frontiers | Frontiers in Education

TYPE Original Research
PUBLISHED 07 December 2023
DOI 10.3389/feduc.2023.1111981

OPEN ACCESS

EDITED BY
Luciana Venâncio,
Federal University of Ceara, Brazil

REVIEWED BY
Tobias Kärner,
University of Hohenheim, Germany
Michael Jüttler,
Zurich University of Applied Sciences, Switzerland

*CORRESPONDENCE
Martina B. Ott
✉ martina.ott@ph-vorarlberg.ac.at

RECEIVED 30 November 2022
ACCEPTED 20 November 2023
PUBLISHED 07 December 2023

CITATION
Ott MB, Meusburger KM and Quenzel G (2023) Adolescents' participation opportunities and student well-being in school.
Front. Educ. 8:1111981.
doi: 10.3389/feduc.2023.1111981

Adolescents' participation opportunities and student well-being in school

Martina B. Ott*, Katharina M. Meusburger and Gudrun Quenzel

Institute of Sociology of Education, University Colleges of Teacher Education Vorarlberg, Feldkirch, Austria

At school, it is important that young people are in an environment in which they feel well and have a positive attitude. To increase the positive attitude toward school as an indicator of the well-being of students, it is essential to know which factors influence it. Recent studies have indicated that participation opportunities at school might have a positive impact on the well-being of students. However, participation encompasses a wide range of different actions, decision-making processes, and forms of communication. This article explores different aspects of student participation—democratic school culture, active co-design, pseudo-participation, and the co-determination of students in the classroom and in teaching—and its relationships to student well-being. This article has an exploratory design and uses representative secondary data (n = 1,526) of students in the 8th to 10th grades in Vorarlberg (Austria) for a multilevel analysis to examine different aspects of student participation that promote or reduce student well-being. The results show that a democratic school culture has the strongest correlation with student well-being. Students' co-determination and active co-design in the classroom and in teaching are also positively related to student well-being. Pseudo-participation has a weak negative effect on student well-being. The results suggest that in order to promote student well-being, it is important to increase the democratic culture of schools, to involve students in as many decisions as possible, and to let them have a real say in the class.

KEYWORDS

student well-being, positive attitude toward school, student participation, democratic school culture, decision-making in schools, pseudo-participation, student codetermination

1 Introduction

In 1989, the Convention on the Rights of the Child (CRC, 1990) resolved the consistent involvement of children and adolescents in decisions in all areas relevant to them in Article 12. It enshrines the right of children to freely express their opinions on matters that affect them and that their will should be taken into account wherever possible. Since school is a central area of children's and young people's lives, they can and should participate actively there. For example, students could be involved in extracurricular events (e.g., class trips and school festivals) and upcoming changes to the school buildings and facilities (e.g., design of the playground and library equipment). It is also conceivable, however, that students could be involved in the main business of the school—lessons—for example, in the choice of lesson topics and the way in which they are taught.

The opportunity to participate seems to have various positive effects on students (Mager and Nowak, 2012; Griebler et al., 2017; Jungkunz, 2023). Whether students are able to participate in

their schools is therefore a central characteristic of the quality of schools (Honneth, 2012; Simon and Schmitz, 2021). Overall, participation in schools is considered to have "almost mythical power" (Biedermann and Oser, 2020, p. 28). Thus, the participation of students is said to increase their independence and self-efficacy and result in happiness and a positive attitude toward school (Jungkunz, 2023; Quenzel and Ott, 2023). Through active participation in schools and lessons, students can experience basic democratic skills; they learn to articulate their own concerns and interests and to be taken seriously with them (Soler-i-Martí, 2015; Brügelmann, 2019; Quenzel et al., 2023). The political self-efficacy experienced in this way strengthens the concrete sense of belonging to the (experienced) community and the abstract confidence in the legitimacy of democratic decision-making processes (Bacher and Weber, 2008; Johnson, 2015).

Based on data on participation opportunities at schools in Austria, this paper attempts to determine the connection between these opportunities and positive attitudes toward school as an indicator of student well-being. However, the findings can also be applied to other school systems because the level of participation and the areas in which students have the opportunity to participate vary considerably from school to school in Austria. At some schools, the teaching of basic democratic attitudes, such as that everyone has the same rights and that there can be different opinions on topics, is very important. Some schools inform their students about all important decisions and let them have a say in the process, while others actively involve their students in the classroom. However, there are also schools that ask students for their opinions but without the serious intention of taking them into account.

Although some studies suggest a correlation between participation and student well-being, it remains unclear how different participation practices are related to student well-being. This is because participation as a concept encompasses a wide range of practices and can be used both generally to refer to the access of certain groups of people to relevant goods (e.g., participation of women in the labor market and of children in school) and as a synonym for various forms of co-determination or co-design. Due to this unsubstantiated theoretical and data basis, this article is exploratory in design. This article uses participation as a synonym for co-determination and co-design and explores the following question: Which forms of participation opportunities are positively related to student well-being?

Using secondary data analysis collected in an Austrian federal state, the article aims to link participation in different manifestations, from democratic school culture, pseudo-participation as well as active co-design in decision-making processes, and concrete opportunities for participation in class with student well-being. Where do clear correlations emerge, and what can be derived from them for schools that want to promote participation and well-being?

2 Participation in school

Schools play a significant role in the socialization process of young people (Wentzel, 2015; Hurrelmann and Quenzel, 2018). It has the educational mandate to contribute to the reproduction and innovation of society as well as to the personality development of students (Fend, 2009). In pluralistic and democratic societies, stable personality development is rarely achieved without participation, as it holds emancipatory value for the strengthening of personality through the experience of autonomy and self-determination (Moser, 2010; Reisenauer, 2020). Accordingly, it is important to expand opportunities for participation in schools (de Róiste et al., 2012; Feu i Gelis et al., 2021; Simon and Schmitz, 2021; Anderson et al., 2022; Graham et al., 2022).

The term "participation" is used for a wide range of practices. According to Müller-Kuhn and Häbig (2022), it is an "umbrella term." For example, participation is synonymous with co-determination, co-design, or involvement (student voice, having a say, and student involvement; Müller-Kuhn et al., 2021; Müller-Kuhn and Häbig, 2022). However, the term participation is also used for involvement in processes, such as planning and decision-making processes (Müller-Kuhn and Häbig, 2022). In this article, we also see school participation as an umbrella term in which different forms become apparent. We do not see participation as a synonym for co-design or co-determination but as forms of school participation. By active co-design, we mean involvement in decision-making processes in the school context, whereas co-determination stands for shaping opportunities in the classroom. Moreover, the term participation is closely linked to concepts such as democracy, self-determination, emancipation, integration, justice, and inclusion (Reisenauer, 2020). All these concepts have in common that they are central concerns of a democratic society and thus also represent important pedagogical content for schools.

Reichenbach (2007), on the other hand, pointed out that participation in schools is associated with difficulties. He stated that more (note: participation) is not always better. Three phenomena in particular can undermine participatory action: first, there is occasionally a group of students who do not want to participate and are therefore not included in the process; second, although attempts are made to flatten hierarchies, individuals who have more to say than others and thus have a greater influence on everyone's opinion often emerge; and third, pseudo-participation is often practiced under the label of participation. Therefore, it is important not only to focus on the "more" participation of pupils but also to consider different aspects of participation in school.

To comprehend the range of participation possibilities in everyday school life, it is important to make a rough classification of attitudes toward participation, forms, and opportunities. However, such a generally accepted classification is not yet available. Therefore, this paper tries to divide school participation into three aspects: 1. a general attitude toward the teaching of fundamental values such as democracy, self-determination, emancipation, integration, justice, or inclusion (democratic school culture); 2. participation in planning or decision-making processes or will-forming processes (shared decision-making processes); and 3. concrete forms of co-determination or co-involvement in the classroom and in teaching (students' co-determination in class).

2.1 Democratic school culture

Democratic school culture can be used to identify and illustrate democratic and associated participatory elements in the everyday school lives of young people (Diedrich, 2008; Derecik et al., 2018; Rinnooy Kan et al., 2023). Schools are hierarchically structured institutions in which students can participate only if this is permitted and positively supported by school administrators and teachers.

However, conveying democratic values is part of the educational mission of schools (SchUG, 2023, §58 e; f). The extent of a democratic school culture describes the extent to which the central principles of a modern democracy are communicated and lived in schools, such as fairness and tolerance, or the majority principle and the protection of minorities in voting. To survey democratic school culture in quantitative studies, a scale for recording the degree of democratization of schools (Diedrich, 2008) was developed in a German study based on the IEA Civic Education Study (Schulz et al., 2016, 2018).

2.2 Shared decision-making process

Another aspect of student participation is the extent of student involvement in decision-making. A popular way of representing the different forms of participation is through level or ladder models. Hart (1992), for example, listed different levels of participation by children and adolescents and organized them on a ladder with eight steps. Hart (1992) classified the first three levels as activities that did not constitute actual participation. They represent non-involvement as well as fake participation (i.e., pseudo-participation). For example, at Level 1, students are externally directed; they are unable to make decisions about the form of work or the results of a project. In the second level, too, students do not participate; they are used for decoration. Although they participate, students do not know exactly why they are doing it or what it is all about. At Level 3, students participate only in appearance; they can decide whether to participate, but their voices do not really count. Regarding Level 4, Hart (1992) spoke of participation, for example, by informing students about upcoming decisions and processes. However, actual co-determination or co-design is not depicted until Level 5, for example, when students are informed and have a say or—as the highest level—when they find their own solutions and can also implement them. The separation of the different levels of participation makes sense analytically, but in decision-making practice, the levels often occur simultaneously (Wetzelhütter and Bacher, 2015). Moreover, Hart (2008) suggested that the top rung of the ladder is not necessarily the best form of participation. Rather, this ladder serves to represent an assessment of the extent of student participation "allowed" by adults or institutions.

2.3 Student co-determination in class

Adolescents can co-determine in different areas of everyday school life. Empirically, these areas are often quantitatively operationalized in terms of places or topics (e.g., class trip destinations, lesson topics, or the choice of where to sit) on which they can participate. In the classroom context, for example, this often occurs in the choice of seating arrangements or class trip destinations (Meusburger, 2023). Less frequently, co-determination takes place directly in the lessons, for example, in the choice of lesson topics or homework. However, if we look more broadly at instructional designs that allow students more freedom of choice, aspects of participation can be identified indirectly. For example, Hauk and Gröschner (2022), in their systematic review, dealt with the effects of learner-controlled instruction and showed that this is positively related to, for example, motivation.

The Austrian school system offers a wide range of participation opportunities. Pupils have the opportunity to participate in committees, for example, on a school community committee or in offices as class or school representatives. Moreover, the Austrian School and Education Act also provides for the participation of pupils in lessons through elected representatives (SchUG, 2023, §58 e; f). This means that representatives can also directly co-determine in lessons. However, Austrian young people report that this rarely occurs (Meusburger, 2023).

3 The concept of student well-being

How students feel about their school, whether they enjoy going there, and whether they are satisfied with it in the long term are key elements of student well-being (Schwinger et al., 2015; Hascher et al., 2018; Schürer et al., 2021). In older studies on student well-being, this was often constructed one-dimensionally. Commonly, questions such as "How much do you like going to school?" were used as operationalizations of student well-being. More recent studies understand student well-being as a multidimensional construct (Nobel et al., 2008; Gutman and Vorhaus, 2012; Roffey, 2012; Soutter et al., 2014; Borgonovi and Pál, 2016; Renshaw and Chenier, 2019) and, depending on the focus, include components such as enjoyment and satisfaction, as well as physical and mental health (König et al., 2011; Soutter et al., 2014; BMBWF, 2015; McLellan and Steward, 2015; OECD, 2017).

Hascher (2004) summarized the different considerations and proposed defining student well-being as an emotional state in which positive emotions and cognitions about school are present and dominate over negative emotions and cognitions. She presented a sixcomponent model (Hascher, 2004, 2010, 2012) in which positive attitudes toward school play a central role in student well-being:

1 Positive attitudes and emotions toward school in general
2 Enjoyment in school
3 Positive academic self-concept
4 Absence of worries about school
5 Absence of physical complaints in school
6 Absence of social problems in school

The model of Hascher's (2004) consists of three positive and three negative emotions and cognitions toward school. While we follow this model, student well-being is not represented in its multidimensionality in the dataset used here; we focus on the positive attitudes of students toward their schools and thus capture an essential dimension of student well-being. Unfortunately, the available secondary data do not allow us to operationalize the component of positive attitudes and emotions toward school in the form originally envisioned by Hascher (2004, 2010, 2012). Therefore, we follow Schwinger et al. (2015) in operationalizing well-being as affective school well-being. By this, they refer to positive and negative feelings and attitudes (e.g., happiness, satisfaction, or anxiety) toward school.

4 Determinants of student well-being and the role of participation

Whether students feel comfortable at school has become a key indicator of successful teaching (Hascher and Hagenauer, 2018), a cooperative school climate conducive to learning (OECD, 2017), and

a factor influencing the further success of students' educational careers (Bücker et al., 2018; Wirthwein et al., 2018). Thus, it should be of common interest to make a school a place where students like to be and to have a positive attitude toward it. However, the findings suggest that the pleasure of going to school tends to decline the longer children and young people attend school. At the end of primary school, 37 percent of Austrian students are very happy to go to school, while only 17 percent report a very high level of happiness at the end of secondary school (Mayrhofer et al., 2019). To maintain and promote a positive attitude toward school, it is important to know what this attitude is linked to.

The level of student well-being is related to the biological and psychological dispositions of individual students (Liu et al., 2021; Wilson and Spencer, 2022). Although the relationship between health and gender is well established, a range of studies have found little evidence of a relationship between gender and student well-being (Løhre et al., 2010; Kröske, 2020; Ott, 2020). In contrast, other studies have suggested differences between female and male adolescents in terms of their well-being (Tomyn and Cummins, 2011; Palsdottir et al., 2012; Mayrhofer et al., 2019). Consequently, the findings on gender-specific student well-being are ambiguous (Hülshoff, 2020).

The connection between the happiness of school attendance and family educational background shows a discontinuous course (Mayrhofer et al., 2019): students whose parents have a tertiary education more often report that they like going to school. However, well-being does not increase continuously up to this point because the well-being of students from educationally disadvantaged homes hardly differs from that of young people whose parents have completed vocational training or general university entrance qualifications. In addition, there are hardly any empirical findings in Austria that can prove a correlation between the socioeconomic background of students and their well-being at school. It is therefore unclear whether there is a connection here and, if so, how it is structured.

There is also a lack of research on whether there is a connection between the language spoken and the well-being of students in Austria. The language spoken is often used as an indication of a migration background. However, it is clear that there is a correlation between migration background and student well-being (Mayrhofer et al., 2019). This indicates that about 20 percent of students with a migration background in the 8th grade state that they like going to school very much. In comparison, about 16 percent of students without a migration background do so. In addition, student well-being depends on various social factors, such as teachers' behavior (Løhre et al., 2010; Ott, 2020), the culture of social interaction among students at school (Lester and Cross, 2015; Aldridge et al., 2016; Aldridge and McChesney, 2018; Moore et al., 2018; Varela et al., 2019), and the relationship between teachers and students (Van Petegem et al., 2008; Poulou, 2020).

As teachers' behavior, the social interaction of students, and the relationship between teachers and students are also related to the available opportunities for participation at school (Reinhardt, 2016; Sykas and Peonidis, 2022; Jungkunz, 2023), and participation has a positive effect on self-efficacy and sense of belonging (Bacher and Weber, 2008; Johnson, 2015), it is reasonable to conclude that participation, student well-being, and a positive attitude toward school are also connected. Surprisingly, however, no theoretical models have been found that directly link student well-being to student participation. Indications that participation may be relevant for (health) well-being can be concluded from explanatory models in psychology. For example, the subarea of *autonomy* of self-determination theory by Ryan and Deci (2000) is also used to explain well-being.

In addition to these theoretical assumptions, some empirical findings suggest a connection between student well-being as well as a positive attitude toward school and participation (for example, Helwig and McNeil, 2010; Smith et al., 2010; Hammerin et al., 2018; Graham et al., 2022). Quantitative studies on the relationship between participation and well-being, however, are rare. Additionally, participation in school includes a wide range of possible actions, ranging from talking to student representatives to actively involving as many students as possible in lessons and in all matters relevant to the school. Studies on whether these various forms of participation also have different impacts on well-being are still outstanding. Since participation also demands time and commitment, for example, when differences of opinion are openly discussed and solutions have to be worked out, it seems possible that participation could actually reduce student well-being. In addition, the range of operationalizations of well-being is also quite broad. Studies that focus on health, satisfaction, motivation, or attitudes are often located in the area of well-being. For example, Griebler et al.'s (2017) systematic review indicated that several studies showed a positive effect of student participation on student satisfaction.

Previous sparse empirical findings on student participation and student well-being will be categorized into the three dimensions of participation described above—democratic school culture, shared decision-making process, and students' co-determination in class. Hypotheses will be deduced from these findings.

4.1 Democratic school culture

Graham et al. (2022) provided evidence of correlations between well-being and certain elements of a democratic school culture—in this case, *influence* and *working together*. With *influence*, students' views on the ability to effect change are illustrated, and *working together* shows intergenerational collaboration. In both areas, the researchers were able to show significant correlations with well-being at school. In addition, de Róiste et al. (2012) proved for Irish students that participation in the design of school rules and the representation of one's own views at school are positively related to the well-being of students. For Chilean students, González et al. (2021) analyzed the effect of *rules of coexistence* and *listen students* as indicators of student participation and democratic school culture on students' subjective well-being (life satisfaction). They were able to show that these two forms of participation are positively related to well-being and that *listen students* also has a direct positive effect on well-being. Based on these findings, the following hypothesis is proposed for this article:

> H_1: When students report a democratic school culture at their school, they tend to have higher student well-being.

4.2 Shared decision-making process

There are no empirically reliable studies on the question of how student well-being is specifically related to the first participation steps on the Hart ladder: pseudo-participation. However, Meyer-Ahrens et al. (2010) pointed out indications of a relationship between

pseudo-participation and motivation, interest, and enjoyment in their study. Here, they investigated how groups of students with and without apparent opportunities for co-determination differ from each other in biology classes. Interestingly, students who had apparent opportunities for co-determination (i.e., they felt that they were making decisions, but these decisions were rarely implemented) rated their motivation, interest, and enjoyment higher. However, it must be mentioned here that students might not recognize pseudo-participation as such; therefore, the positive effects on motivation are more likely to be attributed to the participation aspect. However, Gamsjäger and Wetzelhütter (2020) examined how Hart's (1992) levels of pseudo-participation were related to the relationship to school. They were able to show that the relationship to school and pseudo-participation correlated negatively. Now, a positive school relationship is not the same as school well-being, but it is a related construct. However, if adolescents are only able to participate in an apparent way and are aware of this, their attitudes toward school may decline and, by extension, so may their student well-being. Therefore, the following hypothesis is proposed for this article:

> H_2: If students are only apparently included in decision-making, then this is negatively correlated with their student well-being.

If the participation of students in decision-making processes—in the sense of Levels 5–8 of the Hart ladder—is focused, some empirical findings are identified. In the study of Graham et al.'s (2022), for example, students were asked whether they had the opportunity to vote (having a choice) and whether they could participate (having a say). These forms of participation can be categorized at different intensity levels on the participation ladder and are both positively related to student well-being. Hammerin et al.'s (2018) qualitative study examined the ability of Swedish students' involvement in class activities to be related to their feelings of stress. They made no explicit reference to the Hart ladder but divided the forms of participation similarly, according to pure information transfer to students up to student-centered instructional settings in which students can make decisions and control their own learning processes. The study showed that the intensity of participation was related to students' experiences of stress, but the direction was unclear. Although students reported that they felt better when they could actively participate in the classroom, they also said that they felt more stressed because they had to make decisions themselves. Additionally, Kostenius and Nyström (2020) showed in their qualitative survey that active participation in school—similar to active co-design as the top rung of Hart's participation ladder—contributes to greater health well-being. Overall, the results suggest that adolescents who are involved in and able to shape decision-making processes in their schools and classes may feel better. Accordingly, the hypothesis for this article is as follows:

> H_3: When students are able to actively co-design decision-making processes, this is positively related to their student well-being.

4.3 Student co-determination in class

Students have a wide range of opportunities to participate in decision-making in the class context. In particular, students often have a say in the organization of extracurricular events, such as class trip destinations or project days and weeks (Meusburger, 2023). De Róiste et al. (2012) investigated how such participation opportunities are related to student well-being. They were able to show that students perceived their schools more positively when they were involved in organizing class events. Graham et al. (2022) also demonstrated a positive correlation between co-determination and school activities (voices about activities). However, students are less involved in the main business of school—lesson and teaching—even though they are interested in participating in these activities (Meusburger, 2023). In the study of Graham et al.'s (2022), students were asked whether they had a say in schooling. The correlation of this question with student well-being showed a positive association. This link is stronger than the link between participation in school activities and student well-being. Smith et al. (2010) also indicated that experiencing autonomy in the classroom also leads to higher positive attitudes toward school among American and Japanese adolescents. Therefore, it appears that opportunities for co-determination in the classroom context and in teaching could be a central factor in the well-being of young people. Therefore, the following hypothesis is deduced:

> H_4: When students have the opportunity to co-determine in class, they have higher student well-being.

5 Data and methods

To test these hypotheses, secondary data from a representative survey of 8th, 9th, and 10th grade students in Vorarlberg (Austria) will be used. The students are approximately 14–17 years old and are either at the end of lower secondary school or at the beginning of upper secondary school. First, the data basis is described. Subsequently, the analysis variables are illustrated. Finally, the statistical data analysis is explained.

5.1 Data basis

For the secondary data analysis, data from the international project "Education and Participation" (Quenzel et al., 2023) pertaining to Austria were used. In the course of this study, the students' school participation opportunities were surveyed by a representative online survey between March and June 2020 and administered by the class teachers. This study was not primarily designed to explain student well-being. However, the data are still used to answer the questions due to their high quality. The population represents all students in the 8th, 9th, and 10th grades of all school types, except general special education. The population data were provided by the Federal Ministry of Education, Science and Research and the Federal Ministry of Agriculture, Regions, and Tourism, as well as by Statistics Austria. The population comprises 613 classes and 11,834 young people throughout Vorarlberg. A representative sample was drawn from all the schools.

A combined proportionally stratified random sample was drawn from all schools by the Vorarlberg State Office for Statistics. The distribution was made according to the characteristic strata of school type and gender. The gross sample comprised 123 classes, with 2,574 pupils. Despite COVID-19-related school closures in spring 2020, the response rate was just under 65 percent. All

students in a class from the sample were asked to participate in the survey. Data cleaning was conducted. A total of 210 cases were deleted from the data set; for instance, when students were under 14 years old, the completion time of the questionnaire was less than 6 min, there were more than 85 missing values, all sociodemographic information was missing, no questions on participation were answered, or extremely one-sided and implausible response behavior was recognizable for several questions (Jungkunz et al., 2023). The realized sample comprised 1,526 adolescents from 92 classes in Vorarlberg (Austria). The data were weighted according to the structural characteristics of school type and gender. The weighted data represented 8th to 10th grade students of all school types in Vorarlberg (with the exception of general special schools) for the school year 2019/2020 (see Table 1).

With a population of 11,834 students in the corresponding age group, the realized sample is comparatively large, which partly compensates for possible cluster effects of the sample design. In addition, analysis strategies were chosen in which possible cluster effects could be considered. The average proportion of missing values is 2.6 percent. The highest proportion, 4.9 percent, is found in the statement to be evaluated: "We have a voice, but do not know exactly what about." The MCAR test, according to Little (1988), indicates a missing at random (MAR) mechanism [$\chi^2(1{,}494) = 1{,}866.7; p \leq 0.001$]. Specifically, it shows that missing values for the participation questions are associated with a lower socioeconomic status or an increase in other languages primarily spoken at home. Consequently, the missing data were replaced by multiple imputations in SPSS for adequate treatment of the missing values. For imputation, following Royston (2004), five estimators per missing value were calculated All variables included in the model were used to estimate the missing values (recommended by Collins et al., 2001; Böwing-Schmalenbrock and Jurczok, 2011), because the missing values are not independent of the control variables. Therefore, 1,526 (47.7% male) cases are included in the analyses.

5.2 Variables for analysis

Five scales are used for the following analyses. A confirmatory factor analysis was conducted in AMOS to examine the structure of the scales student well-being, democratic school culture, pseudo-participation, active co-design, and co-determination class. The student well-being scale consists of three items: democratic school culture includes seven items, pseudo-participation contains two variables, and active co-design and co-determination classes are formed by four items in each case.

First, the model was specified with five factors. The model fit indices indicate that the model fits the data adequately: $\chi^2 = 961.101$; df = 156; $p < 0.001$; CFI = 0.94; NFI = 0.92; IFI = 0.94; TLI = 0.92; RMSEA = 0.06 (90% CI [0.055, 0.061]). These results indicate that the model has a sufficient fit with the data. RMSEA should actually be below 0.06; however, Kenny et al. (2015) cautioned that in simple models, such as confirmatory factor analysis in AMOS, this indicator can be problematic. The factor loadings of the items are presented in Table 2.

The scales were created using the mean values of items that together represent a content dimension (e.g., student well-being).

5.2.1 Dependent variable

Student well-being. In this paper, student well-being is measured by two emotional aspects (school happiness and absence of school stress) and one cognitive aspect (school satisfaction; Schwinger et al., 2015). The student well-being scale is formed from the mean values of the variables school satisfaction (How satisfied are you overall with your situation at school? Response options: very satisfied, satisfied, partly satisfied, dissatisfied, and very dissatisfied), school happiness (I actually like going to school. Response options: always, often, sometimes, and never), and school stress (How do you feel about your everyday school life? Response options: easy, okay, slightly stressful, and stressful/very stressful). The items are based on questions from

TABLE 1 Overview weighting - population, samples, sample weighting.

Type of School	Gender	Population	%	Sample	%	Sample weighting
Academic Secondary School	100	1,441	12.2	197	12.9	0.94
Academic Secondary School	50	1,195	10.1	166	10.9	0.93
College for Higher Vocational Education	100	1,221	10.3	165	10.8	0.95
College for Higher Vocational Education	50	1,099	9.3	78	5.1	1.82
School for Intermediate Vocational Education	100	661	5.6	91	6.0	0.94
School for Intermediate Vocational Education	50	451	3.8	40	2.6	1.45
Part-Time Vocational School and Apprenticeship—The Dual System	100	895	7.6	111	7.3	1.04
Part-Time Vocational School and Apprenticeship—The Dual System	50	1,215	10.3	143	9.4	1.10
Compulsory Secondary School	100	1,151	9.7	197	12.9	0.75
Compulsory Secondary School	50	1,440	12.2	193	12.6	0.96
Pre-Vocational School	100	622	5.3	76	5.0	1.06
Pre-Vocational School	50	444	3.8	69	4.5	0.83
Total		11,834	100.0	1,526	100.0	

Gender 100: The proportion of women is greater than the average across the type of school; Gender 50: The proportion of women is less than or equal to the average across the type of school.

TABLE 2 Confirmatory factor analysis: factor loadings.

Student well-being	
How satisfied are you overall with your situation at school?	0.72
I actually like going to school.	0.69
How do you feel about your everyday school life?	0.53
Democratic school culture	
I learn that all students have the same rights.	0.62
I learn to justify my opinion to others.	0.68
I have a voice.	0.70
I learn that there can be different opinions on an issue.	0.75
I learn fairness and tolerance.	0.78
Different opinions are heard when making decisions together.	0.81
Decisions that affect everyone are understandable.	0.79
Pseudo-participation	
We have a voice, but do not know exactly what about.	0.67
We are asked, but our opinion is not taken into account.	0.64
Active co-design	
We are well informed and have a vote.	0.74
We are well informed and actually have a voice.	0.84
We think about solutions and then vote on them.	0.88
We think about solutions and implement one of them.	0.86
Co-determination class	
determination of homework	0.57
choice of teaching topics	0.62
choice of class trip destinations	0.78
project day or week	0.74

$n = 1{,}526$.

studies "17. Shell Youth Study" (Shell Deutschland Holding, 2015) and "School for 10 to 14 year olds in Vorarlberg" (Böheim-Galehr and Engleitner, 2014). The item school satisfaction is a five-level Likert scale. The items school happiness and school stress are four-level ordinal scaled variables. For scaling, the five-level variable expressions from the item school satisfaction were scaled to a value range of 1–4 (1 = 1; 2 = 1.75; 3 = 2.5; 4 = 3.25; 5 = 4). The school stress item was inverted so that a high score indicated the absence of school stress. The student well-being scale formed below from these three items has a Cronbach's alpha of 0.68 (see Table 3). This value is still within the acceptable range for social science data. On average, student well-being has a score of 2.78 within the range of 1 (low) to 4 (high).

5.2.2 Independent variables

The independent variables capture different forms of participation: democratic school culture, pseudo-participation, active co-design, and co-determination possibilities in class.

5.2.2.1 Democratic school culture

Schools in Austria are required to convey basic democratic values to their students (BMBWF, 2015). These include, for example, the knowledge that all students have the same rights (guidance on general human rights) or that there can be different opinions on an issue. The amount to which students perceive that they are taught these values reflects the level of democracy in the school and demonstrates a democratic school culture. The scale of democratic school culture comprises seven items. The wording of the items begins with "My school is a place where…" and is followed by statements to be evaluated: 1. I learn that all students have the same rights, 2. I learn to justify my opinion to others, 3. I have a voice, 4. I learn that there can be different opinions on an issue, 5. I learn fairness and tolerance, 6. different opinions are heard when making decisions together, and 7. decisions that affect everyone are understandable (response options: completely agree, tend to agree, tend to disagree, and disagree; Source of items: Diedrich et al., 2004; Abs et al., 2007). The scale has a Cronbach's alpha of 0.89 and a mean of 3.17 in the range of values from 1 (low) to 4 (high).

5.2.2.2 Pseudo-participation

A way of making decisions in schools is to ask students for their opinions in everyday school life, without taking them into account, or to let students vote on something without sufficient information. Hart (1992) speaks of pseudo-participation in this context. The pseudo-participation scale consists of the following two items: 1. We have a voice but do not know exactly what about and 2. We are asked, but our opinion is not considered (response options: exactly agree, tend to agree, undecided, tend to disagree, and disagree; items formulated following Wetzelhütter and Bacher, 2015). For a scale consisting of two items, a Cronbach's alpha of 0.60 is assumed to be acceptable. On average, the surveyed students gave a value of 2.77 in a range from 1

TABLE 3 Variables.

	α	r (i, t)	M (SD)	R	k
Student well-being	0.68	0.43–0.53	2.78 (0.59)	1 low–4 high	3
Democratic school culture	0.89	0.59–0.74	3.17 (0.62)	1 low–4 high	7
Pseudo-participation	0.60	0.42	2.77 (0.96)	1 low–5 high	2
Active co-design	0.90	0.71–0.81	2.98 (1.01)	1 low–5 high	4
Co-determination class	0.77	0.52–0.63	1.91 (0.68)	1 low–4 high	4

$n = 1{,}526$; α = Cronbach's alpha; r (i, t) = selectivity; M (SD) = mean (standard deviation); R = range scale; k = number of items.

(low) to 5 (high). Accordingly, a decisive part of the students experienced pseudo-participation.

5.2.2.3 Active co-design

When students are actually involved in school decision-making processes, for example, by being asked for their opinions and then feeling that their voices are heard, or when they develop solutions independently and can implement them, we speak of active co-design. The active co-design scale comprises the following four items: 1. we are well informed and have a vote, 2. we are well informed and actually have a voice, 3. we think about solutions and then vote on them, and 4. we think about solutions and implement one of them (response options: exactly agree, tend to agree, undecided, tend to disagree, and disagree). The items were formulated following Wetzelhütter and Bacher (2015). The scale has a reliability of 0.90 and a mean of 2.98 in a range of values from 1 (low) to 5 (high).

5.2.2.4 Co-determination class

The students were asked in which areas they co-determined at school and how often. The co-determination class scale represents areas of participation that relate directly and indirectly to the class. The questions used in this study are based on the co-determination areas of the Bertelsmann Study on the Participation of Children and Adolescents in Germany (Fatke and Schneider, 2008). Different areas of co-determination were included in the factor analysis, but they could not be divided into two scales, as in Fatke and Schneider (2008). Therefore, the present scale was formed with all four items. It has a Cronbach's alpha of 0.77 and consists of the following items: determination of homework, selection of lesson topics, selection of class trip objectives, and co-determination of project day or project week. This scale has a mean of 1.91 by a range of 1 (low) to 4 (high).

5.2.3 Control variables

Although sociodemographic variables are related to student well-being, they often have a comparatively low effect (Alivernini et al., 2019; Ott, 2020). Nevertheless, gender, family educational background, socioeconomic background, and primarily spoken language at home were included as controlled variables in the current analysis.

5.2.3.1 Gender

The gender of adolescents is dichotomized in the analysis, with 47.7 percent boys and 52.3 percent girls, as well as others (0.08 percent).

5.2.3.2 Socioeconomic background

The family affluence scale (FAS) of the Health Behaviour in School-aged-Children study (HBSC; Inchley et al., 2020) was used to determine the socioeconomic background (Meusburger and Rücker, 2021). The level of family prosperity was determined by a sum score. This is based on six questions about the social and economic circumstances of young people. The scale has a range of 0–10 and a mean value of 7.71 (SD 1.63).

5.2.3.3 Educational background

Based on the International Standard Classification of Education (ISCED), the educational background of the students was determined by the highest formal educational attainment of their mothers or fathers (Statistik Austria, 2015). Following this classification, 13.8 percent of adolescents have parents who did not complete compulsory education or whose educational background was not known to them (ISCED 0–1). Another 12.5 percent of adolescents have parents who have completed at most compulsory education (ISCED 2).[1] Slightly more than one-third of the students reported that at least one parent has completed vocational training or a general secondary school (ISCED 3). Exactly, 17.6 percent of students report that at least one parent has completed a secondary vocational education program (ISCED 5), and 20.5 percent have at least one parent who has completed a tertiary education program (ISCED 6 or higher).[2]

5.2.3.4 Spoken language

The young people surveyed could specify which language they mainly speak at home. Exactly 70.3 percent of the young people speak primarily in an Austrian dialect or in standard German at home. Another 29.7 percent reported that they speak mainly another language or several other languages at home. In this analysis, the spoken language is recorded as being dichotomized as German/dialect or another language.

5.3 Statistical analysis

The analysis consists of two steps and is conducted in SPSS 29 (IBM, 2023). The first step involves analyzing the correlations between the variables presented. As it can be assumed that students within a

1 Based on the question in the questionnaire, the category of compulsory school-leaving qualifications also includes qualifications from polytechnic schools, although these are counted as Level 3 according to the ISCED classification.

2 ISCED 4 includes post-secondary, non-tertiary qualifications. These degrees were not surveyed in this study and are not reported below.

class are more similar to their attitudes than students between two classes (Hox et al., 2017), the correlation analysis is tested for possible cluster effects, and the SPSS module complex sample is applied to correct the standard error (see Bacher, 2009). The analysis plan includes one layer and 92 classes as cluster variables. Based on the population of 11,834 students, the cases were taken with equal probability without reclining. However, since the complex sample module does not include a separate tool for correlation analysis, all correlation coefficients and their significance were tested using a bivariate general model.

In the second step, we try to test the four hypotheses presented in advance. Because of the clustered data structure, we estimate a multilevel model in which students are clustered within school classes. This analysis includes testing the empty model and the mixed model.

In the empty model, we first analyze the test of variance in student well-being and the explanation of its difference at the individual and class levels without predictors. This should clarify how much of the explained variance in student well-being is due to the differences between individual students or between the classes in which the students are surveyed.

The mixed models test the extent to which the predictors can statistically "explain" student well-being. Predictors are the independent variables presented above and the control variables. In addition, the interaction effects between the control variables and the independent variables were tested.[3] Furthermore, the differences between the regression coefficients of the independent variables in the model were tested for significance using confidence intervals. Predictors can be at the individual level as well as at the class level. The assignment is theory-based. Gender, socioeconomic status, and educational background of a family, as well as the primary spoken language, are at the individual level. They are included here as control variables in the analysis. On the class level are the scales of democratic school culture, pseudo-participation, active co-design, and co-determination in class. This is because students in a class describe the same phenomenon and, therefore, are probably not independent in their assessment. In addition, the mixed models can clarify how much of the explained variance is due to the differences between students and between classes.

Although the effects on the individual and class levels are reported separately, the focus of this article is on the influence of predictors on student well-being. This multilevel analysis is conducted to account for the clustered sample. Multilevel analyses in SPSS only report non-standardized estimators; therefore, all variables are z-transformed in the model analyses. The B coefficient can therefore be interpreted as a standardized coefficient (beta), and the various effects can be compared.

When analyzing multilevel models, SPSS does not yield a corrected R^2 to show the explained variance, as is usually the practice of linear regressions or general linear models. Therefore, the R^2 for the increase in explanatory power for the individual and class levels is calculated on the basis of the explained and unexplained variance of the empty and mixed models.

3 The interaction effects are not illustrated in the tables.

6 Results

The results are presented in two steps, starting with an analysis of the relationship between the possibilities for participation and student well-being. In the second step, a multilevel analysis is conducted with the aim of identifying the impacts of participation opportunities on student well-being.

6.1 Descriptives and bivariate correlations

In the subsequent sections, a descriptive specification based on the mean values of the scales is provided. Furthermore, the interclass correlation (ICC) will be presented, and then the bivariate correlation of the variables will be described.

With a mean of 2.79 and a range of 1–4, the students report feeling well in their school (see Table 4). Thus, student well-being tends to be in the upper range. Accordingly, most students believe that their school is a place where they learn democratic values. The feeling of only having a say for appearance's sake is also not uncommon at schools in Vorarlberg; almost half of the pupils report pseudo-participation. Almost half of the adolescents state that they can actually voice their opinions actively in their schools (co-determination in class). Accordingly, the students indicate that on average, they rarely have a say in the class. Democratic school culture is thus much more widespread in schools than the active participation of pupils in decision-making.

Because the data are in a clustered form and the students in a class potentially observe a common phenomenon, the ICC for each scale is reported here. The scale of school well-being has an ICC of 0.059; thus, 5.9 percent of the variance explanation can be attributed to differences between school classes. The school class seems to contribute a smaller proportion to the variance explanation. 4.2 percent of the variance for democratic school culture is also attributed to differences between classes, and 6.0 percent of the variance of pseudo-participation is attributed to the difference between classes. Thus, the variance is explained by the difference between the students. For the active co-design scale, the ICC is 0.072, which means that 7.2 percent of the variance explanation can be attributed to differences between school classes. For the co-determination class scale, the ICC (0.127) is the highest; here, 12.7 percent of the variance explanation is attributed to the difference between classes. For this scale, the response behavior of the students within a class seems to be similar. Considering the content-related construction of the scale, this is understandable: the students should evaluate areas in which they can co-determine within their classes.

Correlation analyses can be used to demonstrate how student well-being is related to various opportunities for participation in school. The analysis results indicate that student well-being is significantly related to all the participation items. Therefore, student well-being correlates with democratic school culture [$r(1,526) = 0.35$; $p \leq 0.001$], co-determination in class [$r(1,526) = 0.21$; $p \leq 0.001$], and also with active co-design [$r(1,526) = 0.19$; $p \leq 0.001$]. Student well-being is negatively related to the "pseudo-participation" scale [$r(1,526) = -0.17$; $p \leq 0.001$]. Apparently, co-determination in class and active co-design are clearly positively related to student well-being, while pseudo-participation is slightly negatively related.

TABLE 4 Correlation between student well-being and independent variables.

	M (SD)	ICC	1	2	3	4	5
1 student well-being	2.78 (0.59)	0.059	-				
2 democratic school culture	3.17 (0.62)	0.042	0.35***	-			
3 pseudo-participation	2.77 (0.96)	0.060	−0.17***	−0.14***	-		
4 active co-design	2.98 (1.01)	0.072	0.19***	0.30***	0.11***	-	
5 co-determination class	1.91 (0.68)	0.127	0.21***	0.22***	0.09***	0.32***	-

Pearson correlation; $n = 1{,}526$; M (SD) = mean (standard deviation); ICC = interclass correlation.
***$p \leq 0.001$.

Overall, it is evident that student well-being is related to existing opportunities for participation and the democratic school culture.

6.2 Multilevel analysis

How forms of participation and the democratic school culture contribute to explaining student well-being is examined below based on a multilevel analysis.

6.2.1 Empty model

In the first step, a model is calculated that examines the variance difference of the dependent variable student well-being at the individual and class levels (empty model; see Table 5). This model does not contain any predictors. The aim is to determine how student well-being can be explained by differences between school classes and how much it is based on individual differences between students.

The variance at the class level is statistically significant in the empty model.[4] The calculation of the ICC results in a value of 0.059. Accordingly, 5.9 percent of the variance in student well-being can be related to the difference between the school classes. Consequently, 94.1 percent of the variance can be statistically attributed to differences between students. Thus, the clustering of the data tends to be of minor importance for the analysis.

6.2.2 Mixed model

To test the four hypotheses, control variables and predictors were included in this mixed model. By introducing the predictors, the R^2 is 0.177. Thus, 17.7 percent of the variance in student well-being is explained by the mixed model. As in the previous model, the additional variance explanation is more strongly explained by class-level predictors (individual level: $R^2 = 0.160$; class level: $R^2 = 0.428$).

6.2.2.1 Democratic school culture and student well-being

In this model, all predictors that represent participation in school and one control variable are significant. In particular, the democratic school climate correlates significantly with student well-being and is the strongest predictor in the model. If there is a democratic climate in the school (i.e., values such as fairness and tolerance are conveyed), the pupils also feel more comfortable there. Therefore, H_1 "When students report a democratic school culture at their school, they tend to have higher student well-being." can be accepted.

6.2.2.2 Shared decision-making process and student well-being

The two intensity forms of participation are also related to the well-being of students. If students experience pseudo-participation, their well-being decreases. Thus, this analysis shows that H_2 "If students are only apparently included in decision-making, then this is negatively correlated with their student well-being." can be assumed. If, on the other hand, they perceive that they are asked for their opinion and are allowed to participate actively, they have a higher level of student well-being. With a B of 0.10, active co-design correlates positively with student well-being. Accordingly, H_3, namely that actively co-design decision-making processes are positively related to student well-being, can be confirmed.

6.2.2.3 Student co-determination in class and student well-being

To test H_4 "When students have the opportunity to co-determine in class, they have higher student well-being." the co-determination in class was included in the analysis. Consequently, if students can co-determine in different areas of the class, this is slightly but positively related to student well-being. Therefore, H_4 can be accepted.

Likewise, the formal education of parents has a significant effect on student well-being. Students with parents who are closer to education consequently show higher scores in student well-being.

To test whether the B of predictors were statistically significantly different from each other, the overlap of their confidence intervals was tested. If the confidence intervals overlap less than 50 percent, it can be assumed that the Bs are significantly different from each other (Cumming and Fidler, 2009). This analysis shows that the B (0.27) of democratic school culture is significantly different from pseudo-participation (B = −0.13), active co-design (B = 0.10), and co-determination class (B = 0.12). However, the regression coefficient of pseudo-participation is also significantly different from the active co-design and co-determination classes.

In addition, this model tested whether there were interaction effects between the control variables (gender, educational background, socioeconomic background, and language spoken) and the independent variables (democratic school culture, pseudo-participation, active co-design, and co-determination class). The analysis shows that for the combination of control and independent variables, all effects except for the combination of democratic

4 The Wald Z-test is still significant for student well-being with a $p = 0.002$. Therefore, mixed models are calculated in the following, whereby this is done because of the data structure and less because of the interest in level effects.

TABLE 5 Multilevel analysis of student well-being.

	Empty model B (SE)	Mixed model	
		B (SE)	95% CI
Constant	−0.01 (0.04)	−0.01 (0.03)	[−0.06; 0.05]
Control variables (individual level)			
Gender (male)		−0.03 (0.03)	[−0.08; 0.02]
Socio-economic background		0.01 (0.03)	[−0.04; 0.06]
Educational background		0.09 (0.03)***	[0.04; 0.15]
Spoken language (other language)		−0.06 (0.03)*	[−0.10; 0.01]
Predictors (class level)			
Democratic school culture		0.27 (0.03)***	[0.23; 0.32]
Pseudo-participation		−0.13 (0.02)***	[−0.18; −0.08]
Active co-design		0.10 (0.03)***	[0.04; 0.15]
co-determination class		0.12 (0.03)***	[0.07; 0.17]
Variance components			
ICC	0.059	0.041	
−2LL	4,515.084–4,518.425	4,251.545–4,263.646	
R^2		0.177	
R^2 (individual level)		0.160	
R^2 (class level)		0.428	

$n = 1{,}526$ (individual); $n = 92$ (classes); B = unstandardized coefficients; SE = standard error; CI = confidence interval; ICC = interclass correlation; −2LL = − 2 Log Likelihood; $^*p \leq 0.05$; $^{**}p \leq 0.01$; $^{***}p \leq 0.001$; all variables are z-standardized.

school culture and educational background (B = 0.07) are not significant.

7 Discussion and conclusion

7.1 Discussion of the results in light of the hypotheses

To increase the well-being of students, it is essential to know which factors influence it. Our results show that participation opportunities are positively correlated with student well-being. Since participation encompasses a wide range of different actions, we examine three different aspects of student participation—a democratic school culture, shared decision-making processes, and the co-determination of students in the classroom and in teaching—and its relationships to student well-being by using a multilevel analysis. Here, four hypotheses H_1 ("When students report a democratic school culture at their school, they tend to have higher student well-being)."; H_2 "If students are only apparently included in decision-making, then this is negatively correlated with their student well-being."; H_3 "When students are able to actively co-design decision-making processes, this is positively related to their student well-being." and; H_4 ("When students have the opportunity to co-determine in class, they have higher student well-being.") were formulated whereby the relationship between different aspects of student participation and student well-being was tested.

Having a democratic school culture has the strongest correlation with student well-being (H_1). This means creating a school climate in which fairness and tolerance prevail; students feel that they are seen and heard, which contributes to their feelings of well-being at school. Our quantitative results thus confirm the results of other studies (de Róiste et al., 2012; González et al., 2021; Graham et al., 2022).

The active involvement of students in relevant decisions also considered well-being (H_2 and H_3). However, if students are only apparently involved, for example, if they are asked for their opinion but it is not considered, this is negatively related to their student well-being. This finding is new, so confirmation from other studies is still lacking.

The findings, especially from qualitative studies (see Kostenius and Nyström, 2020; Quenzel and Ott, 2023), suggest that active co-design in the classroom and in teaching can also promote student well-being (H_4). Hammerin et al. (2018) showed a positive relationship between active participation in teaching and a reduced stress experience among students. Smith et al. (2010) indicated that experiencing autonomy in the classroom also leads to more positive attitudes toward school. Our results also point in this direction and show a positive correlation between student well-being and the opportunity for active co-design in the classroom and in teaching.

Thus, consistent with previous research (de Róiste et al., 2012; Anderson et al., 2022; Graham et al., 2022), our findings suggest that to promote student well-being, it is important to strengthen the democratic culture in schools, to involve students in as many decisions as possible, and to give them a real voice in the classroom. In this context, it is important to note that the three aspects of participation examined promote student well-being in their own right, with a democratic school culture having statistically the strongest effect. This article therefore points out that in order to gain a deeper understanding of the relationship between participation opportunities and student well-being, it would be important to take greater account of the various forms of co-determination practiced in schools in the analyses.

7.2 Limitations of the approach

The article presented is limited in several aspects. Models of student well-being are often based on 4–7 dimensions (Soutter et al., 2014; OECD, 2017; Hascher et al., 2018). With the available data, only the dimension of positive attitudes toward school can be analyzed here. The article is also limited in its interpretation of causal relationships. Although predictors of student well-being can be investigated based on multilevel analyses, the direction of the effect cannot be adequately substantiated with cross-sectional data. Therefore, in this article, we use empirical findings to establish the direction of the effect and to build and examine the explanatory model accordingly. In addition, the democratic school culture could be at the school level. Due to anonymity, no information on the school affiliation of the students is available in the data used. Accordingly, a democratic school culture cannot be modeled at the school level.

The article follows an exploratory design, uses secondary data, and aims to explain well-being through different forms of participation in school life. The effects of participation on well-being can be determined by a regression analysis (Gäde and Schermelleh-Engel, 2023), as we have done in this article. If the goal were to test a complex theoretical model, a structural equation model would be the method of choice. However, we refrained from doing so because there is currently only circumstantial evidence for a model relationship, but so far no established theory that would explain school well-being through participation in school life. This article therefore makes a first contribution to theory development: it becomes clear that each individual area of participation in school life contributes separately to explaining student well-being. It also becomes clear that well-being potentially increases when there is a broad range of forms of participation in school.

For further research, we recommend including different domains of school participation as well as other apparent factors (Kline, 2010) that influence school well-being, such as classroom climate or teacher behaviour (Løhre et al., 2010; Aldridge and McChesney, 2018; Vockert et al., 2018), and testing this theoretical model with a structural equation model. We also assume that by accounting for measurement error in structural equation models (Kühnel, 2001; Hayduk et al., 2007; Gäde and Schermelleh-Engel, 2023), the relationships between participation in school life and school well-being would become even more salient.

7.3 Conclusion

What do these findings mean for school practice? Students who have a voice in their schools feel more comfortable. Participation should therefore be encouraged wherever possible. However, students are obviously sensitive to whether they are really participating or whether this is pseudo-participation. Therefore, if participation is to be implemented, all those involved must be aware that it requires the consistent active involvement of young people to achieve positive effects. However, the organizational structure at Austrian schools is a thoroughly hierarchical one. If the aim is to transform and develop teaching and school into a living space in which democratic values are conveyed and students can actively participate, the existing school culture must change. This is particularly important, as a high democratic school culture is clearly linked to student well-being. Here, further research projects are necessary to determine a more detailed understanding of successful participation processes on which practice-relevant and successful participation models for school and classroom development can be built.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

Ethical approval was not required for the study involving humans in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was not required from the participants or the participants' legal guardians/next of kin in accordance with the national legislation and the institutional requirements.

Author contributions

MO is a research associate at the Institute for Sociology of Education and a lecturer at the University colleges of teacher education Vorarlberg, Austria. She graduated with a diploma in education and a master's degree in archaeology from the University of Innsbruck. Her research interests include youth research and well-being research as well as diversity and participation. KM is a research associate at the Institute for Sociology of Education and a lecturer at the University colleges of teacher education Vorarlberg, Austria. She studied sociology at the Johannes Kepler University in Linz. Her main research interests are youth research and sociology of education. GQ heads the Institute for Sociology of Education at the Vorarlberg University colleges of teacher education Vorarlberg, Austria. She studied applied cultural sciences in Lüneburg, received her PhD in sociology from Duisburg-Essen in 2005, and habilitated on health sciences in Bielefeld in 2014. Her research interests are youth and socialization, educational poverty, health and educational inequality. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

References

Abs, H. J., Roczen, N., and Klieme, E. (2007). Abschlussbericht zur Evaluation des BLK-Programms "Demokratie lernen und Leben". Frankfurt am Main: Deutsches Institut für Internationale Pädagogische Forschung.

Aldridge, J., Fraser, B., Fozdar, F., Alai, K., Earnest, J., and Afari, E. (2016). Students' perception of school climate as determinats of wellbeing, resilince and Identitiy. *Improv. Sch.* 19, 5–26. doi: 10.1177/1365480215612616

Aldridge, J. M., and McChesney, K. (2018). The relationships between school climate and adolescent mental health and wellbeing: a systematic literature review. *Int. J. Educ. Res.* 88, 121–145. doi: 10.1016/j.ijer.2018.01.012

Alivernini, F., Cavicchiolo, E., Girelli, L., Lucidi, F., Biasi, V., Leone, L., et al. (2019). Relationships between sociocultural factors (gender, immigrant and socioeconomic background), peer relatedness and positive affect in adolescents. *J. Adolesc.* 76, 99–108. doi: 10.1016/j.adolescence.2019.08.011

Anderson, D. L., Graham, A. P., Simmons, C., and Thomas, N. P. (2022). Positive links between student participation, recognition and wellbeing at school. *Int. J. Educ. Res.* 111:101896. doi: 10.1016/j.ijer.2021.101896

Bacher, J. (2009). "Analyse komplexer Stichproben" in *Umfrageforschung: Herausforderungen und Grenzen*. eds. M. Weichbold, J. Bacher and C. Wolf (Wiesbaden: VS Verlag für Sozialwissenschaften), 253–272.

Bacher, J., and Weber, C. (2008). Mitbestimmung und Gewalt an Schulen – richtungsweisende Studien des Instituts für Soziologie der JKU.

Biedermann, H., and Oser, F. (2020). "Durch partizipative Prozesse zu politisch-demokratischem Lernen – ein Patentrezept?" in *Wirkungsanalyse von Demokratie-Lernen. Empirische und theoretische Untersuchungen zur Demokratiedidaktik in Schule und Hochschule*. eds. H.-P. Burth and V. Reinhardt (Opladen: Budrich), 63–91.

BMBWF (2015). Unterrichtsprinzip Politische Bildung, Grundsatzerlass 2015. Rundschreiben Nr. 12/2015. Available at: https://rundschreiben.bmbwf.gv.at/rundschreiben/?id=700 (Accessed November 4, 2022).

Böheim-Galehr, G., and Engleitner, J. (2014). *Schule der 10-bis 14-Jährigen in Vorarlberg. Entwicklungen, Bildungshaltungen und Bildungserwartungen. Projektbericht Band 1*. Innsbruck: Studien Verlag.

Borgonovi, F., and Pál, J. (2016). A framework for the analysis of student well-being in the PISA 2015 study: Being 15 in 2015.

Böwing-Schmalenbrock, M., and Jurczok, A. (2011). *Multiple imputation in der praxis*. Ein sozialwissenschaftliches Anwendungsbeispiel. Universität Potsdam.

Brügelmann, H. (2019). "Demokratisierung von Schule und Unterricht" in *Handbuch Schulpädagogik*. eds. M. Harring, C. Rohlfs and M. Gläser-Zikuda (Münster, New York: Waxmann), 620–630.

Bücker, S., Nuraydin, S., Simonsmeier, B. A., Schneider, M., and Luhmann, M. (2018). Subjective well-being and academic achievement: a meta-analysis. *J. Res. Pers.* 74, 83–94. doi: 10.1016/j.jrp.2018.02.007

Collins, L. M., Schafer, J., and Kam, C. (2001). A comparison of inclusive and restrictive strategies in modern missing data procedures. *Psychol. Methods* 6, 330–351. doi: 10.1037/1082-989X.6.4.330

CRC (1990). Convention on the rights of the child. Available at: Convention on the Rights of the Child.

Cumming, G., and Fidler, F. (2009). Confidence intervals: better answers to better questions. *J. Psychol.* 217, 15–26. doi: 10.1027/0044-3409.217.1.15

de Róiste, A., Kelly, C., Molcho, M., Gavin, A., and Nic Gabhainn, S. (2012). Is school participation good for children? Associations with health and wellbeing. *Health Educ.* 112, 88–104. doi: 10.1108/09654281211203394

Derecik, A., Goutin, M.-C., and Michel, J. (2018). *Partizipationsförderung in Ganztagsschulen*. Wiesbaden: Springer Fachmedien Wiesbaden.

Diedrich, M. (2008). Demokratische Schulkultur. Messung und Effekte. Diss. Münster, Westfalen: Waxmann Available at: http://nbn-resolving.de/urn:nbn:de:0111-opus-26709 [Accessed February 22, 2023].

Diedrich, M., Abs, H. J., and Klieme, E. (2004). Evaluation im BLK-Modellprogramm Demokratie lernen und leben: Skalen zur Befragung von Schüler/−innen, Lehrer/−innen und Schulleitungen. Dokumentation der Erhebungsinstrumente 2003. Frankfurt am Main: Deutsches Institut für Internationale Pädagogische Forschung.

Fatke, R., and Schneider, H. (2008). Partizipation von Kindern und Jugendlichen in Deutschland. Konzeptionelle Grundlagen und empirische Befunde zur Mitwirkung junger Menschen in Familie, Schule und Kommune. Gütersloh: Bertelsmann Stiftung Available at: https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/Berichtsband_final_formatiert_2008.pdf (Accessed November 28, 2023).

Fend, H. (2009). *Neue Theorie der Schule: Einführung in das Verstehen von Bildungssystemen*. Wiesbaden: VS.

Feu i Gelis, J., Casademont Falguera, X., and Abril, F. (2021). Is another democracy possible in schools? Challenges to create a truly democratic school. *Educ. Citizsh. Soc. Just.* 18, 98–112. doi: 10.1177/17461979211048666

Gäde, J. C., and Schermelleh-Engel, K. (2023). "Strukturgleichungsmodelle" in *Forschungsmethoden und Evaluation in den Sozial-und Humanwissenschaften*. ed. N. Döring (Berlin, Heidelberg: Springer), 923–950.

Gamsjäger, M., and Wetzelhütter, D. (2020). "Zwischen Scheinpartizipation und tatsächlicher Einflussnahme–Die Bedeutung von Partizipation für das Engagement von SchülerInnen" in *Partizipation und Schule: Perspektiven auf Teilhabe und Mitbestimmung von Kindern und Jugendlichen*. eds. S. Gerhartz-Reiter and C. Reisenauer (Wiesbaden: Springer Fachmedien), 207–231.

González, C., Varela, J., Sánchez, P. A., Venegas, F., and De Tezanos-Pinto, P. (2021). Students' participation in school and its relationship with antisocial behavior, academic performance and adolescent well-being. *Child Indic. Res.* 14, 269–282. doi: 10.1007/s12187-020-09761-5

Graham, A., Anderson, D., Truscott, J., Simmons, C., Thomas, N. P., Cashmore, J., et al. (2022). Exploring the associations between student participation, wellbeing and recognition at school. *Camb. J. Educ.* 52, 453–472. doi: 10.1080/0305764X.2022.2031886

Griebler, U., Rojatz, D., Simovska, V., and Forster, R. (2017). Effects of student participation in school health promotion: a systematic review. *Health Promot. Int.* 32, 195–206. doi: 10.1093/heapro/dat090

Gutman, L. M., and Vorhaus, J. (2012). *The impact of pupil behaviour and wellbeing on educational outcomes*. London: Institute of Education, University of London.

Hammerin, Z., Andersson, E., and Maivorsdotter, N. (2018). Exploring student participation in teaching: an aspect of student health in school. *Int. J. Educ. Res.* 92, 63–74. doi: 10.1016/j.ijer.2018.09.007

Hart, R. A (1992). United Nations Children's Fund, and Innocenti Research Centre. Children's participation: From tokenism to citizenship. Florence: UNICEF, United Nations Children's Fund. Available at: https://www.unicef-irc.org/publications/pdf/childrens_participation.pdf (Accessed November 28, 2023).

Hart, R. (2008). "Stepping back from 'the ladder': reflections on a model of participatory work with children" in *Participation and learning. Perspectives on education and the environment, health and sustainability*. eds. B. B. Reid, J. Nikel and V. Simovska (New York: Springer), 19–31.

Hascher, T. (2004). *Wohlbefinden in der Schule*. Münster: Waxmann.

Hascher, T. (2010). "Wellbeing" in *International encyclopedia of education*. (eds.) P. Peterson, E. Baker, B. McGaw (Amsterdam: Elsevier), 732–738.

Hascher, T. (2012). "Well-being and learning in school" in *Encyclopedia of the sciences of learning*. ed. N. M. Seel (Boston, MA: Springer US), 3453–3456.

Hascher, T., and Hagenauer, G. (2018). "Die Bedeutung von Qualitätsfaktoren des Unterrichts und Lernemotionen für das Wohlbefinden in der Schule" in *Emotionen und Emotionsregulation in Schule und Hochschule*. eds. G. Hagenauer and T. H. Münster (New York: Waxmann), 103–120.

Hascher, T., Morinaj, J., and Waber, J. (2018). "Schulisches Wohlbefinden: Eine Einführung in Konzepte und Forschungsstand" in *Leistung und Wohlbefinden in der Schule: Herausforderung Inklusion*. eds. K. Rathmann and K. Hurrelmann (Weinheim Basel: Beltz Juventa), 66–82.

Hauk, D., and Gröschner, A. (2022). How effective is learner-controlled instruction under classroom conditions? A systematic review. *Learn. Motiv.* 80:101850. doi: 10.1016/j.lmot.2022.101850

Hayduk, L., Cummings, G., Boadu, K., Pazderka-Robinson, H., and Boulianne, S. (2007). Testing! Testing! One, two, three – testing the theory in structural equation models! *Personal. Individ. Differ.* 42, 841–850. doi: 10.1016/j.paid.2006.10.001

Helwig, C. C., and McNeil, J. (2010). "The development of conceptions of personal autonomy, rights, and democracy, and their relation to psychological well-being" in *Human autonomy in Cross-cultural context: Perspectives on the psychology of agency, freedom, and well-being Cross-cultural advancements in positive psychology*. eds. V. I. Chirkov, R. M. Ryan and K. M. Sheldon (Dordrecht: Springer Netherlands), 241–256.

Honneth, A. (2012). Die verlassene Schule der Demokratie. *Zeit Online*, 7.

Hox, J. J., Moerbeek, M., and Schoot, R. (2017). *Multilevel analysis. Techniques and Applications*. Third Edition. New York: Routledge.

Hülshoff, A. (2020). "Quantitativ-differenzielle Perspektive auf Geschlecht und schulisches Wohlbefinden. Ein Überblick über theoretisch-methodologische Prämissen und jüngere empirische Befunde" in *Methoden und Methodologien in der erziehungswissenschaftlichen Geschlechterforschung*. eds. M. Kubandt and J. Schütz (Opladen, Berlin, Toronto: Verlag Barbara Budrich), 66–83.

Hurrelmann, K., and Quenzel, G. (2018). *Developmental tasks in adolescence. 1st* Edn. London: Routledge.

IBM (2023). *IBM SPSS statistics (version 29)*.

Inchley, J., Currie, D., Budisavljevic, S., Torsheim, T., Jåstad, A., Cosma, A.K., et al. (2020). *Spotlight on adolescent health and well-being. Findings from the 2017/2018 health behaviour in school-aged children (HBSC) survey in Europe and Canada. International report. Volume 2. Key data*. Copenhagen: WHO Regional Office for Europe.

Johnson, C. (2015). Local civic participation and democratic legitimacy: evidence from England and Wales. *Polit. Stud.* 63, 765–792. doi: 10.1111/1467-9248.12128

Jungkunz, S. (2023). "Erwerb von Kompetenzen durch Partizipation" in *Bildung und Partizipation. Mitbestimmung von Schülerinnen und Schülern in Deutschland, Österreich und der Schweiz*. eds. G. Quenzel, M. Beck and S. Jungkunz (Opladen, Berlin, Toronto: Verlag Barbara Budrich), 113–140.

Jungkunz, S., Lehnerer, E., Beck, M., Meusburger, K., Schläpfer, M., and Ha, J. (2023). "Projektbeschreibung und methodisches Vorgehen" in *Bildung und Partizipation. Mitbestimmung von Schülerinnen und Schülern in Deutschland, Österreich und der Schweiz*. eds. G. Quenzel, M. Beck and S. Jungkunz (Opladen, Berlin, Toronto: Verlag Barbara Budrich), 45–63.

Kenny, D. A., Kaniskan, B., and McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociol. Methods Res.* 44, 486–507. doi: 10.1177/0049124114543236

Kline, R. B. (2010). *Principles and practice of structural equation modeling, third edition. 3rd Edition*. New York: The Guilford Press.

König, J., Wagner, C., Valtin, R., and Schmude, C. (2011). Jugend, Schule, Zukunft: psychosoziale Bedingungen der Persönlichkeitsentwicklung. *Ergebnisse der Längsschnittstudie AIDA*. Münster: Waxmann.

Kostenius, C., and Nyström, L. (2020). "When I feel well all over, I study and learn better" - experiences of good conditions for health and learning in schools in the Arctic region of Sweden. *Int. J. Circumpolar Health* 79:1788339. doi: 10.1080/22423982.2020.1788339

Kröske, B. (2020). Schulisches Wohlbefinden, Zugehörigkeit und Unterstützung bei Schülerinnen und Schülern im gemeinsamen Unterricht der Sekundarstufe I. *Unterrichtswissenschaften* 48, 243–272. doi: 10.1007/s42010-020-00067-7

Kühnel, S. (2001). "The didactical power of structural equation modeling" in *Structural equation modeling: Present and future: A festschrift in honor of Karl Jöreskog*. eds. R. Cudeck, K. G. Jöreskog, D. Sörbom and S. D. Toit (Lincolnwood: Scientific Software International), 79–96.

Lester, L., and Cross, D. (2015). The relationship between school climate and mental and emotional wellbeing over the transition from primary to secondary school. *Psychol. Well-Being* 5, 1–15. doi: 10.1186/s13612-015-0037-8

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *J. Am. Stat. Assoc.* 83, 1198–1202. doi: 10.1080/01621459.1988.10478722

Liu, C., McCabe, M., Dawson, A., Cyrzon, C., Shankar, S., Gerges, N., et al. (2021). Identifying predictors of university students' wellbeing during the COVID-19 pandemic - a data-driven approach. *Int. J. Environ. Res. Public Health* 18:6730. doi: 10.3390/ijerph18136730

Løhre, A., Lydersen, S., and Vatten, L. J. (2010). School wellbeing among children in grades 1-10. *BMC Public Health* 10, 1–7. doi: 10.1186/1471-2458-10-526

Mager, U., and Nowak, P. (2012). Effects of student participation in decision making at school. A systematic review and synthesis of empirical research. *Educ. Res. Rev.* 7, 38–61. doi: 10.1016/j.edurev.2011.11.001

Mayrhofer, L., Oberwimmer, K., Toferer, B., Neubacher, M., Freunberger, R., Vogtenhuber, S., et al. (2019). "Indikatoren C: Prozesse des Schulsystems" in *Nationaler Bildungsbericht 2018. DAs Schulsystem im Spiegel von Daten und Indikatoren: Band 1*. eds. K. Oberwimmer, S. Vogtenhuber, L. Lassnigg and C. Schreiner (Graz: Leykam), 123–196.

McLellan, R., and Steward, S. (2015). Measuring children and young people's wellbeing in the school context. *Camb. J. Educ.* 45, 307–332. doi: 10.1080/0305764X.2014.889659

Meusburger, K. (2023). "Ausmaß und Formen von Beteiligung" in *Bildung und Partizipation. Mitbestimmung von Schülerinnen und Schülern in Deutschland, Österreich und der Schweiz*. eds. G. Quenzel, M. Beck and S. Jungkunz (Opladen, Berlin, Toronto: Verlag Barbara Budrich), 87–111.

Meusburger, K., and Rücker, E. (2021). "Methodik und Stichprobe der Untersuchung" in *Lebenswelten 2020. Welterhaltung junger Menschen in Österreich Fokus Bildung Schule*. ed. Jugendforschung Pädagogischer Hochschulen Österreichs (Innsbruck: Studien Verlag), 19–39.

Meyer-Ahrens, I., Moshage, M., Schäffer, J., and Wilde, M. (2010). Nützliche Elemente von Schülermitbestimmung im Biologieunterricht für die Verbesserung intrinsischer Motivation. *Zeitschrift für Didaktik der Naturwissenschaften* 16, 155–166.

Moore, G. F., Cox, R., Evans, R. E., Hallingberg, B., Hawkins, J., Littlecott, H. J., et al. (2018). School, peer and family relationships and adolescent substance use, subjective wellbeing and mental health symptoms in Wales: a Cross sectional study. *Child Indic. Res.* 11, 1951–1965. doi: 10.1007/s12187-017-9524-1

Moser, S. (2010). B*eteiligt sein. Partizipation aus der Sicht von Jugendlichen*. Wiesbaden: VS Verlag für Sozialwissenschaften.

Müller-Kuhn, D., and Häbig, J. (2022). "Partizipation, Mitbestimmung, Beteiligung…? Eine begriffliche Differenzierung und damit verbundene Problematiken" in *Mitbestimmung von Kindern: Grundlagen für Unterricht, Schule und Hochschule*. eds. M. Grüning, S. Martschinke, J. Häbig and S. Ertl (Weinheim, Basel: Beltz), 56–73.

Müller-Kuhn, D., Herzig, P., Häbig, J., and Zala-Mezö, E. (2021). Student participation in everyday school life—linking different perspectives. *Z. Für Bild.* 11, 35–53. doi: 10.1007/s35834-021-00296-5

Nobel, T., McGrath, H., Roffey, S., and Rowling, L. (2008). *A scoping study on student wellbeing*. Canberra: Department of Education, Employment and Workplace Relations.

OECD (2017). *PISA 2015 Results (Volume III): Students' Well-Being*. Paris: OECD Publishing.

Ott, M. (2020). Wie beeinflussen familiär-soziodemografische, unterrichtliche und individuell-schulbezogene Faktoren das Wohlbefinden von Schüler/innen? Annäherung mittels eines allgemeinen linearen Modells. *Z. Für Bild.* 10, 279–298. doi: 10.1007/s35834-020-00285-0

Palsdottir, A., Asgeirsdottir, B. B., and Sigfusdottir, I. D. (2012). Gender difference in wellbeing during school lessons among 10–12-year-old children: the importance of school subjects and student–teacher relationships. *Scand. J. Public Health* 40, 605–613. doi: 10.1177/1403494812458846

Poulou, M. S. (2020). Students' adjustment at school: the role of teachers' need satisfaction, teacher–student relationships and student well-being. *Sch. Psychol. Int.* 41, 499–521. doi: 10.1177/0143034320951911

Quenzel, G., Beck, M., and Jungkunz, S. (2023). *Bildung und Partizipation. Mitbestimmung von Schülerinnen und Schülern in Deutschland, Österreich und der Schweiz*. Opladen, Berlin, Toronto: Verlag Barbara Budrich.

Quenzel, G., and Ott, M. (2023). "Beteiligung auf Unterrichtsebene: '… weil ich glaube, man lernt so besser, wenn einen irgendwas interessiert" in *Bildung und Partizipation. Mitbestimmung von Schülerinnen und Schülern in Deutschland, Österreich und der Schweiz*. eds. G. Quenzel, M. Beck and S. Jungkunz (Opladen, Berlin, Toronto: Verlag Barbara Budrich), 205–228.

Reichenbach, R. (2007). "Diskurse zwischen Ungleichen. Zur Ambivalenz einer partizipativen Pädagogik" in *Die Mühen der Freiheit–Probleme und Chancen der Partizipation von Kindern und Jugendlichen*. eds. C. Quesel and F. Oser (Zürich: Verlag Ruegger), 39–62.

Reinhardt, V. (2016). Partizipation in der Schule. Interne und externe Partizipationsmöglichkeiten für eine demokratische Schulkultur. *Unterr. Wirtsch. Polit.* 6, 44–47.

Reisenauer, C. (2020). "Kinder-und Jugendpartizipation im schulischen Feld – 7 Facetten eines vielversprechenden Begriffs" in *Partizipation und Schule: Perspektiven auf Teilhabe und Mitbestimmung von Kindern und Jugendlichen*. eds. S. Gerhartz-Reiter and C. Reisenauer (Wiesbaden: Springer Fachmedien), 3–22.

Renshaw, T. L., and Chenier, J. S. (2019). Screening for student subjective well-being: an analog evaluation of broad and targeted models. *J. Psychoeduc. Assess.* 37, 803–809. doi: 10.1177/0734282918795797

Rinnooy Kan, W. F., Munniksma, A., Volman, M., and Dijkstra, A. B. (2023). Practicing voice: student voice experiences, democratic school culture and students' attitudes towards voice. *Res. Pap. Educ.* 1, 1–21. doi: 10.1080/02671522.2023.2178496

Roffey, S. (2012). Pupil wellbeing. Teacher wellbeing: two sides of the same coin? *Educ. Child Psychol.* 29, 8–17. doi: 10.53841/bpsecp.2012.29.4.8

Royston, P. (2004). Multiple imputation of missing values. *Stata J.* 4, 227–241. doi: 10.1177/1536867X0400400301

Ryan, R., and Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am. Psychol.* 55, 68–78. doi: 10.1037/0003-066X.55.1.68

SchUG (2023). Schulunterrichtsgesetz-Bundesrecht konsolidiert, Fassung vom 22.02.2023. Available at: https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10009600 (Accessed February 22, 2023).

Schulz, W., Ainley, J., Fraillon, J., Losito, B., and Agrusti, G. (2016). IEA International Civic and Citizenship Education Study 2016 Assessment Framework. Springer Open. doi: 10.1007/978-3-319-39357-5

Schulz, W., Ainley, J., Fraillon, J., Losito, B., Agrusti, G., and Friedman, T. (2018). *Becoming citizens in a changing world: IEA international civic and citizenship education study 2016 international report*. Cham: Springer International Publishing.

Schürer, S., van Ophuysen, S., and Michalke, S. (2021). Der Zusammenhang von Schuleinstellung und Qualität kind-und klassenbezogener pädagogischer Beziehungen von Lehrkräften. *Z. Für Bild.* 11, 117–135. doi: 10.1007/s35834-021-00297-4

Schwinger, M., Wild, E., Lütje-Klose, B., Grunschel, C., Stranghöner, D., Yotyodying, S., et al. (2015). "Wie können motivationale und affektive Merkmale bei Kindern mit sonderpädagogischem Förderbedarf valide erfasst werden?" in *Inklusion von Schülerinnen und Schülern mit sonderpädagogischem Förderbedarf in Schulleistungserhebungen*. eds. P. Kuhl, P. Stanat, B. Lütje-Klose, C. Gresch, H. A. Pant and M. Prenzel (Wiesbaden: Springer VS), 273–300.

Shell Deutschland Holding (2015). *Jugend 2015: eine pragmatische Generation im Aufbruch*. Frankfurt am Main: Fischer Taschenbuch.

Simon, T., and Schmitz, L. (2021). "Kontinuitäten auf der Spur? Einstellungen angehender Sachunterrichtslehrkräfte zur Partizipation von Schüler*innen im Zusammenhang zum erlebten Demokratisierungsgrad von Schule und dem Gefühl diskursiver Wirksamkeit" in *Demokratie im Sachunterricht–Sachunterricht in der Demokratie: Beiträge zum Verhältnis von Demokratie (lernen) und Sachunterricht (sdidaktik) Edition Fachdidaktiken*. ed. T. Simon (Wiesbaden: Springer Fachmedien), 283–303.

Smith, D. C., Ito, A., Gruenewald, J., and Yeh, H.-L. (2010). Promoting school engagement: attitudes toward school among American and Japanese youth. *J. Sch. Violence* 9, 392–406. doi: 10.1080/15388220.2010.509308

Soler-i-Martí, R. (2015). Youth political involvement update: measuring the role of cause-oriented political interest in young people's activism. *J. Youth Stud.* 18, 396–416. doi: 10.1080/13676261.2014.963538

Soutter, A. K., O'Steen, B., and Gilmore, A. (2014). The student well-being model: a conceptual framework for the development of student well-being indicators. *Int. J. Adolesc. Youth* 19, 496–520. doi: 10.1080/02673843.2012.754362

Statistik Austria (2015). Zuordnung der Bildungsgänge des österreichischen Bildungswesens zu ISCED 2011. Available at: https://www.statistik.at/KDBWeb/kdb_VersionAuswahl.do;jsessionid=DF40A380BE5032F097CE6A8A8C2AED57 (Accessed November 28, 2023).

Sykas, T., and Peonidis, F. (2022). Direct democracy in high school: an experiment from Greece. *J. Soc. Sci. Educ.* 21, 65–84. doi: 10.11576/jsse-4959

Tomyn, A. J., and Cummins, R. A. (2011). The subjective wellbeing of high-school students: validating the personal wellbeing index—school children. *Soc. Indic. Res.* 101, 405–418. doi: 10.1007/s11205-010-9668-6

Van Petegem, K., Aelterman, A., Van Keer, H., and Rosseel, Y. (2008). The influence of student characteristics and interpersonal teacher behaviour in the classroom on Student's wellbeing. *Soc. Indic. Res.* 85, 279–291. doi: 10.1007/s11205-007-9093-7

Varela, J. J., Sirlopú, D., Melipillán, R., Espelage, D., Green, J., and Guzmán, J. (2019). Exploring the influence school climate on the relationship between school violence and adolescent subjective well-being. *Child Indic. Res.* 12, 2095–2110. doi: 10.1007/s12187-019-09631-9

Vockert, T., Rathmann, K., and Jochmaring, J. (2018). "Sozial bedingte Ungleichheit im Klassenklima und Wohlbefinden: Ein Vergleich zwischen Regel-und Förderschule" in *Leistung und Wohlbefinden in der Schule: Herausforderung Inklusion*. eds. K. Rathmann and K. Hurrelmann (Weinheim Basel: Beltz Juventa), 317–339.

Wentzel, K. R. (2015). "Socialization in school settings" in *Handbook of socialization: Theory and research*. *2nd* ed (New York, NY, US: The Guilford Press), 251–275.

Wetzelhütter, D., and Bacher, J. (2015). How to measure participation of pupils at school. Analysis of unfolding data based on Hart's ladder of participation. Methods data, 26 Pages.

Wilson, C., and Spencer, G. (2022). The mental health support needs of university students with long-term physical health conditions. *Health Educ.* 122, 584–598. doi: 10.1108/HE-01-2022-0004

Wirthwein, L., Steinmayr, R., and Bergold, S. (2018). "Schulleistung und subjektives Wohlbefinden" in *Leistung und Wohlbefinden in der Schule: Herausforderung Inklusion*. eds. K. Rathmann and K. Hurrelmann (Weinheim Basel: Beltz Juventa), 105–120.