





# Exploring the Interplay Between Community Building and Competition in Honors Education: A Scoping Review

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## Abstract

To help students reach their full potential, additional challenges beyond the standard curriculum may be necessary for some. In Dutch secondary vocational education, education for talented students is organized in two prevalent ways: through participation in honors programs that foster community building and through professional competitions. Given the apparent contradiction and potential tension between community building and competition, this research explores these concepts and their interplay to create optimal learning environments for talented students. A scoping review was conducted, analyzing 101 studies and identifying six overarching themes: Added Value, Characteristics & Conditions, Design & Development, Collaboration, Membership & the Role of Actors, and Enhanced Learning & the Role of Actors.

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Findings confirmed the benefits of both community building and competition in honors education. Despite a literature gap regarding their combination, this review provides insights into how these concepts can be merged to create enriching learning environments by synthesizing the themes.

### **Keywords**

community building, competition, honors education, talent development, vocational education

## **Rationale**

To enable students to reach their full potential, some students need extra support from their teachers. Other students flourish when given extra or different challenges in addition to the curriculum offered to them. The latter is considered education for talented students, also known as honors education. In Dutch secondary vocational education, honors education is organized in two prevalent ways: (1) participation in honors programs that focus on forming communities with peers and (2) participation in professional competitions.

There is evidence to suggest that both community building (Kingma et al., 2017; Wabike, 2021; Wawrzynski et al., 2012) and competition (Burguillo, 2010) can help enhance students' learning capacities. Since building a community *with* others and wanting to win *over* others seem to contradict each other, it might be counterproductive to try to combine these two aspects of honors education into a single overarching program. Consequently, the question arises whether and how these concepts interact, and how they can potentially be combined to create an optimal learning environment for talented students. To address this question, the current study presents a scoping review on the roles of community building and competition in honors education and beyond.

Educational institutions have been trying to meet the ambitions of students who can and want to take on more than the regular curriculum by offering various programs, such as honors education. Although honors programs come in many variations (Ten Berge et al., 2018; Wolfensberger, 2015), they have overarching features, captured in Wolfensberger's (2015) definition below.

Honors programs are selective study programs linked to higher education institutions. They are designed for motivated and gifted students who want to do more than the regular program offers. These programs have clear admission criteria and clear goals and offer educational opportunities that are more challenging and demanding than regular programs. (p. 12)

This definition of honors education in higher education is in line with how honors education is organized in Dutch secondary vocational education (Ten Berge et al.,

2018). Dutch honors programs in higher education, however, have no or only minor elements of competition (Wolfensberger et al., 2012), whereas Dutch secondary vocational education incorporates professional competitions actively into honors education (Kragten & Ruepert, 2020).

Creating an honors community is seen as an important facet of honors education (Dai, 2019; Koh et al., 2009; Stobbe & Hogenstijn, 2017; Van Eijl et al., 2010; Van Ginkel et al., 2012; Wolfensberger, 2012; Young et al., 2016). Honors students find a community where they can meet and work together with peers stimulating (Deeg et al., 2024; Tiesinga & Wolfensberger, 2014). It is beneficial to their learning capacity (Abizada & Mirzaliyeva, 2021; Kingma et al., 2017) and their talent development (Van Eijl & Van Ginkel, 2017). Honors communities can also serve as examples for developing larger academic communities in jointly achieving more general educational goals (Stanlick, 2006).

Competition in educational settings can be motivating (Tebeanu & Macarie, 2013) and enhance learning outcomes (Evripidou et al., 2020). Particularly when there is a focus on collaboration, competition can further enhance the learning experience (Hutter et al., 2011; Johnson et al., 1981; Johnson & Johnson, 1989, 2013; Kristensen et al., 2015). Competition in honors education, for example in secondary vocational education, also includes professional competitions (James & Holmes, 2012). Such competitions, as described on the Worldskills Netherlands website (<https://worldskillsnetherlands.nl>), are designed to select and delegate the best students at national level, aiming to win prizes for their country during European or World Championships. Research has pointed out that training for these competitions facilitates deliberate practice. Therefore, participating in (inter)national competitions enhances factors like engagement and motivation (Pylväs & Nokelainen, 2017). It has a positive effect on students' vocational competencies and career development (Chankseliani et al., 2016). However, this research has often been individually focused and did not address teamwork (Nokelainen, 2018).

## **Objectives**

In sum, ample research has been conducted into community building in honors education (Brinkel et al., 2015; Dai, 2019; Heijne-Penninga & Wolfensberger, 2018; Stobbe & Hogenstijn, 2017; Van Eijl et al., 2010; Van Ginkel et al., 2012; Wolfensberger, 2012), as well as into competition in (honors) education (Allen et al., 2015; Cantador & Conde, 2010; Hughes et al., 2004; Issa et al., 2014; Kristensen et al., 2015; Sciarabba, 2012; Verhoeff, 1997). These studies have demonstrated the added value of both community building and competition for students' learning capacity. Because community and competition are integral, albeit separate, parts in honors education, it is imperative to examine whether and how they can be combined to create an optimal learning environment, particularly for students who require extra challenges to reach their full potential. Especially when we know that it can be challenging to provide equal opportunities to all students while simultaneously giving sufficient attention to the more talented students (Van Vijfeijken et al., 2024). Empirical research in

the context of honors education has been limited in quality, sample size, and context (Rinn & Plucker, 2019). However, research from other educational contexts has suggested that competition can be a critical component in creating a sense of community, although excessive competitiveness may negatively impact that community (Warner et al., 2012). A clearer understanding of the role and meaning of, and relationship between community and competition in honors education, can help us understand how to create optimal learning environments for the development of students' talents. Therefore, the objectives of this scoping review were (1) to assess and understand the body of knowledge on competition and community building in honors education, to clarify its repertory of concepts (Peters et al., 2020) and their interrelationships, (2) to identify gaps in the literature (Tricco et al., 2016), and (3) to provide a basis for further studies. In addition, the results could be used to further develop honors education.

The main research question of this scoping review was: "What is the role and meaning of community building and competition in honors education, and how do they relate to each other?" Consequently, we formulated sub-questions to address the three main areas of our research: competition, community building, and their interplay. Since a preliminary search showed limited articles on competition and the combination of competition and community building in honors education, we broadened the scope for these two sub-questions to education in general. This resulted in the following questions:

- What is the role and meaning of community building as a teaching approach in honors education?
- What is the role and meaning of competition as a teaching approach in (honors) education?
- How do community building and competition interact with each other in (honors) education?

## Methods

We conducted a scoping review in accordance with Arksey and O'Malley's (2005) five methodological steps: (1) identification of the research question, (2) identification of relevant studies, (3) study selection, (4) charting the data, and (5) collating, summarizing, and reporting the results. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018) was used as a guideline for reporting this scoping review.

## Protocol and Registration

We developed a robust scoping protocol based on the guidelines set out by Peters et al. (2022). The protocol was registered with the Open Science Framework (OSF) on 31 December 2022 (<https://osf.io/yxepg>). Small adjustments were made during the execution of the protocol. We describe these in the following paragraphs.

## **Eligibility Criteria**

Our review study focused on two key concepts in the context of honors education: community building and competition. We selected studies that examined a combination of either community building and honors education, community building and competition, or competition and (honors) education. For studies on competition, we included only those that focused on competition between students as an activity, not on competition between institutions. For studies on community building, we retained only those with a focus on relationships, and excluded studies that dealt with territoriality of geographical communities. Since the nature of (honors) education in primary school is significantly different from its counterpart in vocational education, we excluded studies conducted in primary school (up to age 12). When a selected abstract was a book review, the original book was consulted. When a selected abstract included several studies, the individual studies were considered for inclusion in the review. We were only interested in studies that contained at least a minimal description of the competition's outcomes. Studies that only provided a description of the competition without reporting outcomes were excluded, as they did not contribute to answering the research question. Furthermore, we only included studies published in either English or Dutch, because the authors read fluently in these languages and excluding other languages does not lead to systematic bias (Morrison et al., 2012; Nussbaumer-Streit et al., 2020). No restrictions were imposed regarding publication year. An overview of the eligibility criteria is provided in Supplementary Appendix A.

## **Information Sources**

Since the objectives of a scoping review are to assess and understand the body of knowledge in a specific area, to clarify its repertory of concepts (Peters et al., 2020), and to identify gaps in the literature (Tricco et al., 2016), we chose to examine a wide diversity of sources, not just peer-reviewed studies. Published (peer-reviewed) results were often only the significant results, which can generate bias (Franco et al., 2014). This justified us in looking beyond peer-reviewed studies and including scientific articles from journals and books, as well as dissertations, conference papers, and reports, and also articles from professional journals. No restrictions were imposed regarding research methods; both quantitative and qualitative studies were included. To identify potentially relevant studies, we searched two general databases—Scopus and Web of Science—and two field-specific databases provided by EBSCO: ERIC and PsycInfo. In order to achieve our intended broad scope as effectively as possible, colleagues/experts from our network—including those from the research group “Talent Development in Higher Education and Society” of the Hanze University of Applied Sciences (UAS)—were asked to provide relevant articles, magazines, and websites dedicated to community building and honors programs and/or competition in education. Although our scoping review protocol initially included an extra search in WorldCat and Google Scholar, we opted not to pursue this lead due to a significant overlap in articles and a limited discovery of additional relevant articles during our initial exploration.

## Search

Our search strategy was developed in collaboration with an information specialist of Hanze University of Applied Sciences. An initial audit trail of ERIC and PsycInfo through EBSCO, Google Scholar, and WorldCat was undertaken to identify studies on the topic. The text in the titles and abstracts of relevant studies and the index terms used to describe the studies were used to develop a full search strategy. All search terms relating to the concepts of community building and competition, and to the context of honors education, are listed in Supplementary Appendix B. The search in the Scopus, Web of Science, and EBSCO databases was split into four sub-searches of different combinations of concepts: (1) “competition–honors–education,” (2) “community–honors–education,” (3) “competition–community–education,” and (4) “competition–community–honors.” These combinations are referred to as “categories” in this scoping review. Supplementary Appendix C shows how the search was applied to Scopus.

## Selection of Sources of Evidence

Following the database search, all identified studies were collated and uploaded by the first author into RAYYAN, an online systematic review software (Ouzzani et al., 2016). This process was carried out for the four distinct sub-search strings. Subsequently, the duplicates were removed for each sub-search string. Following this, the results from the four sub-search strings were merged. In line with the assumption that study identification in a scoping review is an iterative process (Levac et al., 2010), additional potentially relevant studies from our own database and studies received from colleagues in our network in the period September to December 2022 were added to the selection.

The selection process consisted of two stages: (1) selection on abstracts, titles, and keywords, and (2) selection on full texts. To ensure the reliability of study selection in stage one, and to calibrate the eligibility criteria, the first two authors double-blind screened 90 studies (7.2%; in line with Mak & Thomas, 2022), based on the initial eligibility criteria (see Supplementary Appendix A). Conflicts were discussed until consensus was reached, and the eligibility criteria were refined accordingly. These adjustments are listed in Supplementary Appendix A. The first author then carried out the rest of the screening. During this stage, in case of doubt about whether a study met the eligibility criteria, the study was included. In cases of doubt about excluding a study, the second author was consulted as an extra check, ensuring accuracy and preventing studies from being mistakenly excluded. In stage two, the first 20 studies (around 10% in alphabetical order, starting with A) were assessed double-blind in detail by the first two authors against the refined eligibility criteria. According to the protocol, this met the target of 90% agreement, and screening of the remaining studies was further conducted by the first author. When in doubt, the second author was consulted. For example, studies that focused on the description of honors programs or competitions and not primary on their added value were excluded.

## **Data Charting Process and Data Items**

For each included study, we extracted, among other details, the authors' names, title, year of publication, and country of study (see Supplementary Appendix D for a complete list of extracted study details). For qualitative analysis of the study outcomes, we extracted key sentences relevant to the review questions. Key sentence extraction is indicative of the content of studies (Ruch et al., 2007). In our review, this referred to content related to the concepts of community building and/or competition. We looked for sentences that expressed the impact of these concepts on (honors) education. We used direct quotes from the studies as much as possible. The selected sentences came mainly from the results sections, discussions, or conclusions. Sometimes it was difficult to determine a key sentence or to comprehend a sentence on its own. In these cases, the sentences were slightly adapted. Sometimes several sentences were required to place the key sentence in the context of the article in question. For books, we selected key sentences per chapter, as long as they contributed to answering the research questions. To ensure reliability in the selecting of sentences, the first two authors conducted a pilot with six studies, covering a diverse range of scientific and non-scientific studies. An extensive description of the selection of key sentences was made and handed over to the third and fourth authors for an audit. All authors agreed with the selection method. These key sentences and all other extracted data were merged into Microsoft Excel.

## **Methodological Quality Appraisal**

Quality appraisal of included studies has been determined as optional according to the methodological guidelines for performing scoping assessments (Peters et al., 2020). In addition, the value of quality appraisals is regarded as being variable (Goldstein et al., 2017).

However, to gain insight into the diversity of our included studies, we categorized them into four groups based on their adherence to scientific article standards (Ecarnot et al., 2015): “not at all” (0), “partly” (1), and “completely adhering” (2 and 3), with the latter explicitly based on a theoretical framework. Next, we compared this classification with the studies that had been peer-reviewed according to the databases we used. This was not intended as a value judgement, but as a method to map the diversity of the studies we selected.

## **Synthesis of Results**

To help identify overarching themes, we synthesized the results of studies on two levels. First, based on their full texts, all our included studies were divided into four categories: (1) “competition–honors–education,” (2) “community–honors–education,” (3) “competition–community–education,” and (4) “competition–community–honors.” This was done to identify a potential knowledge gap. The second level was focused on key sentences. Coding of data to categories is regarded as a useful approach to clarify

concepts in scoping reviews (Peters et al., 2020), which was precisely the objective of our review. To answer our research questions, all key sentences were coded as matching with one (or more) of the keywords “community,” “competition,” and “honors.” In a next step, the key sentences were inductively divided into overarching themes. To determine whether key sentences formed a theme, a minimum requirement of 10 key sentences was set. For each theme, the key sentences served as a starting point to further analyze the studies within that respective theme.

## Results

### Selection of Sources of Evidence

A total of 1498 studies were found based on the four search strings, from which 278 duplicates were removed. Table 1 shows the number of results and deleted studies per sub-search string. After merging the remaining 1220 studies from the four sub-search strings, an additional 9 duplicates were removed. This resulted in 1211 studies selected from the databases. A further 42 studies, derived from other sources than the databases, were added. In total, 1253 studies remained from the first screening stage.

In the first stage of screening, based on the abstract, title, and keywords, out of the 1253 studies a total of 1075 studies were excluded. Four of these studies were book

**Table 1.** Studies Selected for Screening from Scopus, Web of Science, EBSCO,<sup>a</sup> and Other Sources.

Sub-search string	Combination of concepts	Studies found	Deleted duplicates	Selected for screening
1	“Competition–honors–education”	1161	222 <sup>b</sup>	939
2	“Community–honors–education”	190	30	160
3	“Competition–community–education”	142	26	116
4	“Competition–community–honors”	5	0	5
<b>Total</b>		<b>1498</b>	<b>278</b>	<b>1220</b>
Combination sub-search strings 1–4		1220	9	1211
Derived from other sources		42	–	<b>1253</b>

Note. Total number of studies selected for screening is in bold.

<sup>a</sup>EBSCO limited to ERIC and PsycInfo.

<sup>b</sup>Included two automatically deleted records during upload to RAYYAN.

reviews; for only one we decided to include the original book. This resulted in 179 potentially relevant full-text studies for the second stage of screening.

In the second stage of screening, based on the full text, out of 179 studies a total of 78 studies were excluded. Seven exclusion criteria were identified, with the most applicable being: “the study findings were not related to competition and/or community building” ( $n = 19$ ), “other definition/conceptualization of competition, community building and/or honors” ( $n = 14$ ), and “no full text available” ( $n = 12$ ). Figure 1 shows the entire list and provides a complete overview of the selection process. Ultimately, this resulted in the inclusion of 101 studies.

### Characteristics of Sources of Evidence

Based on the databases, the included studies were mainly classified as articles ( $n = 51$ ) and conference papers ( $n = 29$ ). Other sources were book sections ( $n = 8$ ), reports ( $n = 5$ ), books ( $n = 2$ ), reviews ( $n = 2$ ), a dissertation ( $n = 1$ ), eBook ( $n = 1$ ), note ( $n = 1$ ), and thesis ( $n = 1$ ). The included studies were conducted between 1980 and 2022. Figure 2 shows the number of selected studies per publication year, categorized by publication type. The figure also shows that, until 2009, the average number of

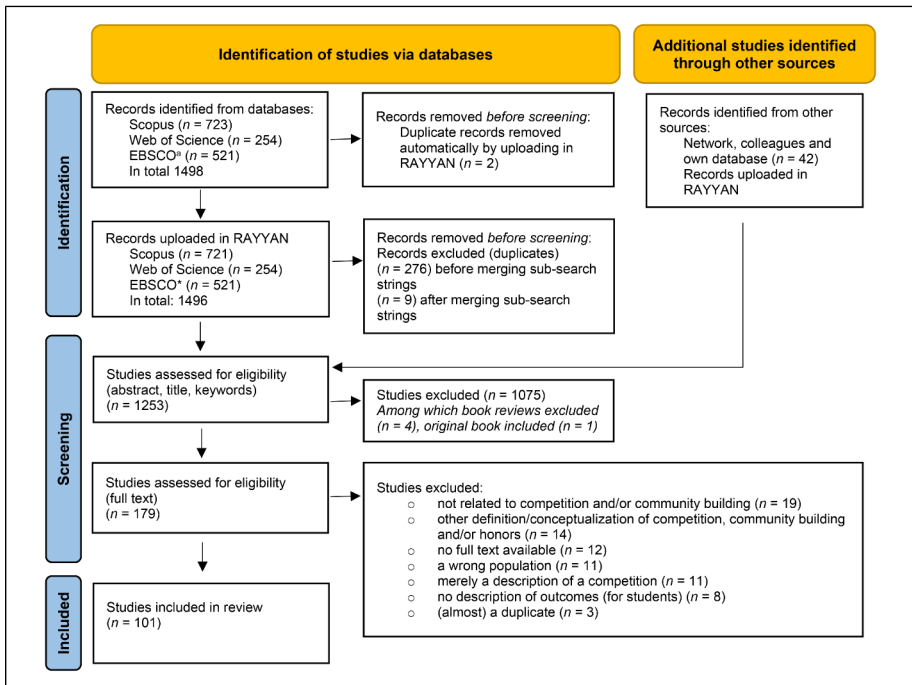
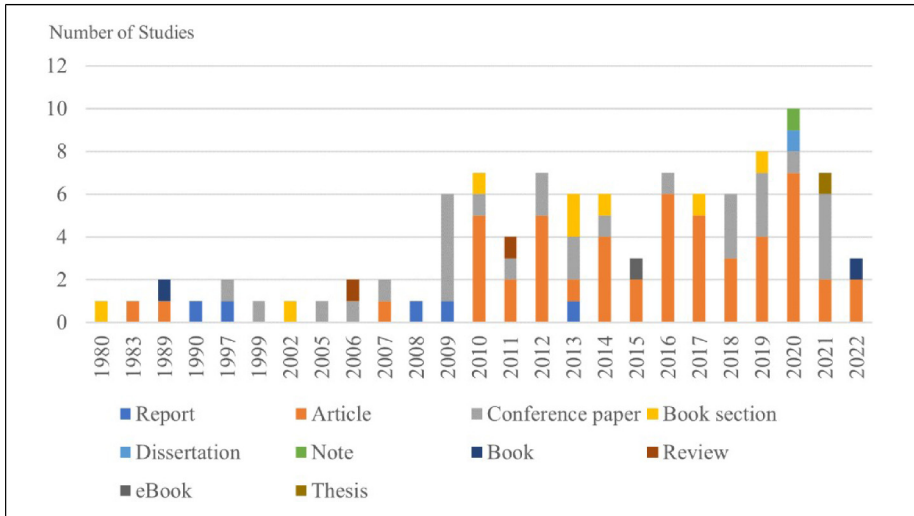


Figure 1. Identification Process of Included Studies.

Note. Based on: PRISMA 2020 flow diagram from Page et al. (2021). Superscript “a” denoted limited to ERIC & PsycInfo.



**Figure 2.** Number of Studies per Publication Year, Categorized by Publication Type. Note. Years of publications are not linear. Only years with publications are displayed.

studies we included was one or two per year. From 2009 onward, the number of publications we selected increased significantly. Specifically, of the 51 articles, 48 were published from 2010 onwards. The studies were conducted in 25 different countries; 3 of the studies did not specify the country. A total of 50 studies were conducted in the USA, 14 in the Netherlands of which 13 were published from 2010 onwards, and the remaining studies were distributed across various other countries (4 or less per country). Of the 14 studies conducted in the Netherlands, it is noteworthy that 11 were classified under category 2, focusing on community building in honors education, all within the context of higher education. In contrast, studies from the USA were more evenly distributed across the four categories, each representing different combinations of competition, community, and honors education.

Based on their full text, all included studies were compared to the results of the initial search strings, re-evaluating whether the initially assigned categories were still appropriate. This resulted in the adjusting of 16 studies, mainly shifting them from category 1 to category 3 or 4. Consequently, 29 studies were categorized as “competition–honors–education” (category 1), 34 as “community–honors–education” (category 2), 30 (including the two books) as “competition–community–education” (category 3), and 8 studies as “competition–community–honors” (category 4).

### Critical Appraisal Within Sources of Evidence

Critical appraisal within the sources of evidence was divided into two parts: peer review and audit of key sentences. The first part focused on gaining more insight

**Table 2.** Comparison Between Peer-Reviewed Studies and Categorization Based on Adherence to Scientific Article Standards.

Publication type	Peer-reviewed					Not peer-reviewed				
	0	1	2	3	Total	0	1	2	3	Total
Article (n = 51)	12	8	4	20	<b>44</b>	3		2	2	<b>7</b>
Book (n = 2)					<b>0</b>	1			1	<b>2</b>
Book section (n = 8)					<b>0</b>	5	2		1	<b>8</b>
Conference paper (n = 29)			1	1	<b>2</b>	10	12	3	2	<b>27</b>
Dissertation (n = 1)					<b>0</b>				1	<b>1</b>
eBook (n = 1)					<b>0</b>		1			<b>1</b>
Note (n = 1)					<b>0</b>	1				<b>1</b>
Report (n = 5)					<b>0</b>	2		1	2	<b>5</b>
Review (n = 2)				1	<b>1</b>	1				<b>1</b>
Thesis (n = 1)					<b>0</b>				1	<b>1</b>
<b>Total</b>	<b>12</b>	<b>8</b>	<b>5</b>	<b>22</b>	<b>47</b>	<b>23</b>	<b>15</b>	<b>6</b>	<b>10</b>	<b>54</b>

Note. 0 = not at all, 1 = partly, 2 = completely adhering to scientific article standards, 3 = completely adhering, studies based on a theoretical framework. Totals are in bold.

into the diversity and quality of the included studies, of which 60 out of 101 were empirical. According to the databases, 47 of our 101 included studies were peer-reviewed. Applying our classification “based on adherence to scientific article standards” (Ecarnot et al., 2015), we categorized 35 studies as “not at all” (0), 23 as “partly” (1), and, respectively, 11 and 32 studies as “completely adhering” (2 and 3). The latter group (n = 32) was explicitly based on a theoretical framework. A comparison between the peer-reviewed studies and our classification “adherence to scientific article standards,” as shown in Table 2, revealed to us the diversity of the studies we selected. Almost half of the peer-reviewed studies were categorized as “not at all” or “partly adhering to scientific article standards.” The second part of the critical appraisal within sources of evidence focused on key sentences. Our conducted audit of key sentences, as described in the Methods section, and the consensus reached between all the authors about the sentence selection procedure demonstrated that our key sentence selection process could be considered reliable.

### Results of Individual Sources of Evidence

We distilled 196 key sentences from the total set of included studies. These sentences emerged naturally from the included studies, encapsulating the core findings relevant to community and competition, and providing the depth of insights needed for a thorough synthesis, all while remaining grounded in the thematic framework. The key sentences were distributed as follows: 43 from “competition–honors–education” (category 1), 72 from “community–honors–education” (category 2), 66 from “competition–community–education” (category 3), and 15 from “competition–community–honors”

(category 4). This categorization helped us to understand the individual key sentences in their context. An example for each category is presented below. When words in the sentences below are written between square brackets, they were added for better understanding. The letter “M” after the page number signals that the sentence was slightly adapted. A complete overview of all the included studies, categorization, and distilled key sentences is provided in Supplementary Appendix E.

Category 1: “Even if your school does not have a program for the gifted, it is always possible to find a competition [elsewhere] that could stimulate a talented student” (Campbell & Walberg, 2010, p. 15).

Category 2: “Our research and the experiences of many others in the field of honors education underscore that honors communities enhance learning and interaction” (Van Ginkel et al., 2012, p. 208).

Category 3: “What is clear is that combining the value of competition with an interdisciplinary team composition yields great added value captured into one student experience” (Hill et al., 2020, p. 11 M).

Category 4: “The extra time together [spent in extracurricular activities such as contests] had a unifying effect among the class members” (Monaco & Goodner, 1990, p. 4).

## Synthesis of Results

To develop an understanding of the concepts of “community building” and “competition,” and their possible relationship in the context of honors education, we undertook a clustering of key sentences, as described in the Methods section. This clustering resulted in six themes. Four of these themes applied to *both* community building and competition, while two of the themes related to *either* community building or competition. The four “shared” themes were (1) Added Value, (2) Characteristics & Conditions, (3) Design & Development, and (4) Collaboration. The two remaining themes were (5) Community Building: Membership & the Role of Actors, and (6) Competition: Enhanced Learning & the Role of Actors. These themes together indeed contributed to a clearer understanding of the concepts of “community building in honors education” and “competition in (honors) education.” Below we elaborate on them one by one.

### **Added Value**

We applied the theme “Added Value” to both community building ( $n = 8$ ) and competition ( $n = 20$ ). As a theme, it reflected the additional benefits and positive impact that authors associated with fostering communities and participating in competitive activities, which enhanced students’ experiences and outcomes in the context of (honors) education.

The added value of community building in the context of honors education was identified in eight studies. The most frequently mentioned reasons by the authors

were: meeting like-minded people ( $n = 5$ ), fostering a sense of belonging ( $n = 4$ ), and encountering individuals whom you might not have met otherwise ( $n = 4$ ). Other reasons mentioned in the studies were: co-creation ( $n = 2$ ), shared experiences ( $n = 2$ ), and balance between individual and community ( $n = 1$ ). These factors were experienced as stimulating and motivating for students. Altogether, these studies indicated that being part of an honors community positively influenced learning and interaction. The studies demonstrated that it is evident honors communities hold significance for, and have impact on students. For example, Young et al. (2016) formulated this as follows: “A community made them feel that they were important, that their presence mattered” (p. 185).

The added value of competition in the context of (honors) education we identified was based on 20 studies, 10 of which examined honors education. The most frequently mentioned reasons by the authors were: improving performance ( $n = 19$ ), providing a challenge ( $n = 13$ ), arousing interest ( $n = 9$ ), and adding value to the curriculum ( $n = 9$ ). Other reasons mentioned in the studies included knowledge development in a particular professional sector ( $n = 6$ ), showcasing students’ abilities ( $n = 5$ ), and identifying talent ( $n = 5$ ). The studies illustrated that competition was utilized to improve performance, not only to enhance vocational skills but also social development. We concluded that a distinction can be made between the added value of competition from an educational perspective, such as in motivating students, and the added value from a professional perspective, such as in arousing interest and developing knowledge in a specific professional sector. Competition can be initiated from both perspectives. For instance, Hill et al. (2020) reflected both on the challenge and the knowledge development aspect: “Competition provides a pressure on competitors to continuously revisit initial designs to maximize efficiency. This is undoubtedly valuable as it promotes both creativity and knowledge within the engineering profession” (p. 10).

Among the 20 studies classified within the theme of “added value of competition,” a distinct subgroup focuses on competition in a group setting. Seven studies described the added value of this specific type of competitions, and, in extension of that, their contribution to (a form of) community building. In this subgroup of studies, the following aspects of community building were identified: fostering a sense of belonging ( $n = 4$ ), encountering individuals whom you might not have met otherwise ( $n = 3$ ), co-creation ( $n = 3$ ), shared experiences ( $n = 1$ ), and balance between individual and community ( $n = 1$ ). Encountering like-minded people was not mentioned, as this was not the primary purpose of these competitions. Competition can be used as a form of intervention to create a sense of community, as described by Rayment et al. (2022): “A series of microscopy competitions was a valuable opportunity for community building, which was otherwise likely to be limited because of restrictions in place due to the pandemic [COVID-19]” (p. 8).

### **Characteristics and Conditions**

We applied the theme “Characteristics & Conditions” to both community building ( $n = 6$ ) and competition ( $n = 16$ ). As a theme, it encompassed both the characteristics of

community building and competition, and the conditions that influence their existence within the context of (honors) education.

Our findings about characteristics and conditions of community building within the context of honors education were based on the findings of six studies. The majority of the authors noted that honors communities extend beyond the classroom or the honors program itself, potentially overlapping with other communities ( $n = 4$ ), suggesting a fluid nature. Additionally, half of the authors observed significant differences among honors communities ( $n = 3$ ); they differed in structure, size, duration, and in the intensity of the interactions or group identity. This observed fluidity and diversity made it challenging for us to generalize the nature of honors communities, but we did see common characteristics and conditions emerge. Five studies indicated that the characteristics of honors communities were embedded in the individuals who comprised them. These features were primarily shaped by a set of behaviors and attitudes emphasizing strong interpersonal relationships. Furthermore, two studies mentioned that participants in honors communities were often highly motivated and open-minded, while two studies highlighted the shared culture of excellence. Most authors emphasized the significance of a safe and supportive environment ( $n = 5$ ) that promotes exploration of the unknown, expressed by Van Ginkel et al. (2012) as follows: “They [honors communities] fulfill multiple social and emotional functions for participants, encouraging them to support each other and undertake new initiatives while providing a platform for discussion and collaboration on both academic and social fronts” (p. 208).

The characteristics and conditions of competition in the context of (honors) education that we extracted were based on 16 studies, 5 of which focused on honors education. These characteristics and conditions could be divided into four subthemes: focus on learning, (shared) goals, careful design/planning, and task type. The majority of authors indicated that successful competition in educational settings required a focus on learning rather than competition ( $n = 9$ ). It was also noted that having (shared) goals is motivating ( $n = 7$ ). A few authors mentioned that the type of task chosen for competitions played a critical role in their success ( $n = 4$ ). The students’ belief in their own abilities regarding the task, and reliance on others for the task, were examples of how the type of assignment seemed to play an essential role in the participants’ response to competitions. Half of the authors recommended careful design and/or planning ( $n = 8$ ). Choices they mentioned, for example, are whether to display leaderboards, which can either motivate or demotivate participants, and how to ensure a good balance between ability and challenge. Another choice authors brought up is whether to design group competitions. Regarding group competition, Nebel et al. (2016) observed that when participants competed group against group, their level of attention focused on the competition—and thus on the learning task—was lower due to the added social component. Overall, it seemed challenging for students to reach the intended educational goals within a competition framework. Kao (2011) expressed this as follows: “Competition is like a two-edged sword since it can lead to skill improvement, good work habits, and positive self-concept, but also avoidance of challenge, undue stress, jealousy, feelings of inadequacy, and a utilitarian learning style” (p. 31).

### **Design and Development**

We applied the theme “Design and Development” to both community building ( $n = 23$ ) and competition ( $n = 12$ ). As a theme, it encompassed aspects mentioned by the authors in relation to the design, stimulation, and development of community building and competition in the context of (honors) education.

The design and development of a community in the context of honors education was discussed in 23 studies. As a process, it could be divided into the starting, strengthening, and expanding of a community. Regarding the starting and strengthening of a community, the authors mentioned the following aspects: organizing (high-impact) projects, activities, or events ( $n = 18$ ); the importance of (intensive) contact between students, teachers, and/or professionals ( $n = 13$ ); utilizing ICT and social media tools ( $n = 5$ ); working with small groups ( $n = 4$ ); and paying attention to well-being ( $n = 2$ ). In relation to the expanding of a community, the aspects that were mentioned included expanding the community to parents and/or the professional sector ( $n = 8$ ), and transferring/combining honors projects ( $n = 2$ ). The studies showed that the organization of activities and projects played a central role in the building of a community, while at the same time clear attention was given to the quality of contact in the form of deeper and/or equal relationships and unique friendships. Most of the selected studies included more than one of the above-mentioned aspects; nine studies even contained three or more aspects. Van Eijl et al. (2013) expressed this as follows: “To stimulate an honors community, a combination of strategies is especially powerful [Om een honours community te stimuleren is vooral een combinatie van strategieën krachtig]” (p. 174).

The designing and developing of competition in the context of (honors) education was discussed in 12 studies, 5 of which focused on honors education. All 12 studies addressed the position and role of competition in education. Concerning its role, competition was mainly described as a model or tool for learning ( $n = 8$ ). Regarding its position, the majority of authors described competition as being embedded ( $n = 7$ ), or recommended its embedding ( $n = 1$ ) into the curriculum. In a smaller number of studies, competition was described as supplementary to the curriculum, that is, as an extracurricular activity ( $n = 4$ ). In two of these studies, the factor time was mentioned. It was observed that spending extra time together on extracurricular activities had a unifying effect, but this also proved difficult to organize, because these extracurriculars come on top of the curriculum. Furthermore, the majority of authors described competition with a focus on collaboration ( $n = 9$ ). A few authors described the importance of the type of competitions, namely as being held in a real-world environment ( $n = 2$ ), while a few authors addressed the importance of scaffolding by using competition in educational contexts ( $n = 2$ ). It should be noted that multiple studies ( $n = 7$ ) identified the above-mentioned aspects (i.e., “model/tool for learning,” “embedded in the curriculum,” and “collaboration”) as co-occurring. This was illustrated by Williams and Sheridan (2010) as follows: “Pupils and teachers need to develop an attitude that regards collaboration and competition as tools for learning in a long term perspective rather than focusing on specific competitive situations” (p. 342).

### **Collaboration**

We applied the theme “Collaboration” to both community building ( $n = 18$ ) and competition ( $n = 17$ ). Here, we used “Collaboration” as a collective term for concepts like “cooperation,” “teamwork,” and “team building” to improve readability. As a theme, it included a total of 19 studies, 16 of which addressed aspects of both community building and competition within the same study. The “Collaboration” theme explored what authors articulated about the role, function, and (dis)advantages of collaboration, cooperation, and/or team(work/building) in the context of (honors) education. Given the considerable overlap between competition and community building observed in these studies, we discuss them in tandem.

Four common topics could be identified in the studies: the impact of competition on collaboration ( $n = 11$ ), the impact of collaboration on social support between students and/or their well-being ( $n = 7$ ), the link between collaboration and the problem-solving of tasks ( $n = 6$ ), and the process leading from collaborative learning to individual learning ( $n = 3$ ). First of all, most authors mentioned that competition can (in a way) support collaboration and enhance teamwork and/or team skills. On the other hand, the authors of four studies also discussed how the desire to win can hinder collaboration, and/or pointed out the challenge of letting competition and collaboration co-occur. Five studies specifically focused on collaboration within competition in honors education. Regarding the enhanced team skills mentioned above, these studies showed that combining collaboration and competition also enhanced participating students’ problem-solving skills and critical/creative thinking when focusing on complicated ideas in competitions (Bailey, 2020) and/or challenges focused on complex (real-world) problems (Fairley et al., 2009; Legoh, 2019; Ofori-Boadu et al., 2019; Scager et al., 2014). Such experiences inspired and prepared students for their future work environments in a friendly/sportive competitive way.

Second, the studies showed that collaboration could have a positive influence on (perceived) peer support and/or student well-being, which aligns with the importance of fostering a safe and supportive environment for community building. Johnson and Johnson (1989) added that the better students were taught about collaboration, the greater the effect was on social support.

Third, the authors viewed working together on solving problems as a learning strategy to enhance problem-solving skills and/or ingrain it as a motivational strategy. This observation was mainly given in the context of innovation contests. Finally, authors mentioned a positive process leading from group learning to individual learning benefits. Legoh (2019) emphasized the importance of paying attention to both the group and the individual, stating: “During the national coaching for the Junior Science Odyssey competition one student was discovered to be excellent in mathematics but when he was a member of a team, his approach was not outstanding” (p. 10).

### **Membership and the Role of Actors**

We applied the theme “Membership & the Role of Actors” exclusively to studies that discussed community building ( $n = 22$ ), and not competition. As a theme, it provided

insight into the meaning of community membership and the connection this had to the actors' roles within the community.

Three common topics emerged from the studies: active participation/involvement ( $n = 22$ ), engaged membership ( $n = 14$ ), and reciprocity ( $n = 6$ ). First, all the authors described the active participation of actors within a community. Most authors described this in terms of being proactive, having productive interactions, and/or mentioned a high frequency of interactions. Some authors also noted a higher frequency of interactions among honors students compared to non-honors students. In some studies, the attention given to active participation could be deduced from activity descriptions calling for active involvement, for example, as integrated into the course structure. In two studies, the authors explicitly made active participation in the activity a requirement for promoting community building. Wabike (2021) emphasized the importance of active participation as follows: "Active participation [in an honors community] has a more significant impact on learning than mere membership" (p. 53).

Second, the topic "engaged membership" referred to how authors described the depth of involvement within a community. They used terms such as "committed," "meaningful interaction," "a community is greater than the combination of its individuals," "wanting to share," "connect curiously with each other," and "constant encouragement." Such engaged membership was expressed by Hartup (2020) as follows: "I believe authenticity is a key component to all relationships. Whether inside or outside of the classroom, being our true selves in our interactions with students leads to building rapport and may deepen students' sense of belonging" (p. 16).

Third, several authors mentioned aspects of reciprocity within communities. This involved not only a give-and-take dynamic between members, but also a deeper movement toward a self-reinforcing community facilitated by their members' active participation. Brinkel et al. (2015) expressed this as follows: "Ideally honors students showed an active attitude and took responsibility in organizing events as well, stimulating the concept of community building among themselves" (p. 106). It seemed that the more active the participation, the deeper the community members became involved, leading to a greater desire to contribute within the community. This complex process created a self-reinforcing movement toward more engaged membership.

### ***Enhanced Learning and the Role of Actors***

We applied the theme "Enhanced Learning & the Role of Actors" exclusively to studies that discussed competition ( $n = 32$ ), and not community building. Of these studies, 15 pertained to honors education, extracurricular competitions, and/or competitions offering scholarships for top-performing students, with no notable differences between these contexts. The remaining studies focused on regular education. As a theme, "Enhanced Learning & the Role of Actors" provided insight into the impact of competition on learning, engagement, and group composition.

First, all but three authors mentioned an impact of competition on learning ( $n = 29$ ). In the remaining three studies, learning was not addressed, and thus did not emerge. In the examined studies, learning involved both gaining technical skills ( $n = 20$ ) and soft skills

( $n = 16$ ). Technical skills and knowledge referred to the specific competencies needed for core job functions, while soft skills involved a variety of interpersonal and overall cognitive abilities. Soft skills included social skills, communication skills, critical thinking, problem-solving skills, teamwork skills, and/or 21st-century skills. Nearly half of the authors mentioned that competition impacts both types of skills, underscoring the diverse benefits of competitive environments for learning. Kerzmann and Werner (2012) expressed this as follows: Competition “elevated the level of education” (p. 9).

Second, more than half of the authors mentioned various forms of student engagement resulting from competition ( $n = 17$ ). These included increased motivation, more active engagement, active participation, and experiences of joy and enthusiasm. Bishop and Walters (2007) expressed this engagement as follows: “Competition created interest and encouraged potential lifetime commitments to conservation and learning” (p. 74). Nebel et al. (2016) showed that the higher the perceived challenge, the more engagement students experienced. However, it should be noted here that student characteristics, such as gender, can influence student engagement. For example, it was found that competition is not motivating for male students who lack motivation altogether (Czibor et al., 2014). Nor did it turn out to be motivating for female students who endorsed negative stereotypes about female talent and ability, and experienced a lower sense of belonging in male-dominate environments, regardless of their engagement level (Ladewig et al., 2020). Furthermore, a drawback associated with competition turned out to be that fear of failure can hinder participation (Ignatova et al., 2021).

Third, half of the authors addressed how group composition within competitions influenced learning ( $n = 16$ ). Bringing individuals with different backgrounds, perspectives, and skill sets together into a single group appeared to enhance the overall learning experience. However, research has shown that in a diverse group, there should be an emphasis on fostering a sense of community (Bernstein & Lysniak, 2017). Conversely, homogeneous groups may be inspired to interact more with individuals outside their own group (Hill et al., 2020). Therefore, we concluded that the composition of groups should be carefully considered, so that they align with the educational objectives of the competition and promote positive learning outcomes.

## Discussion

### Summary of Evidence

Our scoping review retrieved 101 studies addressing aspects of community building and/or competition in the context of (honors) education across 25 different countries, published between 1980 and 2022. Of these, half were conducted in the USA, and 14 were conducted in the Netherlands. Of all the included studies, 29 were categorized as competition—honors—education, 34 as community—honors—education, 30 as competition—community—education, and 8 as competition—community—honors. From the studies conducted in the Netherlands, 11 focused specifically on community building in honors education.

The objective of our scoping review was to understand the roles and meanings of community building and competition in honors education, and how they relate to each other. Our findings demonstrated that both community building and competition impact student learning, and that interaction between them can enhance this effect. By distilling key sentences and clustering them into related themes, we identified six overarching themes: (1) Added Value, (2) Characteristics & Conditions, (3) Design & Development, (4) Collaboration, (5) Membership & the Role of Actors, and (6) Enhanced Learning & the Role of Actors. It is noteworthy that the number of studies allocated to these themes varies considerably for both community and competition. However, the process of synthesizing the results of all included studies clarified the concepts of community building and competition and elucidated their mutual relationship in accordance with the three sub-questions of our scoping review, as detailed in the paragraphs below.

First, we answered the question of what the role and meaning of community building are as a teaching approach in honors education. The studies about community illustrated that honors communities can hold significance for and have an impact on students. The organizing of activities turns out to play a central role in building communities, promoting interaction within a supportive environment. Despite the fluid and diverse nature of honors communities, our results indicated that their characteristics are primarily embedded in the individuals who comprise them. The more active the participation, the deeper the involvement of the members becomes, leading to a greater desire to contribute within the community. This complex process requires reciprocity, creating a self-reinforcing movement toward more engaged membership.

Second, we answered the question of what the role and meaning of competition is as a teaching approach in (honors) education. Competition was found to enhance performance and develop vocational and social skills. Integrated into education, competition turns out to motivate students and stimulates their interest in professional domains. We concluded that, guided by a focus on learning and shared goals, as well as attention given to design/planning and task type, competition in education can enhance the overall educational experience. Moreover, our review yielded the result that in honors education, the combination of collaboration and competition further enhances problem-solving and critical thinking skills, as evidenced by (extracurricular) innovation contests. This effect can be strengthened by including various disciplines and/or skills in team compositions.

Lastly, we explored how community building and competition interact in (honors) education. Our scoping review indicates that community building supports students' talent development, but this is a complex process influenced by engaged membership, active participation, and reciprocity. While difficult to plan, interventions can influence this process. We ascertained that competition, as one of these interventions, can enhance a sense of community. When well-designed, competitions foster collaboration, teamwork, and skill enhancement, contributing to community development. Our findings also showed that collaboration within competitions can be used as a teaching strategy for community building and the development of mere membership into engaged membership. In addition, a strong community turns out to enhance

competition outcomes, especially when there is a shared goal. In a safe and supportive environment, students dare to explore the unknown, encouraging each other to push their boundaries and excel. It is in these environments that students flourish. However, our findings also indicated a literature gap, as only eight of our selected studies explored the combination of community, competition, and honors education. Moreover, these studies took different approaches and focused on various aspects of the interplay between community and competition. They did not provide sufficient insight into the relationship between community and competition in an honors context. Additionally, this scoping review contained limited empirical research; of the 101 included studies, 60 were empirical, and their quality was not consistently high.

## Limitations

This scoping review encompassed an extensive search for the concepts of community and competition over a longer period. However, our review does have limitations. First, although the review process was followed very precisely and met predefined quality criteria established in a published protocol (Kragten et al., 2022) (<https://osf.io/yxepg>), we made a few deviations from the initial protocol based on evolving insights, as described in the Methods section. In addition to these changes, we merged sub-questions to achieve a better understanding of the concepts and their interaction, which contributed to answering our main research question. We initially planned to follow the six methodological steps for conducting a scoping review, as described by Colquhoun et al. (2014). However, during the scoping process, we decided to omit the sixth step—an optional consultation stage that did not contribute to our scoping review—and instead followed the originally proposed five steps of Arksey and O'Malley (2005). By publishing our protocol and highlighting the changes we made, we aimed to make our scoping review as replicable as possible. However, we acknowledge that the iterative process of synthesizing results in this scoping review is more challenging to replicate. Nevertheless, our findings are illustrative for understanding the concepts of community and competition and their relationship, which was the objective of this scoping review.

Secondly, there is a possibility of undiscovered information. In this scoping review, we chose to work with key sentences. Extracting these key sentences provided us with an indication of the content of studies (Ruch et al., 2007). In our case, it also served as a method to manage the diversity of studies. We derived our themes from these key sentences, while further exploration of the themes was based on those studies from which the sentences were extracted. This approach entails that not all included studies were screened for all themes, which suggests that our coverage across the six topics may not be comprehensive. However, in our analysis of the included studies we observed overlap, indicating a level of saturation. So our approach of key sentence extraction does provide an indication of the extent to which the themes are relevant. In addition, this review was an extensive endeavor, our results were current until 2022, and we did not select for all languages, which may itself result in undiscovered information.

## Conclusions

In this scoping review, we sought to examine the role and meaning of community building and competition in honors education. Specifically, we were interested in how these concepts interact, and how they can be combined to create an optimal learning environment for talented students. Our 101 included studies highlighted the strengths of both community building and competition, in addition to the conditions needed to achieve these strengths in honors education. The eight studies focusing on this topic in our review did not sufficiently elucidate how these two elements may be combined in honors education, indicating a literature gap. This observation aligns with the extensive overview of European honors programs that was mapped out by Wolfensberger (2015). This overview showed that while competitions are part of honors education in several countries, the combination of community building and competition aspects was not explicitly mentioned within Wolfensberger's (2015) study, although it does occur in practice. In addition to this absence of the combination in the available studies, we recognize that our scoping review, although encompassing a diverse range of studies, included only 60 studies out of 101 that were empirical, with not all of them being of consistent high quality. This aligns with the limited empirical research about honors education that was identified by Rinn and Plucker (2019), and the under-researched effects of honors programs reported by Kool et al. (2017). For this reason, several articles in our scoping review contributed to the conceptualization of central concepts, but did not contain scientific research on learning effects, and therefore did not address the question what the impact on learning is. Consequently, further research on combining community building and competition in honors education, and their impact on learning outcomes, seems warranted. Understanding this relationship could enable educators to create new, enriching learning environments that support students' talent development. To fill this gap, we present the following suggestions.

## Combining Community, Competition, and Honors

Synthesizing the results of our scoping review provides guidance on how to create enriching learning environments, by combining the concepts of community building and competition. Our findings show that well-designed competitions foster collaboration and thus contribute to community building. The importance of paying attention to the design of cooperation and the types of tasks in competitions, in order to properly challenge students and contribute to community building, which emerged in this scoping review, aligns with recent research on honors education completed by Haenen et al. (2024). They identified task complexity in relation to group dynamics as crucial elements for designing honors education. Improving performance, which is the added value of competition, can be enhanced by a safe and supporting community environment. Furthermore, our results indicate that building honors communities requires engaged membership, or, as stated by Stanlick (2006): "There is more to community membership than simple presence" (p. 75). This complex process can be

influenced by interventions like competition, thereby enhancing a sense of community. An interesting next step in designing optimal learning environments can be found in the suggestion of Evripidou et al. (2020) to use criteria for assessing the learning outcomes of educational competitions. However, scientific research on social phenomena like the formation of communities is considered challenging, since it has proven difficult to compare communities with each other (Chankseliani & Relly, 2016). This may explain the differences found in our selected studies within the theme of Added Value: 20 studies about competition and only eight about community.

## **Societal Discourse**

Currently, several developments are taking place in honors education. First, there are growing questions about whether allocating funds and time to honors programs is justified, given the challenges in measuring their effects (Kool et al., 2017; Zubizaretta, 2023). Second, a shift seems to be taking place from excellence to talent development (De Boer et al., 2023). Talent development, it has been argued, should be imperative for all, with appropriate challenges set for each individual (Peters, 2022). In connection to this, it has been pointed out that in order to achieve maximum development of human potential, attention must be given not only to individual development but also to the social context (Dai, 2020). Third, the concept “competition” appears to be somewhat controversial in honors education. Addressing the question “How to evoke excellence?”, De Jong et al. (2021) positioned competition as an opponent of inclusivity in their Framework for Analyzing Conceptions of Excellence (FACE). Considering the findings of our study, it can be argued that focusing on collaboration within competitions contributes to community building. It follows that the embedding of competition as an activity into honors curricula should be reconsidered. This highlights an opportunity to further develop Dutch honors education. By embedding community-oriented competitive tasks, honors programs could create a richer environment that supports students’ growth both individually and collectively. Approached this way, competition is not the opposite of inclusivity, but can be regarded as a pedagogical approach for talent development (Evripidou et al., 2020) and boosting students’ career choices (Smith et al., 2021). Honors education can and should be more inclusive (Zubizaretta, 2023). This shift in the approach to inclusivity reflects a broader transition in Dutch honors education; from an exclusive focus on excellence to prioritization of motivation (De Boer et al., 2023).

If education aspires to talent development for every individual, aligning with inclusive education principles, then attention should also be given to students who are ambitious, willing to go beyond the regular curriculum, and require appropriate challenges. We hope this scoping review helps practitioners to better attract and meet the needs of this student population. By emphasizing the benefits of both community building and competition, our review can serve as a stepping stone for educators to create new learning environments for students who require additional challenges to fully develop their potential.


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## Supplemental material

Supplemental material for this article is available online.

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