized parts of this relationship, but this scoping review is, to our knowledge, the first to comprehensively cover all key educational dimensions and democratic competences. We also extend previous work by examining not only how education is associated with levels of democratic competences but also how it relates to inequalities in these competences. Following PRISMA-Scoping Review guidelines, we systematically identified and screened 4000 records and included 359 empirical studies published between 2001 and 2024 across seven educational domains: curriculum, participatory pedagogy, school democratic ethos, teacher training, assessment, educational attainment, and system characteristics. Studies were charted by design, population, country, and the direction of findings on five democratic competences, knowledge, skills, attitudes, values, and behavior. Overall, 60% of studies report positive findings and 20% null findings, while 45% of those addressing inequality suggest compensatory outcomes and 30% accelerating outcomes. Three key findings emerge. First, findings from educational strategies such as participatory pedagogy, citizenship education curricula, and longer compulsory schooling suggest “win-win” effects, by simultaneously being related to higher democratic competences and lower inequalities. Second, findings from system features such as early tracking and high school autonomy suggest “null-lose” effects, showing limited overall benefit while co-occurring with exacerbated inequality. Third, research on teacher training, assessment, as well as the domains of skills and values remains limited, underscoring the need for more rigorous and comparative designs. Overall, the findings suggest that inclusive, participatory, and equity-oriented educational approaches are most consistently linked to democratic competences and the mitigation of inequalities, offering guidance for policymakers seeking to strengthen democracy through education.

1. Introduction

Over the last 30 years research examining the effect of education on the knowledge, skills, values and behaviors supporting democracy has expanded significantly. This diverse field has evolved to encompass key educational aspects such as curriculum design, pedagogical approaches, learning environments, and educational attainment, as well as their broader social contexts, and democratic outcomes. For instance, one body of literature examines how classroom dynamics, like open discussions on political and social issues, can foster engagement with democratic politics (e.g. Torney-Purta, 2002; Campbell, 2008; Kahne et al., 2013; Persson, 2015). There are also a growing number of studies focusing on macro-level phenomena, such as educational reforms, and their effects on a range of outcomes, including political knowledge, attitudes towards immigrants, social trust, satisfaction with democracy and voter turnout

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(Pelkonen, 2012; Le & Nguyen, 2021; Österman, 2021; Österman and Robinson, 2023). Another significant development is the growing interest in how education is related to *inequalities* in political engagement and other democratic outcomes (e.g. Gainous and Martens, 2012; Hoskins et al., 2017; Janmaat and Mons, 2011; Lindgren et al., 2017; Neundorff et al., 2016; van de Werfhorst, 2017).

These developments coincide with policy makers' growing interest in using education to strengthen the popular support for democracy. This interest is not unfounded, as the stability and vitality of liberal democracy has been undermined by several recent processes, such as the spread of echo chambers and conspiracy theories in the social media and the rise of anti-immigrant populist movements in the West and authoritarianism in Eastern Europe (Bermeo, 2016; Kyle & Mounk, 2018; Norris and Inglehart, 2019).¹ It is also understandable that policy makers turn to education as this a social domain they have considerable control over and an activity that brings young people of different backgrounds together (Feinberg, 1998). As such, education contrasts strongly with the largely unregulated (social) media, which can segregate people and result in misinformation, fragmentation and polarization (Sîrbu et al., 2019; Hobolt et al., 2024). Education is, in fact, explicitly called upon to remedy the divisive effects of the social media (e.g. Gross & Balaban, 2025). Most prominent among the educational strategies that Western democracies have prioritized citizenship education to foster democratic competences and values of the new generation and respond to the new threats facing democracy (Janmaat, 2018; Schulz et al., 2023). For instance, in response to youth vulnerability to extremist messages disseminated through the social media, countries such as France have incorporated media literacy in the citizenship education curriculum (James, 2023).

Although these policy choices would be supported by the many studies finding positive effects of citizenship education (CE), navigating this field remains challenging due to its diversity and ongoing expansion. In response, a body of review studies has appeared seeking to categorize and summarize the findings within this disparate field. Interestingly, each review study, in turn, focuses on a particular aspect of education or democratic outcome. The majority, for instance, zoom in on CE and examine whether various aspects of it, such as the curriculum, participatory pedagogy or service learning, can promote political knowledge and engagement (e.g. Campbell, 2019; Donbavand and Hoskins, 2021; Galston, 2007; Hillygus & Holbein, 2023; Jerome et al. 2024; Lin, 2015; Manning and Edwards, 2014). Only a few examine the effects of CE on a wider range of democratic outcomes (e.g. Geboers et al., 2013; Teegebeekers et al., 2023). Conversely, we found only one review study exploring the effect of more than one aspect of education on political engagement (i.e. Willeck and Mendelberg (2022) who investigated the effects of both educational attainment and civic education). Despite their different emphases, the most systematic amongst these review studies share a common finding: participatory pedagogies that give students a voice in the educational process (such as debating political issues in class and devising their own projects) positively impact various democratic outcomes (e.g. Donbavand and Hoskins, 2021; Geboers et al. 2013; Jerome et al. 2024; Teegebeekers et al. 2023; Willeck and Mendelberg, 2022). However, review studies on educational attainment are inconclusive about whether education genuinely affects political participation (e.g., Persson, 2015; Willeck and Mendelberg, 2022).

Although this review adopts systematic procedures for study identification and inclusion, its aim is to provide a comprehensive overview of a broad and heterogeneous field rather than to evaluate intervention effects. We therefore report our procedures according to the PRISMA-Scoping Review guidelines. We understand the term comprehensive through three dimensions: (1) covering *all* the different ways in which education has been linked to democratic competences, (2) encompassing *all aspects* of democratic competences (we use the term competences here to refer to knowledge, skills, values, attitudes and behavior – see further below), and (3) addressing the relationship between education and both the *level* and *distribution* of such competences. Examining outcome distributions is crucial given the recent focus on whether education can compensate for insufficient civic socialisation within the family and achieve greater equality. Our review study is thus much more ambitious in scope than any of its predecessors. The unique contribution of this study is that it is the first, genuinely comprehensive overview of the research findings in this vast and disparate field of study.

1.1. Research questions

Building on this framework, the review addresses three overarching questions:

1. Competence levels: How are different educational aspects related to levels of democratic competences?
2. Inequality patterns: Which educational aspects are associated with mitigating or exacerbating inequalities in democratic competences?
3. Identification of “win-win” strategies: Which educational strategies are linked to simultaneous improvements in democratic competences and reductions in inequalities, and which strategies show limited or adverse effects?

To address these questions, we first discuss a number of theoretical perspectives on the effect of education on democratic competences. Next, we explain the criteria for selecting studies for the review and define our key terms. We then synthesize findings by educational aspect, democratic competence, direction of findings (positive, negative, null, or mixed), and whether the focus is on overall levels or distributions of outcomes. Finally, we highlight the most promising educational strategies for fostering both levels and equality of democratic competences.

Our findings are broadly consistent with earlier review studies that participatory pedagogies are highly beneficial for the

¹ Throughout this review, we use “democratic competences” as the overarching concept that encompasses the full range of civic- and democracy-related outcomes examined in the included studies. When we refer to terms such as civic skills or political engagement, we use them to reflect the specific language or constructs used in the original studies, while situating them within the broader framework of democratic competences for consistency and comparability.

cultivation of democratic competences. They somewhat diverge from earlier reviews in presenting more evidence for the proposition that education has a direct effect on political engagement than for the argument that the effect of education is spurious. Most importantly, our review suggests that some educational aspects, including the civics curriculum, participatory pedagogies and the extension of compulsory education, are frequently associated with “win-win” effects, in terms of promoting both *levels of* and *equality in* democratic competences, while findings for others, such as educational tracking and school autonomy, are more often associated with “null-lose” effects, i.e. not promoting overall levels of competences while exacerbating inequalities in them. We could only arrive at this crucial new insight by conducting our review in the comprehensive manner explained above.

2. Theoretical perspectives on the effect of education on democratic outcomes

Given the sprawling nature of the literature on education and democracy, it is not easy to identify a limited number of theoretical perspectives making different claims as to how education influences democratic competences. Nonetheless, we felt this is a necessary first step to take as these perspectives help us to select relevant educational aspects (see further below) and develop hypotheses about their effects.

We identified the following relevant perspectives in the literature which we will briefly discuss, one after the other: (1) education-as-proxy; (2) direct effect/civic education; (3) participatory approaches; (4) compensatory effects and (5) social stratification. While the first claims that education does not have an effect by itself, the second and third perspective highlight education's effect on *levels of* democratic competences and the last two argue that education has an effect on the *distribution* of such competences.

The education-as-proxy perspective argues that education does not have an independent effect on democratic outcomes itself – it merely reflects that of other factors such as social background, cognitive abilities and various personality characteristics like curiosity, ability to concentrate and a disposition to complete tasks (Emler and Frazer, 1999; Kam and Palmer, 2008; Persson, 2014). It is these factors that promote both educational achievement and democratic outcomes such as political engagement, making it seem as if education is positively related to such outcomes. However, once the effect of education is subjected to these controls, it will disappear. The education-as-proxy perspective has primarily informed studies investigating the effect of educational attainment (e.g. Kam and Palmer, 2008; Persson, 2014) although some have also drawn on it when assessing the effect of educational tracking (e.g. Persson, 2012).

The direct effect/civic education perspective offers the exact opposite proposition: education has a direct positive effect on democratic competences through the transmission of knowledge and skills on the one hand and values and attitudes on the other. By enhancing their cognitive abilities, education allows young people to come to know about, understand and navigate the world of politics, which in turn enhances a sense of political efficacy and a desire to participate in it (Verba et al., 1995; Nie et al. 1996). Better knowledge and reasoning skills should also promote tolerance as they enable young people to identify prejudice and dismiss xenophobia as irrational (Hagendoorn, 1999; Nunn et al., 1978). Education also transmits norms and values – i.e. it teaches young people what is right and what is wrong within a given society. Through different socialisation practices it promotes the internalisation of values associated with democracy such as tolerance and equal treatment (Hyman & Wright, 1979; Stubager, 2008).

The notion that civic education and related courses can promote political engagement can be seen as the application of the direct effects perspective to a particular field. After the discouraging results of Langton and Jennings' (1968) seminal study, which found that experiencing civic education courses had no effect on political knowledge and participation, the civic education perspective long remained dormant. However, it was revived when several studies, who could measure the effect of civic education and related courses in more robust and comprehensive ways, found a clear link between exposure to social studies' content and a variety of civic outcomes, including political engagement, volunteering and tolerance (e.g. Gimpel et al. 2003; Niemi and Junn, 1998; Paterson, 2009; Stubager, 2008; Van de Werfhorst & Kraaykamp, 2001).

The participatory perspective argues that pedagogies that allow students to actively engage with political content are the most effective strategies to promote democratic competences. The core idea is that active engagement, through, for instance, open discussions of political issues, students' participation in school decision-making and experiential activities that mimic the democratic process, foster a sense of empowerment, ownership and identification with the world of politics, which in turn will drive political participation (Sfard, 1998; Biesta et al., 2009; Campbell, 2008; Hoskins et al. 2012; Keating and Janmaat, 2016; Torney-Purta, 2002). This perspective has primarily informed studies examining a variety of experiential and learning-by-doing activities, such as project work, group activities, classroom discussions, student voice opportunities, mock elections, debating competitions, in-service learning and community service.

More recently, scholars have become interested in how education can not only foster overall levels of democratic competences but also reduce inequalities in these outcomes. Key to this *compensatory* perspective is the claim that one and the same educational programme or pedagogy has a stronger effect on children from disadvantaged backgrounds, in terms of enhancing their political engagement, than on children from middle class families (Campbell, 2008; Gainous and Martens, 2012; Hoskins et al. 2017; Neundorff et al. 2016). This is based on the assumption that the former have missed out on political socialisation from their parents and thus have more to gain from civic education than the latter, who may have heard everything they are taught at school before from their parents – a phenomenon dubbed “information redundancy” by Langton and Jennings (1968). In other words, relevant educational programmes and pedagogies allow disadvantaged children to catch up with their more privileged peers in terms of political knowledge and engagement. However, various scholars have noted that these compensatory effects may not materialise and may even turn into “accelerating” effects (where middle class children benefit more from a certain educational activity than children from disadvantaged families) when the experience of relevant educational activities is not the same for everyone, which typically happens when such activities are not compulsory, depend on voluntary participation or are implemented to different degrees and in different ways across

different educational profiles and tracks (Campbell, 2008; Deimel et al. 2020; Hooghe & Dassonneville, 2011; Hoskins and Janmaat, 2019; Neundorff et al. 2016). In all these instances, access to such activities is uneven.

Lastly, there is a long tradition in the literature that highlights how education systems contribute to the production and perpetuation of social inequalities. Exemplifying this social stratification perspective, Bourdieu and Passeron (1990) have argued that schools reproduce social inequalities by furthering the culture of middle-class children and rejecting that of working class children, setting the former up for success and the latter for failure in the education system. Others have highlighted the role that educational differentiation plays in sustaining social inequality by giving middle class parents the opportunity to secure the best educational routes for their children and thus to maintain their social status across generations (Boudon, 1974; Green et al. 2006). This differentiation can be brought about by choice or by selection on the basis of ability and can be expressed both *between* schools, through schools differing in status (private or state-funded), religious denomination or pedagogical philosophy, and *within* schools, through students selecting different subjects or profiles or being allocated to different tracks (academic and vocational) (Janmaat and Mons, 2011; Witschge & Van de Werfhorst, 2016; Wolf and Macedo, 2004). This emphasis on educational differentiation is what the social stratification perspective has in common with the compensatory perspective.

3. Methods

This scoping review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) framework (Tricco et al., 2018). The review aimed to systematically map quantitative evidence on the relationship between education and democratic competences among adolescents and young adults.

3.1. Objectives and rationale

Most reviews on democratic competences focus narrowly on behavioral outcomes (e.g., Smets & Van Ham, 2013; Willeck & Mendelberg, 2022). In contrast, we adopt a broader conceptualization encompassing knowledge, skills, attitudes, and values that contribute to democratic citizenship. Our outcomes of interest emphasize democratic competences and their behavioral manifestations. Following Hoskins and Crick (2010), we define a competence as “a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world in a particular domain” (p. 122).

To delineate our scope, we use the Council of Europe's Reference Framework of Competences for Democratic Culture (RFCDC) (Barrett et al., 2018) as a guide, including studies examining educational effects on:

- Knowledge (e.g., political knowledge, institutional awareness)
- Skills (e.g., critical thinking, perspective taking, communication)
- Values (e.g., valuing democracy, equality, cultural diversity, rule of law)
- Attitudes (e.g., political interest, civic mindedness, respect, tolerance, self-efficacy)

By deliberately adopting the RFCDC model, we presume a substantial level of consensus regarding the competences included in the framework.¹

We also include democratic behaviors, recognizing that competences alone do not guarantee action (Donbavand, 2025):

- Institutional participation (e.g., voting intention, electoral participation)
- Non-institutional participation (e.g., peaceful protest, petition signing, volunteering for political organizations, contacting officials)

We deliberately exclude academic outcomes (e.g., reading, math) and undemocratic behaviors (e.g., violent demonstrations) to maintain focus on educational contributions to democratic engagement.

3.2. Eligibility criteria

We included studies that:

1. Employed quantitative cross-sectional (with relevant controls), longitudinal, and experimental designs in peer-reviewed outlets.
2. Examined the relationship between education and democratic competences or behaviors.
3. Were published between 2001 and April 2024 in English-language peer-reviewed journals.
4. Involved participants from lower secondary to higher education.
5. Used relevant controls to address potential selection effects.

We excluded:

- Non-political or academic outcomes (e.g., academic achievement, employment).
- Qualitative studies, working papers, reports, and dissertations.
- Studies on early childhood, primary, or adult learning, for reasons given further down.

- Informal or nonformal education influences, due to limited quantitative evidence.

Drawing on prior research, we identified seven key educational aspects: citizenship education assessment, curriculum/content, teacher training programs, educational attainment, participatory pedagogy, system characteristics, and school democratic ethos. Each dimension encompasses multiple mechanisms: for example, “curriculum” includes formal courses, cross-curricular civic content, and engagement opportunities, while “participatory pedagogy” covers child-centered, participatory, experiential, and project-based practices. Additional subfields were developed post hoc for participatory pedagogy, teacher training, and system characteristics (school autonomy, onset and degree of tracking and reforms extending the period of compulsory education) to better capture conceptual nuances and manage the breadth of evidence identified. Given the multidimensional nature of many studies, studies were coded under one or more aspects based on the focus of their independent variables (mean = 1.3).² This review integrates insights from economics, education, political science, psychology, and sociology.

Studies included in this review cover the period from 2001 to 2024. We consider 2001 an appropriate start because that year saw the release of the data of the 1999 Civic Education Study, a comprehensive survey of the civic knowledge, skills and attitudes of 13- and 14-year-olds and their educational experiences in 29 countries and constituencies worldwide (Torney-Purta et al., 2001). The data of this study helped reignite quantitative research into the effects of various aspects of education, including citizenship education, on civic outcomes. April 2024 was selected to capture the most recent evidence, including digital learning and curricular reforms, while allowing sufficient time for screening, extraction, and synthesis of the literature.

Given the breadth of the research questions and the diversity of educational domains examined, this review is designed as a systematic mapping of patterns of association rather than a synthesis of mechanisms. Our primary objective is to identify where quantitative evidence converges, diverges, or remains sparse across educational domains and competence outcomes. Achieving this objective requires comparability in the direction and inequality patterns of reported findings across studies and contexts.

Accordingly, we prioritized quantitative research, as such designs allow for systematic comparison across larger samples, educational systems, and national settings. Quantitative studies also make it possible to classify associations consistently (positive, negative, null, mixed; mitigating or accelerating), thereby enabling structured aggregation of findings. Incorporating qualitative evidence would have required a fundamentally different interpretive framework centered on mechanism tracing rather than cross-study pattern mapping.

We acknowledge that qualitative studies provide essential insights into pedagogical processes, classroom dynamics, and the mechanisms through which educational practices influence democratic competences. Their exclusion therefore reflects a deliberate scope decision aligned with the review's mapping objectives, rather than a hierarchy of evidentiary value.

Similarly, we limited inclusion to peer-reviewed publications to ensure a minimum level of methodological transparency and replicability across disciplines. Peer-reviewed studies typically provide standardized reporting of sampling procedures, measurement strategies, and statistical controls, which is necessary for systematic coding and comparison. While grey literature may contain valuable evaluations, variation in reporting standards would complicate consistent classification. We recognize that this decision may exclude innovative or policy-relevant interventions and may introduce publication bias; however, applying this threshold was necessary to ensure that the patterns reported in our synthesis are derived from studies subjected to established academic standards of review and documentation.

Given its interdisciplinary scope, this study emphasizes conceptual clarity in defining democratic competences and educational mechanisms, recognizing that precise framing of key concepts is essential for cumulative progress across fields (see, e.g., Nyangaresi, 2023). While our search strategy aimed for broad coverage across disciplines, the review was limited to studies published in English. This decision was made to ensure consistency in coding, comparability of measures, and accessibility of sources to the full research team. We acknowledge that this introduces a potential language bias, as relevant studies published in other languages may not have been captured.

Journal impact factors or rankings were not used as formal exclusion criteria, as these do not necessarily reflect methodological soundness or relevance to the topic. However, most included articles were published in well-established journals.

We did not conduct a formal, study-level quality appraisal or assign weights based on methodological rigor. Instead, we adopted a pragmatic approach to quality assurance at the inclusion stage, restricting the sample to peer-reviewed studies that (a) employ appropriate statistical controls, (b) clearly report sampling strategies and data sources, and (c) use established or validated measures of democratic competences. This approach reflects the scoping nature of the review, which prioritizes mapping the breadth and distribution of evidence over evaluating the causal credibility of individual studies. As a result, all included studies contribute equally to the descriptive synthesis, regardless of differences in research design or identification strategy.

We are aware that such a selection also includes studies that have examined causal relations in less rigorous ways, such as those relying on cross-sectional data or longitudinal data with a single measurement of the outcome of interest. We could have restricted our review to experimental studies with random allocation of respondents to the intervention and the control group and a pre- and post-test design, which are the gold standard for assessing causal relations (Geboers et al., 2013). However, as a rule such studies are small scale and recruit respondents from very specific circles (such as students on a particular course), which greatly limits their scope and the generalizability of their findings. Moreover, such studies can only assess the more micro aspects of education, not the macro-level institutional characteristics which require comparative approaches. Hence, and given the ambition of this study to be as

² For readers interested in the specific type of practice examined in each study, our supplementary material C provides detailed descriptions of the educational interventions and pedagogical approaches.

comprehensive as possible, we consciously chose to cast the net wider. However, to minimize the chance that our review reports merely correlations - or worse - spurious effects, we opted to only select studies that subject their relationships of interest to relevant controls, as this is a way for studies relying on cross-sectional or longitudinal designs to at least partly address selection effects. Nonetheless, since we cannot exclude the possibility that the studies selected for our review report only correlations and not causal relations, we will consciously avoid phrasing our interpretations in causal language when reporting our findings.

Finally, the review targets students from lower secondary to higher education. These age groups typically possess the literacy and cognitive skills required for survey-based measures of democratic competences. While primary education can shape political participation (Holbein, 2017), we excluded it because the quantitative written questionnaires used to measure competences typically fall outside this target population. Higher education was included given its documented, albeit contested, influence on democratic competences (e.g., Berinsky & Lenz, 2011; Dee, 2004; Kam & Palmer, 2008; Milligan et al., 2004; Perrin & Gillis, 2019). Adult education was excluded to maintain focus on youth development, though prior work suggests potential lifelong learning effects (Finkel, 2014; Janmaat et al., 2013; Ruhose et al., 2019).

3.3. Information sources and search strategy

We conducted systematic searches across ERIC, Scopus, and Google Scholar between February and April 2024. Separate Boolean search strategies were developed for each of the seven educational domains listed above to capture variations in terminology across disciplines.

The search strategy was structured around three main sets of keywords: (1) educational influence (e.g., citizenship education, curriculum, participatory pedagogy), (2) democratic outcomes (e.g., knowledge, skill, attitude, value, participation), and (3) proximity operators to capture specific phrasings.³

3.4. Screening and data extraction

As illustrated in the PRISMA flow diagram (Fig. 1), a total of 4052 articles were initially retrieved. After removing duplicates (1854) and articles not available for full-text review (57), 2141 records remained for title and abstract screening. Full-text review of the remaining 932 articles resulted in 359 studies included in the final synthesis. Two independent reviewers screened titles and abstracts, resolving conflicts through discussion or a third reviewer. We prioritized studies that adhered to ethical standards for research with youth, including informed consent and confidentiality.

3.5. Data charting and synthesis of results

Data extraction was carried out using a structured template to capture bibliographic information, study design, population characteristics, the specific educational domain(s) examined, the specific outcome(s) assessed, and principal findings, including indicators of inequality patterns.

We summarize findings in two main dimensions:

1. Associations with competence levels, categorized as positive, negative, null, or mixed findings.
2. Patterns of inequality, categorized as mitigating, accelerating, mixed, or null findings (following Campbell, 2008).

Table 1 provides illustrative examples of the coding scheme used to classify studies by reported associations and corresponding outcome categories, reflecting how quantitative evidence was interpreted in relation to democratic outcomes and inequalities. Positive indicate an increase in the explanatory variable was associated with a statistically significant increase in the outcome variable. Negative indicates a statistically significant decrease in the outcome variable. Statistically inconclusive results ("null") indicate the evidence was insufficient to reject the null hypothesis, rather than confirming no effect (Goodman, 1999). Mixed effects were assigned when studies reported both positive and negative associations across different models, subsamples, or contexts (e.g., significant effects only for specific subgroups or regions). To ensure consistency, only results explicitly reported as statistically significant ($p < 0.05$ or equivalent) were classified. Studies reporting multiple results were coded by majority direction, with mixed effects assigned when no dominant trend was evident.

A mitigating finding suggests the educational activity diminishes existing inequalities in competence, while an accelerating finding indicates the opposite (exacerbating inequalities). This categorization broadly applies to social, gender, and ethnic inequalities (Campbell, 2008). In determining whether the findings that a study reports are mitigating or accelerating we relied in the first instance on the verbal reporting of such findings by that study. We then verified whether the statistics provided in that study matched its reporting, e.g. by checking whether claims of mitigating or acceleration patterns are supported with significant negative or positive interaction terms of the relevant educational activity with demographic variables. Where the statistical evidence did not substantiate the reported interpretation, the study was not coded as providing evidence of inequality-related associations.

³ The full list of search strings is provided in Supplementary Appendix B.

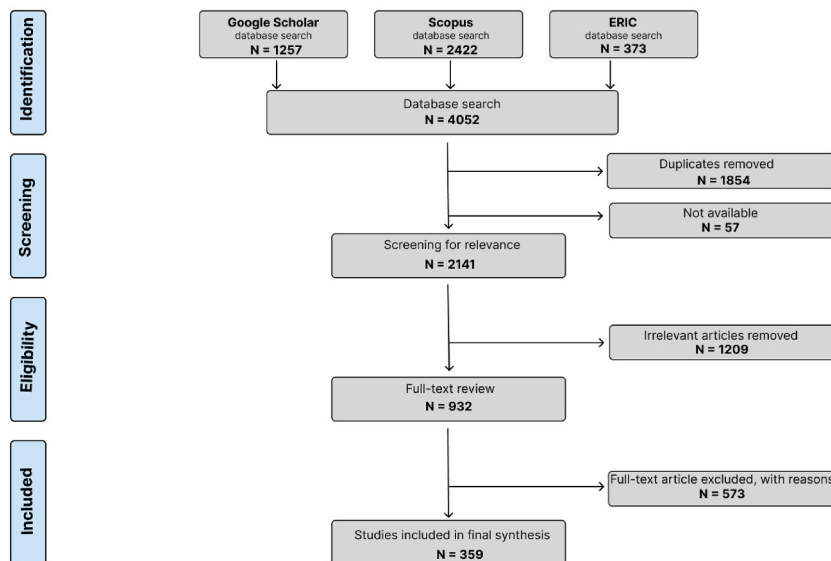


Fig. 1. PRISMA diagram of included articles in the scoping review.

Table 1
Illustrative coding examples.

Example Study	Educational Domain	Outcome	Reported Association	Classification
Neundorff et al. (2016)	Curriculum	Political engagement	Formal civic curriculum $\uparrow \rightarrow$ political engagement $\uparrow$ ($p < .01$)	Positive
Hoskins and Janmaat (2019)	Tracking	Political behavior	Young adults in early selection countries show greater social gaps in reported voting and protest activities in ($p < .05$)	Accelerating
Treviño et al. (2017)	Assessment	Knowledge, attitudes, participation	No significant association ($p > .05$)	Statistically inconclusive
Isac et al. (2011)	Autonomy	Civic knowledge	Significant for Student Policies decentralization ($p < .01$), not for Financial Resource	Mixed

3.6. Limitations

While this review adheres to PRISMA-ScR guidelines and aims for comprehensiveness, several limitations should be acknowledged. First, although the search strategy was extensive and covered three major databases (ERIC, Scopus, and Google Scholar), the review was restricted to English-language, peer-reviewed publications. As a result, studies published in other languages or in grey literature sources (e.g., dissertations, policy reports, and working papers) were not included. This may introduce language and publication bias and could lead to an overrepresentation of studies reporting statistically significant or positive findings, reflecting a potential publication bias. Second, our focus on quantitative studies limits our ability to synthesize detailed accounts of pedagogical processes and mechanism pathways (e.g., how classroom discussion norms translate into efficacy gains). The review therefore identifies where effects are observed but is less able to explain precisely how they unfold within specific institutional and cultural contexts.

Third, heterogeneity in study designs and operationalizations of democratic competences limited our ability to assess effect magnitudes or conduct meta-analytical synthesis. Fourth, while we include school-mandated extracurricular activities such as student councils, debate clubs, and community service, the majority of studies on informal or non-formal educational influences (e.g., peer networks, self-directed learning outside school) remain qualitative or are limited in scope.

Finally, subjective judgments in categorizing study findings and domains may introduce minor interpretive bias, which was mitigated through transparent documentation and consensus-based coding.

Relatedly, the absence of a formal quality appraisal means that studies are not weighted by methodological rigor in the synthesis. Consequently, findings from cross-sectional, longitudinal, and quasi-experimental designs contribute equally to the reported distributions. This may overrepresent patterns identified in observational studies relative to those supported by stronger causal identification strategies.

A further limitation concerns the necessary aggregation of complex and multidimensional interventions into broader analytical categories such as “curriculum” and “participatory pedagogy.” While we disaggregate these fields into specific subtypes in [Appendix C](#) (e.g., course exposure, instructional content, program-based interventions, classroom climate, service learning, simulations), the

synthesis presented in the main text necessarily groups heterogeneous practices under common labels. As the appendix analyses demonstrate, associations vary meaningfully across subcategories, particularly with respect to inequality outcomes and competence domains. Consequently, the aggregate percentages reported in Table 2 should be interpreted as summarizing broad patterns rather than implying uniform effects across all forms of curriculum or pedagogy.

4. Results

In total, our search produced 359 unique studies fitting our criteria. A full list of studies included in the review, along with detailed information on study characteristics, variables, and findings, is provided in Supplementary A. We categorize the educational aspects into the seven fields mentioned above. We will first address the fields that are specifically intended to promote democratic competences, such as CE curriculum, participatory pedagogies, school democratic ethos, CE programs in teacher training, and CE assessment, and then turn to those that influence such competences as side effects or in unplanned ways, such as educational attainment and system characteristics. For each field, we first outline the theoretical argument linking it with democratic competences. As much as possible we will draw here on the theoretical perspectives explained in the previous section to propose hypotheses about effects on both levels and distributions of democratic competences. We then synthesize empirical evidence on its association with both level of and inequality in democratic competences. Each subsection highlights the main trends, identifies mixed or context-dependent findings, and draws attention to recent studies that extend or challenge established patterns.

4.1. Interpreting the evidence base

The patterns reported below reflect a heterogeneous body of research. The reviewed studies vary substantially in methodological design (cross-sectional surveys, longitudinal panel studies, quasi-experimental designs, and randomized controlled trials), sample size, and national context. Our classification tracks the direction and statistical significance of findings but does not weight studies by methodological rigor. The distributions reported below should be interpreted as descriptive indicators of the balance of evidence rather than as meta-analytic estimates of causal magnitude. Accordingly, throughout the results section, we refer to reported relationships as associations rather than causal effects, unless studies explicitly employ designs that support causal inference.

Approximately 45% of the corpus relies on cross-sectional observational data and 38% on longitudinal panel designs, while experimental and quasi-experimental approaches constitute a smaller share. Importantly, methodological strategies are unevenly distributed across fields. Research on curriculum, pedagogy, and school democratic ethos is largely characterized by observational designs, whereas studies of educational attainment and compulsory schooling reforms more frequently employ quasi-experimental or natural experimental methods. These designs often report smaller or more context-dependent effects.

This asymmetry has three implications. First, fields with the largest bodies of evidence are not necessarily those supported by the strongest causal identification. Second, the predominance of observational designs in some domains raises the possibility of unobserved confounding. Third, effects identified using causal designs tend to be contingent on institutional or national context. These considerations should inform the interpretation of the patterns synthesized below.

Table 2 summarizes the high-level findings. However, as noted in the limitations, some of the educational fields examined in this review represent broad analytical categories that necessarily bundle together diverse interventions and practices. Where the evidence base permits, we have disaggregated these fields into substantively distinct subcategories in the appendices (see Supplementary C). In the domain specific sections that follow, we present both aggregate field-level patterns and highlight key subcategory differences that qualify the overall findings. Readers seeking finer-grained analyses should consult the corresponding appendix sections, which provide further breakdowns of outcomes, inequality effects, and competence coverage.

4.2. High-level patterns

Across the corpus, a generally positive association between education and democratic competences emerges, though this pattern is neither uniform nor unconditional. Approximately 60% of studies report positive associations with competence levels, while 20% find statistically non-significant results, 12% report mixed results, and 8% identify negative associations. These remaining 40% of studies cluster in specific domains (e.g., assessment), institutional settings (e.g., tracked systems), and among designs with stronger causal leverage, indicating that effects are contingent rather than universal.

The evidence on inequality outcomes is similarly conditional. While 43% of studies report mitigating outcomes, a substantial share (32%) identifies inequality-amplifying patterns, particularly in fields such as tracking and school autonomy. These accelerating patterns are concentrated in stratified systems and institutional arrangements that differentiate students early, suggesting that education's equalizing potential depends on structural design features. A smaller proportion (18%) finds statistically non-significant results. Taken together, these patterns indicate that effectiveness and equity are not automatically aligned; their convergence depends on specific institutional and pedagogical conditions.⁴

⁴ For the remaining four fields (CE assessment, attainment, school democratic ethos, and training), each has less than ten studies that examine inequality. Given the low number of studies, it is difficult to determine, on an aggregate level, their influence on competence distribution. As a result, there is a more limited discussion on inequality for these fields.

Table 2
Summary of educational fields, study counts, and findings.

Educational Field	n studies	Positive (%)	Negative (%)	Null (%)	Mixed (%)	Mitigating (%)	Accelerating (%)	Null (%)	Mixed (%)
Levels									
Curriculum	83	70	2	12	16	66	10	17	7
Participatory Pedagogy	136	77	–	15	8	58	6	32	4
School Democratic Ethos	37	69	8	18	5	60	10	30	–
CE Teacher Training	20	71	–	19	10	80	–	20	–
CE Assessment	15	40	20	33	7	40	40	–	20
Educational Attainment	76	60	4	20	16	72	–	28	–
Inequalities									
System characteristics									
Track	50	48	32	9	11	2	84	2	12
Reform	20	60	4	28	8	71	–	29	–
Autonomy	10	8	25	50	17	17	67	–	16

Notes: Percentages are based on coding reported statistical significance and findings on inequalities. Multi-outcome studies contribute separately to level and inequality counts.

4.3. Distribution of evidence across domains

The evidence base is unevenly distributed across educational domains. Participatory pedagogy accounted for the largest share of the literature (29.3%), followed by curriculum-focused studies (20.5%) and system-level characteristics (19.1%). Research on educational attainment outcomes represented 15.1% of the sample, while studies addressing school ethos (8.3%) and teacher training (4.6%) were less common. Assessment-related studies constituted only 3.1% of the evidence base. Overall, the distribution highlights a strong emphasis on instructional practices and curricular approaches, with comparatively limited attention to assessment, teacher preparation, and school democratic ethos.

In the studies included in the review, civic attitudes emerged as the most frequently examined competence, accounting for 36.6% of all outcomes. This was followed by civic and political behaviors (23.0%) and civic knowledge (19.6%), reflecting substantial attention to both attitudinal and action-oriented dimensions of civic development. Less frequently studied were civic values (13.1%) and civic skills (7.8%), indicating comparatively limited empirical focus on these domains. Overall, the distribution suggests that research on civic competences remains uneven, with attitudinal and behavioral outcomes receiving disproportionate emphasis relative to value-based and skills-oriented dimensions.

The distribution of studies by population group shows a strong concentration on secondary-school learners, who comprise nearly two-thirds of the sample (64.1). Studies examining civic outcomes in adulthood, often linked to earlier educational experiences such as educational attainment or compulsory schooling, accounts for a further quarter of studies (25.6%), while higher education contexts are comparatively underrepresented (7.8%). Only a very small proportion of studies (2.5%) span both primary and secondary levels. This pattern indicates that evidence on civic and democratic outcomes is heavily shaped by research conducted in secondary education, with substantially fewer contributions from other educational stages.

Geographically, the corpus is concentrated in Europe and North America, which together account for approximately four-fifths of all studies. In comparing Europe and the United States, the two most represented regions, we observe broadly similar directional patterns, though with differences in inequality effects and the competence domains emphasized. Evidence from Latin America, Africa, and large parts of Asia remains comparatively sparse, which limits the global generalizability of the findings. Section 3.8 discusses these implications in greater detail, and [Appendix C.6](#) summarizes the main regional differences.⁵

4.4. Curriculum

4.4.1. Overview and theoretical rationale

Classroom instruction is perhaps the first educational field to come to mind when considering citizenship education and one of the first to receive quantitative scholarly attention. There is an understanding that classroom instruction matters, whether for secondary school students ([Claes and Hooghe, 2017](#); [Quintelier, 2010](#); [Smith & Niemi, 2001](#)) or students in higher education ([Albert and Ginn, 2014](#); [Beaumont et al. 2006](#)). [Niemi and Junn \(1998\)](#) have conceptualised classroom instruction as exposure to (1) the amount of course work, (2) the recency of course work and (3) the subject matter coverage, and argued that greater exposure to relevant course work in these aspects should have positive effects on political outcomes, although they acknowledged that individual characteristics also play a role in the retention of the curriculum input. Based on this reasoning and the direct effects/civic education perspective explained earlier, we can hypothesize that the greater the exposure to civics content in terms of the aforementioned aspects, the higher the level of democratic competences. As exposure to, and thus access to, civics courses is usually the same for all pupils within a school (but

⁵ In Supplementary material C, to more easily compare findings we further disaggregate results based on distinct population, study design, and regional subcategories. For detailed descriptions of these categories and their associated findings, see C.4–C.7.

different for pupils in different schools), we would, based on the compensatory perspective discussed earlier, *also expect that greater exposure reduces inequality in such competences.*

4.4.2. Findings – democratic competences and intervention

We identified 83 studies examining the association between curriculum and democratic competences. Within the curriculum field, attitudes were the most frequently examined outcome ($\approx 36\%$), followed by knowledge ($\approx 23\%$), values ($\approx 17\%$), behavior ($\approx 15\%$) with skills receiving less attention ($\approx 8\%$) (Fig. 2). Across the studies reviewed, the most common focus was on course enrollment or type (34%), followed by instructional content or topics (20.8%). Studies examining programs, interventions, or resources accounted for 16%, while those addressing course exposure or quantity and curriculum structure or mandates represented 15.1% and 14.2%, respectively.

4.4.3. Findings – competence levels

Table 2 displays results across educational fields:

- Positive: 70% of studies found a significant positive association between curriculum practices and democratic competences.
- Null: 12% of studies report statistically non-significant results.
- Negative: 2% of studies found a significant negative association.
- Mixed: 16% of studies reported heterogeneous outcomes across different competences, contexts, or subgroups.

Crucially, however, the label of curriculum encompasses five distinct subcategories that vary in their effects (see Appendix C.3 for full disaggregation). Course enrollment or type, whether students take specific civic subjects, is the most common focus (34% of studies) and shows the strongest positive associations (75% of studies). Instructional content or topics (20.8%) and programs, interventions, or dedicated resources (16%) likewise demonstrate robust positive relationships (64% and 65%, respectively).

By contrast, studies examining course exposure or quantity (15.1%) and curriculum structure or mandates (14.2%) report more mixed findings, with positive results in 56% and 53% of studies, respectively. This variation suggests that what the curriculum covers and how it is designed may matter more than simply how much time is allocated or whether formal mandates exist, an important distinction that aggregation of curriculum can obscure.

4.4.4. Findings – inequality outcomes

- Mitigating: 66% of studies reported that curriculum is linked to lower inequalities in democratic competences.
- Accelerating: A minority (10%) found that curriculum disproportionately benefited already advantaged students.

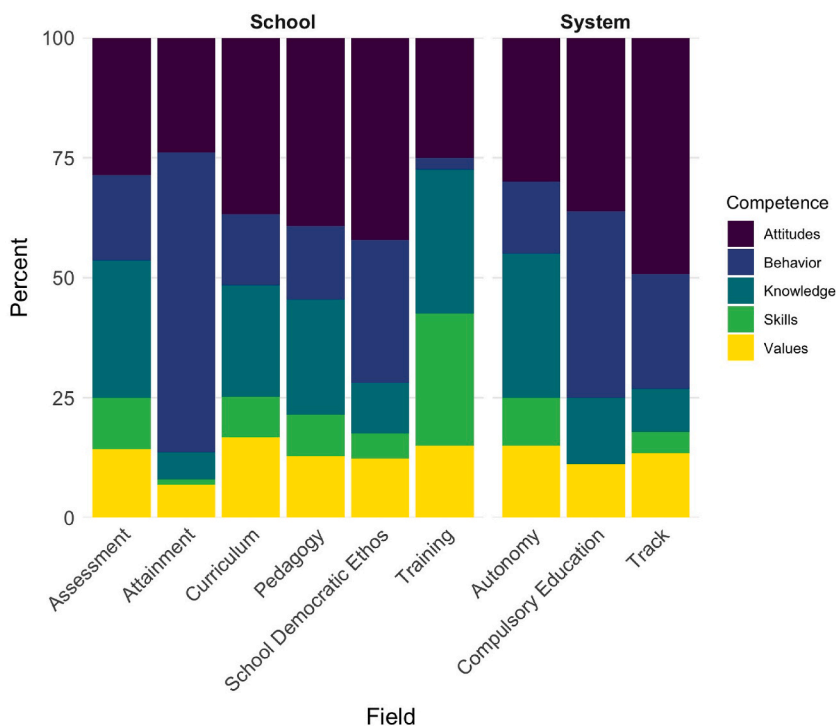


Fig. 2. Proportion of competences studied by educational field.

- Null: 17% reported statistically non-significant findings.
- Mixed: 7% of studies reported heterogeneous outcomes across different competences, contexts, or subgroups.

Just as the civics curriculum is linked to higher overall levels of student democratic competences it can also reduce political inequality. For instance, in a UK study, [Hoskins et al. \(2017\)](#) report that higher levels of citizenship education during lower secondary education are associated with reduced socio-economic disparities in voting intentions. This does not necessarily extend to other dimensions of inequality as [Centellas and Rosenblatt \(2018\)](#) found that political science courses for first year college students in the US is not linked to greater external political efficacy for black students relative to white students.⁶

Inequality findings also vary across curriculum subcategories ([Appendix C.3](#)). Programs, interventions, or targeted resources show the most consistent mitigating pattern (86% of studies), followed by instructional content or topics (78%). Course exposure or quantity (67%) and course enrollment or type (64%) also exhibit compensatory potential, though with a larger share of statistically non-significant findings. In contrast, curriculum structure or mandate, the presence of formal policies requiring civic education, shows limited and less consistent evidence of inequality reduction, although the number of studies in this category remains small.

Taken together, these patterns suggest that targeted curricular design and civic-oriented content are more consistently associated with closing gaps than simply mandating civic education or increasing instructional time.

4.4.5. Recent evidence

While many curriculum studies examine how it is related to the political process, a recent comparative study highlights how the curriculum can also foster other aspects of democratic culture. Using the 2016 longitudinal Czech High School Survey, [Kudrnáč \(2022\)](#) finds that curricula requiring upper-secondary school teachers to discuss immigration is linked to lower anti-immigrant attitudes with more frequent discussions leading to greater reductions. This study also shows the overlap between educational fields commonly observed in this study, in this case between curriculum and participatory pedagogy. The importance of this study cannot be understated amid rising anti-immigration sentiment in Europe, as evidenced by the rise of far-right governing parties.

While [Kudrnáč \(2022\)](#) focuses on a specific country, potentially calling into question external validity, new studies with an comparative approach have found similar results. [Deimel et al. \(2020\)](#), using the ICCS 2016, find that formal citizenship education is associated with a weaker relationship between low socioeconomic status and intended electoral participation among students in lower secondary education in Denmark, Germany, and Netherlands but not Belgium. As this study shows, cross-national studies are more prone to mixed results as some educational practices may be significant in certain countries but not others. However, this should not diminish the extensive external and internal validity found within the corpus of curriculum studies.

4.4.6. Summary

Overall, the evidence indicates that several forms of formal curriculum, particularly content-focused and program-based interventions, are associated with higher democratic competences and, in many cases, reduced inequalities. However, [Appendix C.3](#) shows meaningful variation across curricular subtypes, with structural mandates and simple exposure measures associated with more mixed results.

4.5. Participatory pedagogy

4.5.1. Overview and theoretical rationale

As explained earlier, the participatory perspective posits that students acquire democratic competences mostly through engagement in social and civic practices, such as debates, school councils, and community projects. Learning occurs through social participation, where students develop knowledge, skills, and civic attitudes by interacting with peers and teachers in structured and informal activities ([Hoskins et al., 2012](#); [Kerr, 1999](#); [Lave & Wenger, 1991](#)). Hence, based on this perspective *we expect that the greater the prevalence of participatory activities, such as an open climate of discussion and student voice opportunities, the higher will be the level of democratic competences*. However, as highlighted in the discussion of the compensatory perspective, many of these activities are characterized by voluntary participation, resulting in differential access to these activities. Hence, *we anticipate that greater prevalence of participatory activities is not necessarily leading to greater equality of democratic competences*.

4.5.2. Findings – democratic competences and intervention

We identified 136 studies examining pedagogical interventions and classroom practices. Perhaps reflecting the link between formal education and participatory pedagogy, as well as the tension between “traditional” subject areas of the curriculum and participatory learning, pedagogy and curriculum share similar profiles in competence attention. [Fig. 2](#) shows that attitudes ($\approx 40\%$) are the most studied competence aspect followed by knowledge ($\approx 24\%$), behavior ($\approx 24\%$), values ($\approx 13\%$), and skills ($\approx 9\%$).

The distinction between participatory pedagogy and curriculum is found in the independent variables of interest. The majority of studies focused on classroom climate (45.4%), indicating strong attention to the relational and participatory dynamics within

⁶ To enhance conceptual clarity, both curriculum and participatory pedagogy are disaggregated into distinct subcategories in the appendices. These include, for example, specific curricular dimensions (e.g., course exposure, instructional content, or program-based interventions) and pedagogical approaches (e.g., dialogic classroom climates, debate activities, or experiential learning). For detailed descriptions of these categories and their associated findings, see Supplementary C.

classrooms. Other frequently examined strategies included active participation (14.5%) and service learning, community engagement, or extra-curricular activities (13.2%). Smaller proportions of studies addressed student governance or councils (8.6%), curriculum- or program-based interventions (7.9%), debates or deliberation activities (5.9%), and simulations or role-playing exercises (4.6%).

4.5.3. Findings – competence levels

Through our review we find evidence that:

- Positive: 77% of studies reported a significant positive association between participatory pedagogy and democratic competences.
- Null: 15% of studies reported statistically non-significant results. The only other fields to have a similar number of null results are curriculum and system characteristics.
- Mixed: 8% of studies reported heterogeneous outcomes across different competences, contexts, or student subgroups.

The label of participatory pedagogy likewise masks substantial heterogeneity across seven distinct strategies, each with a different effect profile (see [Appendix C.2](#) for full disaggregation). Classroom climate, the relational and participatory dynamics within classrooms, makes up a large share of the literature (45.4% of studies) and shows strong positive associations (74%). Active participation approaches (14.5%) and service learning or community engagement (13.2%) also yield predominantly positive outcomes (59% and 65%, respectively).

Notably, program-based interventions that incorporate participatory elements, though less frequently examined (7.9%), show the strongest positive associations of any subcategory (92%), suggesting that structured participation embedded in curricular content may be particularly effective. By contrast, student governance or councils (8.6%) and simulations or role-playing exercises (4.6%) show more mixed results, with positive effects reported in 58% and 71% of studies, respectively, alongside a share of mixed or non-significant findings.

These differences underscore that participation is not a monolithic treatment; observed patterns depend critically on how it is structured, implemented, and integrated with other educational elements.

4.5.4. Findings – inequality outcomes

Interestingly, contrary to our hypothesis, participatory pedagogy has one of the highest potentials of any field to mitigate inequalities:

- Mitigating: 58% of studies indicated that participatory pedagogical practices is linked with reduced inequalities.
- Accelerating: 6% of studies suggested that certain pedagogical practices may benefit already advantaged students more.
- Null: 32% of studies found neither consistent compensatory nor accelerating associations, often due to unequal access to participatory opportunities.
- Mixed effects: 4% of studies reported heterogeneous outcomes.

It further appears that open climate, as the most often studied participatory activity, is the most ambivalent in its effects. While some studies identify compensatory associations to open climate (e.g. [Campbell, 2008](#)), there are also studies with different findings. [García-Albacete and Hoskins \(2025\)](#), using the UK Citizenship Education Longitudinal Study (2003–2014), find that classroom discussions are linked to wider gender differences in political efficacy. [Deimel et al. \(2020\)](#) show that students from disadvantaged backgrounds are less likely to perceive an open classroom climate, limiting its benefits. Similarly, [Coopmans et al. \(2023\)](#) report that openness has weaker associations than curriculum content among vocational students in the Netherlands, with only indirect links to societal awareness.

This ambivalence becomes clearer when inequality outcomes are disaggregated by participatory subcategory ([Appendix C.2](#)). Curriculum-based interventions, service learning, and simulations/role-playing consistently exhibit mitigating patterns: every study in these categories reports links to lower inequalities. By contrast, classroom climate shows heterogeneous patterns, ranging from compensatory to statistically insignificant and, in a small number of cases, accelerating outcomes. Student governance displays the most mixed profile overall, with some evidence of accelerating dynamics, likely reflecting that councils and leadership positions may be disproportionately occupied by already advantaged students unless deliberately structured for inclusion.

Taken together, these findings qualify our initial expectation that participatory approaches would rarely produce compensatory outcomes because they rely on voluntary student engagement. Instead, the evidence indicates that participatory pedagogy has substantial equalizing potential, particularly when participation is structured, embedded in curricular content, and deliberately organized to include all students. Approaches that require universal engagement, such as project-based learning, simulations, role plays, or service learning, consistently demonstrate mitigating associations. By contrast, less structured forms of participation, including open classroom climate or student governance, show more heterogeneous patterns and may reproduce inequalities when access to or inclusiveness within the engagement activity is uneven. The findings therefore suggest that participatory pedagogy is not inherently exclusionary; rather, its distributive consequences depend on institutional design and implementation.

4.5.5. Recent evidence

Recent studies reinforce the overall conclusions. [Rapa et al. \(2022\)](#) find an open classroom climate in the southeastern USA for grades 4th through 12th in 2019 to be positively associated with critical consciousness (scale of perceived inequality, egalitarianism, motivation, participation), especially for Black and Latino students. [Wahyudi et al. \(2024\)](#), [Az Zahra et al. \(2024\)](#), and [Agustin et al.](#)

(2024) provide quantitative evidence from vocational and secondary education contexts demonstrating that self-directed, project-based, and problem-based learning approaches is significantly linked to higher engagement, creativity, and democratic competences.

4.6. School democratic ethos

4.6.1. Overview and theoretical rationale

School democratic ethos refers to an educational ethos that integrates democratic values across all aspects of school life. Rather than focusing solely on specific subjects or even on cross-curricular initiatives, it aligns classroom instruction with the school's wider culture, practices, and norms (Gibbs et al., 2021). This approach extends beyond open classroom discussions to include students' influence in decision-making, the quality of teacher–student relationships, and the fairness and inclusivity of school rules (Quintelier & Hooghe, 2013). Even seemingly peripheral elements, such as punitive disciplinary policies or students' sense of belonging, can implicitly or explicitly shape democratic orientations (Bruch & Soss, 2018; Eckstein et al., 2021). As school democratic ethos includes many of the activities suggested by the participatory perspective, *we hypothesize schools adopting such an approach to raise levels of democratic competences*. We refrain from suggesting anticipated effects on inequality of competences because the greater emphasis on fairness and inclusion in this approach can potentially offset inequality enhancing effects of some participatory activities.

4.6.2. Findings – democratic competences and intervention

We identified 37 studies examining a school democratic ethos approach to democratic education. Empirical research on school ethos has primarily focused on attitudinal and behavioral outcomes. Approximately 42% of studies examine attitudinal dimensions, behavioral outcomes feature in roughly 30% of studies, values are studied by about 12% in about of studies, knowledge is around 11%, and lastly skills at 5%.

Defining and measuring school ethos, however, remains conceptually and empirically challenging. The notion extends beyond classroom climate to encompass the broader institutional culture and the informal messages conveyed through daily interactions. Researchers commonly use measures related to student–teacher relations, perceptions of fairness, and the degree of student influence on school decisions. These indicators are frequently grouped under labels such as democratic climate, participatory democratic climate, or democratic school climate (Keating & Benton, 2013; Quintelier & Hooghe, 2013; Tzankova et al., 2021). Other studies operationalize ethos through school-level initiatives, including a shared vision for citizenship education (Dijkstra et al., 2015) or participatory mechanisms like school budgeting (Gibbs et al., 2021).

Analysis of the studies' focus on educational ethos showed that democratic climate was the most examined category (53.5%), followed by teacher and institutional ethos (18.6%), participation and governance (11.6%), fairness and equality (9.3%), and school type or program (7.0%). These findings indicate that research on ethos primarily emphasizes democratic and participatory aspects within schools.

4.6.3. Findings – competence levels

Our synthesis suggests that school ethos are largely positive:

- Positive: 69% of studies reported a significant positive association between school democratic ethos and democratic competences, giving ethos the fourth highest proportion of positive results.
- Negative: 8% of studies reported a significant negative association.
- Null: 18% reported statistically non-significant findings.
- Mixed: 5% of studies found heterogeneous effects depending on competence type, context, or student subgroup.

4.6.4. Findings – inequality outcomes

- Mitigating: 60% of studies indicated that a democratic school ethos is linked to lower socio-economic or racial/ethnic inequalities in democratic competences.
- Accelerating: 10% of studies suggested that benefits might disproportionately accrue to already advantaged students.
- Null: 30% found no clear compensatory or accelerating outcome.

4.6.5. Recent evidence

A compelling illustration of a school democratic ethos approach to democratic education is provided by Gill et al. (2020). Their study of Democracy Prep, a charter school in New York City with the mission “to educate responsible citizen scholars for success in the college of their choice and a life of active citizenship” (p. 1386), demonstrates how institutional ethos can translate into long-term civic outcomes. Using an as-if-random assignment design, the authors find that students admitted by lottery to grades 6–11 during the 2007–2008 school year were significantly more likely to vote in the 2016 U.S. election, underscoring the enduring impact of a civic-oriented school mission.

4.7. Teacher training

4.7.1. Overview and theoretical rationale

The effectiveness of citizenship education programs relies on rigorous pre-service and ongoing professional development for

educators. Training ensures teachers acquire necessary pedagogical and content knowledge and self-efficacy to implement effective instructional strategies for promoting civic learning (Bickmore, 2005; Shulman, 1986; Torney-Purta et al., 2005).

Despite its importance, teacher training has received less attention compared to other educational fields. In one of the first studies to take a quantitative interest in teacher training, Torney-Purta et al. (2005), using the 1999 IEA CIVED, find that a teacher experience composite score (degree in civics and in-service professional development) generally are linked to higher student civic knowledge in lower secondary school, though findings vary by country. Barr et al. (2015) show that providing teachers with conceptual tools and materials can significantly impact students. A US-based randomized controlled trial study conducted between 2007 and 2008 found that the "Facing History and Ourselves" intervention provided professional development to help teachers implement a student-centered, historical case study that promoted stronger historical analysis skills, civic efficacy, and tolerance among students in grades 9th and 10th. As the effect of teacher training is not clearly informed by any of the five theoretical perspectives discussed earlier, we refrain from formulating explicit hypotheses.

4.7.2. Findings – democratic competences and intervention

We identified 20 studies examining teacher training interventions. Teacher training primarily focuses on skills. Fig. 2 shows that about 30% of the studies examine knowledge, while 28% of the 20 studies focus on skills, the highest proportion among all fields. This is followed by attitudes ($\approx 25\%$), values ($\approx 15\%$), and behavior ($\approx 3\%$), the smallest proportion of any field.

Analysis of the studies' focus on teacher training revealed that half (50%) examined professional development or workshops, followed by staff meetings or school-level training (20.8%), teacher qualifications and experience (16.7%), and curriculum or lesson planning support (12.5%). These findings indicate that research on teacher training in civic and democratic education predominantly emphasizes formal professional development opportunities.

4.7.3. Findings – competence levels

The evidence reviewed indicates positive outcomes in student civic learning:

- Positive: Approximately 71% of studies report positive associations between professional development and student competences, which is second only to pedagogy.
- Null: 19% of studies reported statistically non-significant findings.
- Mixed: 10% reported context-dependent results, reflecting variation in training intensity, fidelity of implementation, or classroom conditions.

4.7.4. Findings – inequality outcomes

The studies collectively point toward teacher training can have mitigating effects, as shown in Table 2:

- Mitigating: 80% of studies report patterns consistent with reduced competence disparities in relation to teacher training, although the limited number of studies ($n = 20$) necessitates cautious interpretation.
- Null: 20% report statistically non-significant results.

4.7.5. Recent evidence

The prevalence of positive outcomes should motivate further research into the impact of professional development on democratic competences. While current research highlights the benefits of professional development, understanding its specific relationship remains complex. In a recent US-based study, Domitrovich et al. (2022) found that interventions addressing teachers' curriculum content and pedagogical practices to create a student centered and democratic climate resulted in students in lower secondary education reporting higher levels of empathy, prosocial behavior, and belief in participatory citizenship. This study highlights tensions in understanding the role of teacher training, particularly in separating the impact of training from classroom methods and curriculum. Future studies should explore this relationship further through experimental or quasi-experimental designs, as seen in Barr et al. (2015).

Overall, systematic coding of 20 studies demonstrates that teacher training positively influences students' skills and, to a lesser extent, attitudes and knowledge, while also potentially mitigating inequalities.

4.8. CE assessment

4.8.1. Overview and theoretical rationale

Among the educational fields in this study, assessment has garnered relatively little attention despite its potential impact. Anticipation of exams can motivate students to master a subject, teachers to employ effective methods, and administrators to devote ample resources to the subject (Campbell and Niemi, 2016). Hence, drawing on the direct effects/civic education perspective, we would anticipate that exams in civics courses lead to higher levels of democratic competences. Importantly, as exams are the same for all pupils they may have a standardizing effect on the teaching of civic education (Witschge & Van de Werfhorst, 2016), which, according to the compensatory perspective, is likely to result in greater equality of outcomes. An equalizing effect of exams can further be expected because the incentive to prepare for them is greater among young people with little input from other sources of political socialisation (Campbell and Niemi, 2016). Hence, based on the compensatory perspective, we expect exams to reduce inequalities in democratic competences.

4.8.2. Findings – democratic competences and intervention

We identified 15 studies examining CE assessments. Despite limited studies, assessment literature spans all five democratic competences. Fig. 2 shows that knowledge ($\approx 28\%$) and attitudes ($\approx 28\%$) are the major focus, followed by behavior ($\approx 18\%$), values ($\approx 14\%$), and lastly cognitive skills receive less attention ($\approx 11\%$).

Analysis of assessment approaches revealed that the largest proportion of studies focused on civic requirements or graduation conditions (43.8%), followed by formal exams or standardized tests (37.5%). Smaller shares examined course grades or credits (12.5%) and teacher assessment practices or classroom monitoring (6.3%), indicating that research on civic assessment primarily emphasizes formal institutional requirements.

4.8.3. Findings – competence levels

Our synthesis suggests that:

- Positive: 40% of studies found positive associations.
- Negative: 20% found negative associations.
- Null: 33% of studies report statistically non-significant findings.
- Mixed: 7% of studies found heterogeneous outcomes.

Our review indicates that exams in citizenship education are only in a minority of cases correlated positively with democratic competences. This may be due to the type of assessment. Kim (2021), finds in a longitudinal study of upper secondary Korean students that objective performance, based on test scores, in social studies is not associated with public service motivation but that subjective performance, self-evaluation, is positively associated. However, few examine other types of assessments beyond summative assessment. The mixed pattern of results echoes broader debates on the impact of exams on academic proficiency, with mixed results in existing research (Carlson et al., 2011; Dee and Jacob, 2011; Hursh, 2005; Nichols et al., 2006; Rouse et al., 2013; Supovitz, 2009; Valenzuela, 2005).

4.8.4. Findings – inequality outcomes

- Mitigating: 40% of studies indicated that CE assessment is linked to lower inequalities in democratic competences.
- Accelerating: 40% of studies indicate that it may accelerate already entrenched inequalities.
- Null: 20% report statistically non-significant results.

4.8.5. Recent evidence

Our results imply mixed outcomes for developing competent democratic citizens through assessments. Two US-based studies illustrate contrasting perspectives, in this case regarding the ability of assessments to have compensatory effects. Campbell and Niemi (2016) in their 2006–2010 panel study found high-stakes exams during upper secondary education is associated with greater civic knowledge, particularly benefiting Latino students with less political information exposure. Conversely, Jung and Gopalan (2023) find that mandated civics testing as an upper secondary graduation requirement is linked to exacerbated political disparities, lowering voting turnout among young black adults. Divergent outcomes may stem from different research methodologies: Jung and Gopalan used a difference-in-differences design focusing on voter turnout, whereas Campbell and Niemi (2016) conducted mostly cross-sectional models of political knowledge.

Determining the role of civic education assessments in fostering a democratic society may be premature. The limited number of studies may reflect policymakers' low prioritization and the challenge of assessing learners' democratic competences (Santibanez and Hoskins, 2023). Assessment is not widespread or at least underdeveloped, partly due to challenges about whether and how attitudes and values can be effectively assessed.

4.9. Educational attainment

4.9.1. Overview and theoretical rationale

Conceptually, educational attainment is somewhat of an outlier amongst the educational fields reviewed in this study as it does not refer to an educational policy or practice but to individuals' use of educational opportunities to achieve a certain level of education. We nonetheless decided to include it in this review because of the sheer volume of studies examining the relationship between educational attainment and political engagement, a prominent dimension of democratic competences (e.g., Nie, Junn, and Stehlik-Barry, 1996; Rosenstone and Hansen, 1993; Verba and Nie, 1972; Verba, Schlozman, and Brady, 1995; Wolfinger and Rosenstone, 1980; Hoskins et al., 2008). Verba, Schlozman, and Burns (2003) observe that, "Educational attainment is, in fact, the single most potent predictor of an adult's political activity" (p. 13). Educational attainment is said to foster a wide range of democratic dispositions through the acquisition of certain knowledge and skills, particularly verbal cognitive proficiency as this enables young people to not only understand the world of politics but also take part in it effectively (Nie et al., 1996). While this reasoning is core to the direct effects/civic education perspective, because the education-as-proxy perspective claims that education has no effect at all, we do not propose any hypothesis regarding the effect of educational attainment, neither regarding levels nor distributions of democratic competences.

4.9.2. Findings – democratic competences and intervention

We identified 76 studies examining educational attainment. In the extensive body of research concerning educational attainment, behavior emerges as the most studied aspect of democratic competences. Fig. 2 shows that over 63% of the studies examine some form of participation, with many focusing on voting. The considerable emphasis on voting underscores the ongoing interdisciplinary debate regarding the positive empirical relationship between higher education and participation. Specifically, this debate pertains to whether the effect of education is causal or merely a proxy for other characteristics (as discussed earlier). Attitudes account for about 24%, followed by values ($\approx 7\%$), knowledge ($\approx 6\%$), and skills ($\approx 1\%$) – one of the lowest proportions of studies.

Given the literature's emphasis on educational attainment, there is a narrower range of independent variables tested. Most studies in the attainment category focused on years of education (39.7%) and highest educational qualification (34.6%), indicating that these are the dominant measures of educational attainment. A smaller share examined postsecondary completion (17.9%) or primary and secondary completion (7.7%), suggesting comparatively less emphasis on early or specific stage-based attainment indicators.

4.9.3. Findings – competence levels

Whether educational attainment serves as a cause or proxy of democratic dispositions, our findings support a positive association between education and democratic competences and hence more support for the direct effects/civic education thesis than the education-as-proxy argument:

- Positive: 60% of studies reported positive associations between educational attainment and democratic outcomes.
- Negative: 4% report negative findings.
- Null: 20% report statistically non-significant findings.
- Mixed: 16% reported heterogeneous findings.

This substantial percentage of non-significant findings encompasses studies such as Kam and Palmer (2008), as well as recent works like Gidengil et al. (2019), and Weinschenk et al. (2023), which employ causal inference techniques to test the link between education and attributes supporting democracy.

4.9.4. Findings – inequality outcomes

Given the limited number of studies interested in inequality, it is difficult to determine what influence, if any, years of school has on the distribution of competences. Less than ten attainment studies examine inequality.

- Mitigating: 72% report a mitigating outcome.
- Null: 28% of studies show statistically non-significant findings.

As shown in Table 2, a majority do find a mitigating associations. In one of those Sondheimer and Green (2010), using a natural experiment design in the form of a program in Michigan, US that randomly assigned students to a preschool program, found that high school graduation increased voter turnout in 2002 and 2004 among low SES students.

4.9.5. Recent evidence

More than any other field, studies examining the effect of educational attainment have employed quasi-experimental research designs. For example, scholars have utilized discordant twin designs, mostly using Sweden or Denmark as case studies, to examine the association between education attainment and voter turn out (Ahlskog, 2021), political participation (Dinesen et al., 2016), social trust (Oskarsson et al., 2017), and political knowledge (Weinschenk et al., 2023). The premise is that limiting the study to twins can mitigate sources of confounding in the relationship, such as genes and socialisation, as twins are reared together and share both, differing only in education. The results are best described as ambiguous, with all finding statistically non-significant results, except for Dinesen et al. (2016) who find that in the US and Denmark but not Sweden years of education increase political participation such as contacting a representative or giving money to political activities.

As noted by Campbell (2006), higher education generally enhances multiple dimensions of democratic competences. Quasi-experimental research designs have contributed more to establishing causation, but questions persist regarding why education may or may not have an effect.

Educational attainment emerges as a robust predictor of democratic competences, particularly political participation. The use of rigorous analytic approaches strengthens the validity of observed associations, although heterogeneity across countries and study designs indicates that the effects are neither universal nor uniform. However, the tendency of quasi-experimental designs to produce weaker or null effects relative to cross-sectional studies suggests that part of the observed attainment gradient may reflect selection mechanisms or unobserved confounding rather than purely causal educational effects.

4.10. System characteristics

4.10.1. Overview and theoretical rationale

So far, we have reviewed educational characteristics related to individuals, classrooms or schools. However, a growing body of comparative studies is highlighting the role that some institutional features of national education systems play in influencing efficiency and equality of educational outcomes (Fuchs & Wößmann, 2007; Hanushek & Woessmann, 2010; Van de Werfhorst and Mijs, 2010).

Institutional features that have received particular attention among scholars interested in their effects on democratic outcomes are tracking, school autonomy and compulsory education.

Tracking refers to the practice of allocating students to different educational tracks (academic or vocational) based on students' educational performance. Countries vary in the age when tracking first occurs and scholars have argued for a connection between the age of first selection and the distribution of democratic competences (Janmaat and Mons, 2011; van de Werfhorst, 2017; Hoskins and Janmaat, 2019; Witschge & Van de Werfhorst, 2020). Drawing on the social stratification perspective, which highlights different educational experiences of different social groups, the argument is that the earlier a system starts to track the greater the inequality in such competences will be. This is because academic tracks are believed to offer a more stimulating environment, in terms of curriculum, participatory pedagogy and peer experience, for the acquisition of such competences than vocational tracks (Whitty, 1985; Hoskins and Janmaat, 2016; Ichilov, 2002; Janmaat and Mons, 2023; Ten Dam and Volman, 2003). Hence, the longer students are exposed to such tracked education, the greater the cross-track differences will be in democratic outcomes such as political engagement (van de Werfhorst, 2017). With a side effect of tracking being that students of disadvantaged and migrant backgrounds end up disproportionately in vocational tracks, scholars have also found that early tracking is associated with greater *social* and *ethnic* inequalities in ethnic tolerance and patriotism (Janmaat and Mons, 2011) and voting and protesting (Hoskins and Janmaat, 2019). Although the argument about the effect of tracking concentrates on inequalities, some scholars have also argued that early tracking affects overall levels of democratic competences because of the less relevant and stimulating civic education in vocational tracks (Witschge & Van de Werfhorst, 2020) and the diminished opportunities for intercultural interaction in a tracked (and more segregated) environment (Janmaat and Mons, 2011). Hence, consistent with this literature and the direct effects/civic education and social stratification perspectives, *we expect that early tracking reduces both overall levels of democratic competences and equality in such competences.*

Similar to tracking, studies focusing on school autonomy have mainly been concerned with inequalities of competences. Here the argument is that higher levels of school autonomy should result in greater inequality because of greater differences between schools in the curriculum, participatory pedagogy and social composition that such autonomy enables (Elchardus et al., 2013; Janmaat and Mons, 2011; Resh and Benavot, 2009; Witschge & Van de Werfhorst, 2016; Wolf and Macedo, 2004). Nonetheless, scholars have also argued that the level of school autonomy can affect overall levels of competences. For instance, imposing uniform and demanding civic requirements and a high stakes civics exam on schools (in other words, diminished school autonomy) can give students the incentive to improve their political participation and knowledge (Giersch and Dong, 2018; Campbell and Niemi, 2016). Thus, as with tracking and informed by the same theoretical perspectives, *we anticipate school autonomy to result in both lower levels of and greater inequality in democratic competences.*

The effect of compulsory education has mostly been explored by semi-experimental studies using educational reforms that prolong the period of compulsory education as the key explanatory variable and comparing cohorts that are affected by the reform (the experimental group) to those that are not (the control group) (e.g., Le and Nguyen, 2021; Milligan et al., 2004; Pelkonen, 2012). The extension of compulsory education can be expected to yield higher levels of democratic engagement based on the argument that education in general enhances young people's understanding of the world of politics and the skills to take part in it (i.e. the direct effects perspective) (Nie et al., 1996; Galston, 2001). At the same time, it is likely to reduce social inequalities in political participation since it will have a greater effect on students from working-class homes, in terms of prolonging their educational careers, than those from more privileged families (Lindgren et al., 2017). This is because students from working class backgrounds tend to leave school earlier than the latter. In other words, prolonging the period of compulsory education equalizes the educational experiences for students of different social backgrounds. However, as the argument about prolonging compulsory education relates to education in general, the education-as-proxy perspective is also relevant, which prevents us from suggesting specific hypotheses about the effect of extending the period of compulsory education.

4.10.2. Findings – democratic competences and intervention

We identified about 90 studies examining system characteristics. To understand how system properties influence student democratic competences, we unpack findings along sub-fields. By far the most common type of system characteristic of interest is tracking, examined in over 50 studies (around 56%), whether measured as a dichotomous indicator or age of first selection. The next most common institutional property is reforms on compulsory education, investigated in about 20 studies (22%). Lastly, the smallest sub-field concerns school autonomy, measured through accountability, centralization, or mandatory state tests, with about 10 studies (11%).

Within the growing realm of research pertaining to education system characteristics, attitudes are the competency aspect that emerge as the most extensively explored area for the studies on tracking. Fig. 2 shows that about 50% of such studies delve into various facets of attitudes, the highest proportion for any educational field. Behavior receives a high share of interest within the sub-field of compulsory education studies, at about 40%, the second highest, behind attainment. Knowledge ($\approx 30\%$) and attitudes ($\approx 30\%$) appears to be the most popular outcome to focus on for studies on school autonomy. Thus, studies examining different system characteristics vary substantially in their outcomes of interest.

4.10.3. Findings – competence levels

- Tracking studies show the largest proportion of negative associations ($\approx 32\%$), with lower levels of democratic competences reported in early-tracking systems or vocational pathways.

- School autonomy studies ($n \approx 10$) exhibit a high proportion of non-significant findings ($\approx 50\%$), suggesting heterogeneous impacts on democratic outcomes.
- Compulsory education studies ($n \approx 20$) report the highest proportion of positive associations ($\approx 60\%$) of the three, consistent with extended schooling being linked to higher levels of democratic competences.

4.10.4. Findings – inequality outcomes

Turning to the role of systemic characteristics on competences distribution, [Table 2](#) shows evidence from our review:

- Tracking is associated with larger pre-existing inequalities ($\approx 84\%$) among students.
- Compulsory education reforms are associated with reduced inequalities ($\approx 71\%$).
- School autonomy is associated with widening inequalities ($\approx 67\%$).

This further supports the growing body of literature suggesting that educational system characteristics influence the distribution of civic outcomes among students ([Eckstein et al., 2012](#); [Janmaat, 2011](#); [Janmaat et al., 2014](#); [Janmaat and Mons, 2011](#); [Van de Werfhorst, 2014](#)).

4.10.5. Recent evidence

Recent studies have contributed to a further understanding of why tracking, as a prominent system characteristic, can be detrimental to education's capacity to promote democratic competences. [Janmaat and Mons \(2023\)](#), for instance, in one of the few studies on the outcomes of France's education system, argue that selection based on ability leads to a concentration of relatively disengaged and disadvantaged young people in vocational tracks, which in turn gives rise to a counterculture marked by a rejection of the world of politics. Another line of enquiry concerns the civic learning opportunities offered across tracks. [Sampermans et al. \(2021\)](#) find that, in 2016, Flemish and Dutch lower secondary schools offering more civic learning opportunities do not show smaller civic knowledge disparities across tracks. This suggests that enhanced civic education alone is insufficient to overcome structural inequalities embedded in tracked education systems.

Reform, in the form of extending the years of compulsory education, has been viewed as an opportunity to investigate the causal impact of education on political attitudes and participation ([Bömmel and Heineck, 2023](#); [Dang, 2019](#); [Le and Nguyen, 2021](#); [Siedler, 2010](#)). By leveraging educational reform to obtain exogenous variation in respondents' level of education, often through a regression discontinuity design, scholars have arrived at opposing conclusions regarding education and democratic competences. This is perhaps best exemplified by [Siedler \(2010\)](#) and [Bömmel and Heineck \(2023\)](#), who study the same educational reforms between 1949 and 1969 in West Germany that extended compulsory schooling from eight to nine years, albeit with different data, and find contradictory results in regards to voting, political interest and involvement. Most of the studies focusing on compulsory schooling reforms do find positive effects, though, as noted before.

While tracking in recent years has received more attention, there remains a lack of research on the other two institutional properties. As our synthesis suggests, the impact of school autonomy remain an under-researched area of study.

System characteristics substantially shape both levels and distribution of democratic competences. Evidence consistently supports a negative association between extended compulsory education and inequality, while early tracking and school autonomy produce heterogeneous impacts. These findings highlight the importance of structural educational policies in promoting equitable civic development.

4.11. Regional concentration and implications for global applicability

An important caveat to the patterns documented above is the pronounced geographical concentration of the evidence base. Over 80% of studies originate from Western Europe and North America. Evidence from Latin America, Africa, large parts of Asia, and Oceania remains sparse. This imbalance highlights not only limitations to the representativeness of the literature but also the conditions under which our conclusions can be generalized.

First, educational practices are culturally and normatively embedded ([Alexander, 2001](#)). Participatory pedagogies emphasizing open discussion, student voice, and critical dialogue reflect educational philosophies rooted in liberal-democratic traditions and constructivist learning theories. In systems shaped by more hierarchical classroom norms, collectivist value frameworks, Confucian or Islamic educational traditions, or post-colonial state-building projects, these practices may operate differently or require institutional adaptation. An open classroom climate that encourages students to question authority, for example, may align less comfortably with systems that emphasize deference to teachers or centralized curricular control. In the absence of robust evidence from such contexts, the consistency of effects documented in Western democracies cannot be assumed to extend universally.

Second, the structural and institutional conditions that moderate educational effects vary substantially across countries. Findings that formal civic education curriculum can mitigate socioeconomic inequalities often presuppose relatively consistent curriculum implementation, trained teaching staff, and resource parity across schools. These assumptions may hold in well-resourced welfare states but may be less plausible in systems characterized by weaker state capacity, high between-school disparities, or uneven policy implementation. Similarly, tracking's inequality-amplifying effects are primarily documented in European systems with early selection mechanisms. Whether comparable patterns emerge in systems with more permeable track boundaries or different vocational structures remains insufficiently examined. The compulsory schooling reform literature, though methodologically rigorous, is drawn largely from mid-20th-century European and North American expansions; its applicability to contemporary reforms in lower-income or politically

distinct settings remains an open empirical question.

Third, the regional analyses presented in [Appendix C.5](#) indicate that even within the existing evidence base, patterns are not uniform. While Europe and North America show broadly similar shares of positive associations overall, inequality effects differ markedly, with mitigation more frequently reported in North American studies and acceleration more common in European contexts. The distribution of competence domains also varies, with European research placing greater emphasis on attitudinal and value-oriented outcomes, and U.S.-based studies more frequently examining behavioral outcomes and civic skills. Evidence from other regions, although limited, suggests different emphases and greater dispersion in findings. These variations indicate that aggregated frequency patterns may mask region-specific institutional dynamics and research traditions.

Taken together, these observations suggest that the conclusions of this review are most directly applicable to high-income, consolidated democratic contexts characterized by relatively stable schooling systems, professionalized teacher training, and institutional support for civic education. The limited number of studies from low- and middle-income countries means that observed cross-regional similarities may partly reflect selective research coverage rather than demonstrated universality. Educational effects may operate differently in contexts marked by weaker administrative capacity or different civic traditions.

Accordingly, our findings should be interpreted as conditionally generalizable rather than globally uniform. The regional imbalance in the evidence base underscores a significant gap in the literature and highlights the need for expanded research across diverse institutional and cultural settings. Only through broader geographic diversification can future scholarship assess whether the patterns documented here reflect general properties of educational systems or are contingent on the specific political and institutional environments in which they have primarily been studied.

5. Discussion

Our synthesis of the reviewed studies suggests that current methods in curriculum, participatory pedagogy, school ethos, and teacher, as well as educational attainment more broadly, are linked to more positive distributions of democratic competences. Education plays a critical role in promoting democratic competence and addressing inequalities in democratic competences. Such inequalities undermine the legitimacy of liberal democracy by marginalizing politically disengaged individuals ([Bartels, 2008](#); [Levinson, 2010](#)). Evidence across these fields indicates that education can help mitigate socioeconomic inequalities in political involvement, exacerbated by growing inequality and globalization in the democratic Western world ([Dalton, 2017](#)).

Findings for some educational aspects suggest “win-win” effects, enhancing competence outcomes while reducing inequalities in such outcomes. Curriculum and participatory pedagogy, and to a somewhat lesser extent reforms that increase the period of compulsory education, appear to have this doubly beneficial impact ([Niemi and Junn, 1998](#); [Torney-Purta et al. 2007](#)). Notably, educational attainment also shows promise, though the number of studies addressing inequality within this field is small, with fewer than ten studies. We note that we had not anticipated these win-win outcomes for participatory pedagogy, educational attainment and period of compulsory education and the findings for these aspects thus come as a pleasant surprise.

For policy makers, these aspects are promising tools to counter the divisive effects of the social media, as one of the most pressing issues of our times. Indeed, a review of experimental studies found that educational programs on media literacy are effective in helping people to detect and dismiss misinformation ([Huang et al. 2014](#)), which is important as misinformation has been found to be one of the main drivers of declining trust in the media and other democratic institutions ([Bennett & Livingston, 2020](#); [Qasim, 2024](#), pp. 41–45).

Conversely, findings that suggest “null-lose” effects are found in school autonomy and tracking, especially the latter. While tracking is not associated with higher overall levels of democratic competences, it does appear to be associated with greater inequalities in such democratic competences. The evidence reviewed suggests that the earlier an education system branches out in different tracks, the greater are cross-track inequalities in political engagement (e.g. [van de Werfhorst, 2017](#)) and the greater are the socio-economic differences in such engagement (e.g. [Hoskins and Janmaat, 2019](#)).

Skills and values remain comparatively under-researched, despite their centrality to democratic participation and crucial role in supporting resilience against misinformation ([Directorate-General for Education, Youth, Sport and Culture, 2022](#)). Teacher training and assessment are similarly underexplored, with fewer than 50 studies combined addressing these fields. This limited evidence base constrains our ability to assess their potential role in promoting democratic competences. Although recent studies ([Barr et al., 2015](#); [Campbell and Niemi, 2016](#)) offer valuable insights, their mixed findings underscore the need for more rigorous research, ideally employing experimental or quasi-experimental designs.

Regarding their engagement with existing theory, the findings of our review largely align with the direct effects/civic education and participatory perspectives, which make claims about effects on *levels* of democratic competences, and the compensatory effects and social stratification perspectives, which do so about effects on *inequalities* of competences. The findings that we identified for a number of fields suggesting win-win effects, moreover, indicate that these perspectives are *complementary* and not mutually exclusive, which we wish to emphasize as an important theoretical contribution of this study. More generally, this non-competitive interpretation is consistent with suggestions that excellence and equity in the outcomes of education are not in a trade-off relationship and, in fact, often go hand in hand (e.g. [Hanushek Eric & Wößmann, 2006](#); [OECD, 2012](#)). Interestingly, the two perspectives about effects on levels of competences are not in a competitive relationship either as the close alignment of our findings with the participatory perspective does not preclude consistency with the direct effects/civic education perspective.

Surprisingly, and contrary to our expectation, complementarity also applies to the participatory perspective and the compensatory effects perspective. We recall our argument that participatory approaches would be unlikely to show any compensatory effects on democratic competences as they mostly rely on children's voluntary contribution to activities, which may result in unequal educational access. However, our review indicates that participatory pedagogies are frequently associated with both higher levels of and equality

in such competences. This positive finding might suggest that many participatory approaches are actually inclusive, either by nature, for instance activities that require all children to take part such as project-based learning, role plays, individual research assignments and in-service learning, or because teachers organise them in such a way that they require all children to participate. Indeed, a recent study found the delivery of participatory activities as reported by teachers to be unrelated to school social composition (Kempner and Janmaat, 2025), suggesting that teachers who are working in schools serving poor communities make sure that children from disadvantaged backgrounds have the same access to participatory learning opportunities as children from middle class backgrounds. Another recent study, moreover, found that a distinct gender-inclusive participatory citizenship learning intervention diminished the gender gap in political efficacy (Hoskins et al. 2025). Thus, the proposition, as part of the compensatory effects perspective, that participatory activities are as a rule not inclusive, may require qualification: they may well be accompanied by inclusive pedagogies ensuring equal access to and experience of such activities.

The only perspective that is less consistent with the overall patterns in our review was the education-as-proxy argument as the vast majority of studies examining educational attainment and reforms extending the period of compulsory education reported positive associations between education on both levels and equality of democratic competences. We are cautious, however, in dismissing this perspective as invalid as the studies whose findings did support it tended to use innovative and robust causal inference techniques to examine the link between education and democratic competences.

Aside from the unexpected finding about the more equal outcomes associated with participatory approaches, our review produced other findings that are not in accordance with theoretical expectations. While we correctly anticipated tracking and school autonomy to be associated with greater inequality in democratic competences, we could not draw any conclusions from the evidence reviewed as to whether assessment, tracking and school autonomy is on balance associated with higher or lower levels of such competences because of contradictory results of the reviewed studies. In addition, the absence of a clear association between assessments and the distribution of such competences was not foreseen as we expected assessments to reduce inequalities in these outcomes. While some of this inconclusiveness may be explained by the limited number of studies investigating these fields, it may also indicate that these aspects operate through mechanisms that differ from, or extend beyond, our initial expectations. For instance, with respect to assessment, it could be that high-stakes exams lead teachers to narrowly focus on the exam topics ("teaching to the test") at the expense of other topics and approaches conducive for democratic competences (Campbell and Niemi, 2016). Thus what pupils may gain in some areas they may lose in others, in terms of both level and distribution of mastery, when they are subjected to exams. If there is indeed a zero-sum relationship between components covered and not covered by exams, then the implication for educational theory is that citizenship education should have a broad curriculum, covering and assessing the full range of topics and skills relevant for democratic competences.

Concerning tracking, the ambiguity of the findings may be explained by the possibility that the more inspiring education that students receive in the academic track regarding civic and political engagement fully compensates for the less engaging education offered in the vocational track, leading on balance to little difference in overall levels of democratic competences between early selection systems and more comprehensive systems. A similar mechanism may be at work regarding school autonomy, with schools offering many opportunities for civic learning offsetting schools that focus on other areas in systems with high levels of school autonomy. If true, this would further underline the core argument of the compensatory effects and social stratification perspectives that different educational experiences, particularly if they coincide with social divides, are associated with greater inequality of outcomes.

6. Limitations

Although this review synthesizes one of the largest bodies of research on education and democratic competences to date, several limitations should be noted.

First, unlike meta-analyses that compute standardized effect sizes (e.g., Finkel et al., 2022; Geboers et al., 2013), this review does not quantify effect magnitudes. Calculating an overview of effect sizes is valuable as it enables a discussion of effectiveness across educational components. However, a proper comparison of effect sizes would necessitate a close look at the composition of the analyses of different studies. Studies can use different measures for the same explanatory variables and can vary in the control variables included in the models. These aspects have can influence reported estimates. Taking these aspects into account in a review study is a mammoth task and it is questionable whether this can be achieved at all. Hence, we opted for the pragmatic approach of using statistical significance and the direction of reported associations or effect to inform our reporting of findings. While we are not able to compare magnitude, our approach provides an intuitive overview of patterns in the relationship between education and both levels and distributions of democratic competences.

Second, for reasons outlined above, our review also included quantitative studies that could not explore causal relations in the most rigorous ways, such as those relying on cross-sectional designs.

Third, understanding which educational mechanisms are associated with reductions in intergenerational inequalities in democratic engagement remains a challenge. Studies in this field explore various aspects of education and a range of democratic competences, employing diverse data, research designs, and populations. Moreover, given the multitude of potential effects on inequality for different forms of political learning, a range of approaches is to be expected. This review took this multitude of approaches into account by offering a comprehensive understanding of the current knowledge regarding which educational fields are associated with inequalities across democratic competences.

Finally, our review only focused on quantitative studies, which means that teaching methods that are mainly explored by qualitative research, such as inclusive citizenship education, have not been captured by our review. Only in the last few years has the quantitative field begun to assess these methods, which are potentially crucial for understanding how inequalities of access to effective

pedagogies can be mitigated (see Hoskins et al. 2025).

7. Conclusion

Taken together, the evidence reviewed indicates that education matters for democracy. Across the literature, educational experiences are associated with both higher and lower competence levels, as well as with both narrower and wider inequalities in political participation. The balance of evidence suggests that the civics curriculum, participatory pedagogy, and reforms extending compulsory education hold promise for enhancing democratic competences and reducing disparities in participation. But recent research argues that these associations are conditional on measures ensuring equality of access and addressing the balances of power within the classroom (Hoskins et al. 2025). This understanding prompts us to further explore nuances within well-developed fields as well as expand upon smaller ones.

Beyond these broad insights, our findings also point to several practical implications for educators, curriculum designers, and policymakers. First, curriculum reforms that explicitly integrate democratic knowledge, skills, and values should be prioritized, particularly those that include active learning components and space for student deliberation. Educators can strengthen democratic learning by embedding structured discussion opportunities, project-based engagement with community issues, and activities that allow students to practise civic skills. Second, policymakers should ensure equitable access to participatory practices, such as open classroom climates, student voice initiatives, and opportunities for shared decision-making, as these practices are frequently associated with both higher competence levels and lower inequalities (see Hoskins et al., 2025). Third, because tracking and autonomy reforms can unintentionally widen social gaps, policymakers should pair these reforms with safeguards: for example, ensuring that vocational tracks receive equivalent civic learning opportunities and that schools with high autonomy are supported to adopt democratic practices rather than reproduce existing inequalities. Finally, given growing concerns around misinformation, expanding media and digital literacy curricula remains a particularly promising area for practitioner action.

Author statement

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Appendix A. Supplementary data

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Data availability

Data will be made available on request.

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