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Teachers' perspective on gifted students with extraordinary learning potential in Norway: A descriptive study with primary and secondary teachers

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ABSTRACT

In countries with no clear policy regarding gifted students, teachers are vital. Norway is such a case. Teachers might have stereotypical views and need knowledge about gifted students to facilitate them appropriately. This article aims to give descriptive insights into teachers' views and perceptions of students with extraordinary learning potential (gifted) in Norway. To examine this, we used a survey of primary and secondary school teachers (N = 339), exploring teachers' self-evaluated need for knowledge, how teachers evaluate different characteristics, and the teachers' open-ended descriptions. We also report descriptive statistics from the survey. The results indicate that the Norwegian teachers wanted more knowledge about gifted students; they reported positive characteristics like performing well and being hardworking and intelligent but also being bored and, to some degree, displaying disruptive behavior. Here, 74% of the teachers reported they had experiences with teaching gifted students. One implication is including giftedness as a topic in teacher education. Our study points to important areas for further research – for example, more in-depth research with Norwegian teachers on their view and characterization of gifted students.

KEYWORDS

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Gifted identification; teachers; high ability; student characteristics

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Introduction

Teachers are essential in gifted education. As Tirri (2017) stated, "Teachers are the key agents in identifying and nurturing all kinds of talent" (p. 211). Internationally, a lot of research has supported the needs of gifted students but has shown differences across educational systems and that teachers are not always providing the necessary support and facilitation (Renzulli, 2012; Sekowski & Łubianka, 2015; Walsh & Jolly, 2018). If gifted students are not provided for, they may develop socioemotional difficulties, negative attitudes toward school, and even drop out (Subotnik et al., 2011). Many policy-level strategies can help teachers identify gifted students, and policy does matter by providing structure and guidance (Gubbins et al., 2021; Haug, 2020b; Hodges et al., 2021). Unfortunately, not all countries or municipalities have policies regarding gifted students. Teachers become even more critical in identifying their students' needs in these situations. What happens when there are no national policies to help teachers, and how do teachers view gifted students and their educational needs? The current article illustrates this by exploring teachers' views on education for gifted students in Norway through a descriptive survey. In the survey, we used the term extraordinary learning potential, as this is the terminology used in Norway, with the following definition: *Students with extraordinary learning potential are those students with a strong need and potential in academic subjects like mathematics, reading/writing/language, science, technology, social sciences, or creative/aesthetic subjects and who can transform their potential to talent only if their needs are met in a rich and responding learning environment* (Idsøe, 2014, p. 14, our translation). The present article will use the term gifted students.

The case of Norway

In the current article, we focus on compulsory education, which, in Norway, consists of primary education from first to seventh grade and lower secondary education from eighth to tenth grade (The Norwegian Education Mirror, 2019).

Gifted students are considered a new field of interest in Norwegian educational research. A summary

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has pointed to the need for more research about Norwegian teachers in education for gifted students (Børte et al., 2016). Norway published its first official report on education for gifted students in 2016 (NOU 2016:14, 2016), establishing the new terms high learning potential and extraordinary learning potential. Students with high or extraordinary learning potential are students with the capacity to perform or achieve at the highest level in their given grade or area of expertise (NOU 2016:14, 2016). The report stated that giftedness is not essential in Norwegian teacher education and that Norway has no clear uniform policy regarding gifted students. The educational policies in Norway focus on inclusive and adapted education for all students (The Education Act, 1998). Accordingly, gifted students also need facilitation to enhance their potential (NOU 2016:14, 2016).

Suppose giftedness was not a topic teachers learned about during their teacher education. In that case, teachers might lack knowledge about identification and facilitation in adapting their instruction to the needs of gifted students. Teachers may utilize different identification methods through assessment, such as ability tests, rating scales, or performance-based assessments (Cao et al., 2017). In Europe, the most widely used criteria for identification are aptitude or performance tests (Sekowski & Łubianka, 2015). However, ability tests are rarely used in Norway, and no rating scales exist (NOU 2016:14, 2016).

There are currently around 636,000 students in compulsory education in Norway, and the studentto-teacher ratio is approximately 16 (The Norwegian Education Mirror, 2019). High learning potential is estimated to constitute 10–15% of the student population, while extraordinary learning potential comprises 2–5% (NOU 2016:14, 2016). If 5% of the student population has extraordinary learning potential, that constitutes 31,800 students, so each teacher should statistically have one gifted student at any given time.

Teachers in Norway must follow the principle of adapted and equitable education (*The Education Act*, 1998, §§ 1–1, 1–3), which requires differentiation according to a student's needs and predispositions. However, this principle is not an individual legal right (Haug, 2020a; Norwegian Directorate of Education and Training [NDET], 2021a). The national requirements for teacher education define adapted education as variation through different assignments, material, intensity, organization, teaching aids, and methods. Teachers must adapt the instruction according to the diversity in their classes (Ministry of Education and Research, 2010).

Students who do not have a satisfactory yield from ordinary education have the right to special education (*The Education Act*, 1998, § 5–1). However, according to the NDET, gifted students are not covered by the right to special education. They have a satisfactory yield and should receive adaptation within ordinary education (NDET, 2014).

A qualitative study with focus group interviews of 322 preservice teachers in Norway found that the teachers acknowledged the need to differentiate education but found it hard to design and conduct differentiated instruction (Brevik & Gunnulfsen, 2016; Brevik et al., 2018).

Nordic research on gifted students and giftedness

In a qualitative Swedish study, Mellroth (2021) analyzed the discussions of 12 teachers in a professional development program. Mellroth found that the teachers were prepared to teach their highly able students in mathematics by providing differentiation and challenging assignments. The teachers also had the competence to recognize these students. On the other hand, in a quantitative survey, Persson found that gifted adults (N = 287) retrospectively saw Swedish schools as hostile and unsatisfactory (Persson, 2010). As in Sweden, gifted students in Norway are in regular classrooms, not in any special programs; hence, the general teacher needs knowledge about giftedness, potential, detection, provisions, and the dynamic relationship between potential, support, and motivation (Mattsson & Bengmark, 2011).

Laine (2010) studied the Finnish public discussion of giftedness, finding a diversity of conceptions. Laine further asked if this diversity could influence how gifted children are identified in school and whether those participating in the public discussion discuss the same phenomenon. In Norway, new terminology has been established (high and extraordinary learning potential). However, what this terminology means and how to identify these students might be unclear.

Teachers' characterization of gifted students

When identifying gifted students, teachers in Norway must rely on their knowledge of giftedness, different characteristics, and performance assessment. Level of experience and teacher training have been found to influence teachers' responses (Rizza & Morrison, 2003). However, teachers can be stereotypical when characterizing gifted students and value excellence, potential, rarity, behavior, and innate ability (Lee, 1999; Rizza & Morrison, 2003). Gender biases may also influence characterization; research has found evidence that girls are less frequently nominated for gifted programs (Endepohls-Ulpe & Ruf, 2006; Hernández-Torrano et al., 2013).

Persson (1998) studied Swedish teachers' (N =232) conceptualizations of giftedness, finding that teachers failed to understand the social-emotional aspect of giftedness, instead focusing on the ideal student, the "paragon of virtue." Students characterized as such act as leaders, never give up, are inspiring, and act as teacher assistants when the need arises (Persson, 1998). This is not an image of all gifted students, and it is vital to recognize that gifted students might underachieve and not perform according to their potential or the expectations of their teachers (Reis & McCoach, 2000). As Smedsrud (2018) stated, there is a misconception that gifted students must be high achieving. Mattson found that Swedish headteachers (N =34) emphasized creative ability, logical ability, and motivation in the conception of gifted students in mathematics (Mattsson, 2010). Norwegian preservice teachers have characterized students with high learning potential as a heterogenic group with requirements regarding subject knowledge and cognitive and socioemotional needs (Brevik et al., 2018).

Finnish teachers have characterized gifted students using cognitive, creative, and motivational features (Laine et al., 2016). A Spanish study found that the teachers nominated students with high scores in verbal and numerical areas for gifted programs, choosing students who excelled in social intelligence, showing that they were more likely to nominate a student displaying positive behavior than one with disruptive behavior (Hernández-Torrano et al., 2013).

Aims of the study

The current article aims to provide insight into how teachers perceive education for students with extraordinary learning potential in Norway by using descriptive data from primary and secondary school teachers. We explored where teachers reported gaining knowledge, their self-evaluated need for knowledge about giftedness, and how they evaluated different characteristics. We were also interested in how many teacher-identified students were in our selection because this is a new term and an understudied topic in Norwegian educational research.

The rationale for the current study is twofold. There is a gap in the Norwegian research literature regarding teachers and giftedness (Børte et al., 2016). Teachers are also the most crucial factor in Norwegian compulsory education for providing gifted students with the differentiation they need (Smedsrud et al., 2018; Tirri, 2017). The current study was a prerequisite for developing an interview guide for a qualitative interview study and identifying possible research gaps for further research.

The following research questions guided the present article:

- (1) Where do Norwegian teachers report that they have gained knowledge about gifted, and how do they self-evaluate their need for knowledge?
 - a. How do the background variables of years of experience, experience with gifted students, and education level correlate with teachers' self-evaluated need for knowledge?
- (2) How do Norwegian teachers evaluate the different characteristics of gifted students, and how do they describe the characteristics of gifted students?

Materials and methods

Participants

In total, N = 339 teachers in Norway participated in a web-based survey. We recruited the participants in two cycles. The first sample consisted of n = 144participants from a national inquiry of all combined grade 1 to 10 schools in Norway (650 schools). Only 32 schools answered and sent the survey to their teachers, with a total response rate of 20% from these schools. After the first cycle, we contacted municipalities and received replies from one in Eastern Norway and one in Western Norway. The one in the east provided 18 participants, and the one in the west provided n = 177, with a response rate of 63%. The western sample is representative of that municipality but not necessarily the whole country. The national sample has too low a response rate to be representative and is prone to self-selection bias, so we cannot generalize the findings to all Norwegian 1-10 teachers (Gorard, 2001). The western sample mitigates the self-selection bias in the national sample. Similarities between the total sample and the national average enhance the generalizability. There is an overweight of female teachers (77%), similar to the national gender difference in primary and secondary school (75% female teachers; NDET, 2021b). Over half of the teachers in our study are contact teachers, and the amount coincides with the national difference (57% contact teachers; NDET, 2021c).

Pilot

We conducted a pilot test with 48 teachers to evaluate the survey questions. The participants included one secondary school with 44 teachers and four teachers the first author knew personally. The pilot participants answered the survey and gave feedback on the questions. Feedback included comments like: "I am not sure what you mean by this question" or "I appreciate this question being openended, as that made me reflect more on where I have generated knowledge about gifted students." After the pilot, we made minor changes, such as changing the wording of some questions. No questions were excluded after the pilot. We did not include the informants from the pilot in the final survey.

Instrument

We collected data using a web-based survey provided by SurveyMonkey (www.surveymonkey.com). The authors designed the survey specifically for the current study, with 25 questions split into five different areas: (1) background questions, (2) questions on teachers' self-evaluated need for knowledge of gifted students and where teachers have received knowledge, (3) identification and characteristics of gifted students, (4) adaptation or differentiation of education, and (5) experience with gifted students. The survey consisted of dichotomous questions, Likert-scale questions, and open-ended questions. We developed the survey from the literature on gifted education, for example, on differentiation (Gagné, 2015; VanTassel-Baska & Hubbard, 2016), on characteristics (Ackerman, 1997; Betts & Neihart, 1988; Cross, 2002; Idsøe, 2014; Lee, 1999; Lie, 2014), and other relevant literature (Renzulli, 2012; Shaywitz et al., 2001; Subotnik et al., 2011) but with a Norwegian scope. The survey is available as an appendix (1).

The "characteristics of giftedness" scale consisted of 15 different characteristics that the teachers agreed or disagreed with on a five-item Likert scale. We developed the different characteristics from the Norwegian expert literature concerning cognitive and socioemotional characteristics and differences between high-achieving and gifted students (Idsøe, 2014; Idsøe & Skogen, 2011; Lie, 2014). The scale is simplified, hence not representing all possible characteristics. We focused on the characteristics developed from the Norwegian literature. Preservice teachers use cognitive and socioemotional characteristics when describing students with high learning potential (Brevik & Gunnulfsen, 2016). We ended up with 15 characteristics representing various cognitive and socioemotional aspects, in line with previous research in Norway (Brevik & Gunnulfsen, 2016; Idsøe, 2014; Idsøe & Skogen, 2011; Lie, 2014). The open-ended question, where teachers could write what they believed characterizes gifted students, mitigated some limitations with the limited scale.

To enhance validity, we performed a pilot test before collecting the data and included a definition of giftedness at the beginning of the survey. To check reliability, we performed Cronbach's α .

Analyses

We used descriptive frequencies and bivariate analyses to establish any significant correlation with background variables. We used the open-ended questions as a supplement to the other survey data. We used quantitative content analysis to

Table 1. Coding example.		
Quote	Unit	Code
Ability to reflect, see contexts, and understand subjects on a much higher level than their age peers. Learning is substantially faster than the average student.	Ability to reflect, see context, and understand on a higher level	Intellect
Large inner drive and motivation for acquiring new knowledge.	Learning is faster	Learn fast
	Large inner drive and motivation for	Motivation
	acquiring new knowledge	Joy of
		learning

analyze the open-ended questions regarding teachers' descriptions and where teachers have knowledge gained about gifted students (Neuendorf, 2017).In content analysis, we split the data into smaller units for interpretation. The goal is to produce a numerical count of key categories and a summary of the categories and concepts (Neuendorf, 2017). In developing the coding scheme used in the content analysis, we used the literature from developing the survey and a preliminary review of the answers. We put the coding scheme into SPSS 25, and all answers were re-read and coded accordingly. See, Table 1 for an example of the content analysis. Table 4 provides all the codes and frequencies. We performed all statistical computations using SPSS 25.

Ethical considerations

The Norwegian Center for Research Data (NSD) approved this study. To answer the survey, all participants had to read the information letter at the beginning of the survey. The information letter stated that participation was voluntary and that no personal information would be collected for identification. By answering the survey, the participants completed an informed act of consent.

Results

The teachers were from different parts of Norway and taught first to tenth grades. Two-thirds identified as female (n = 261). According to the teachers' self-evaluation, almost half (44%) believed they currently had gifted students. More than 7 out of 10 (74%) believed they had experience teaching gifted students. The participants had a mean experience of 14 years (*SD*: 10.5). For other descriptive results, see, Table 2.

We have organized this section according to the research questions. First, Where do Norwegian teachers report they have gained knowledge about gifted, and how do they self-evaluate their need for more knowledge?

The teachers answered an open-ended question about where they had received knowledge or information about gifted students. This question was open-ended because we did not want to limit the teachers to our predispositions, and it allowed the teachers to elaborate. The quantitative content analysis generated eight categories: experience (44%), education (27%), literature (18%), no knowledge (14%), media (13%), courses (6%), parents/student themselves (5%), and other (3%). Fourteen percent claimed they did not know about gifted students. Further, even though almost a third mentioned their teacher education, the teachers also reported that they did not see it as a vital part.

Because teachers must adapt or differentiate education for all students, it is necessary to know if they used differentiation and if the educational system would allow for differentiation. Nine out of ten

Tal	ble	2.	Descri	ptive	statistics.
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	Ν	%
Total	339	100
National survey	144	43
Eastern municipality	18	5
Western municipality	177	52
Gender		
Female	261	77
Male	78	23
Education		
Bachelor (4 years)	138	41
Bachelor (4 +1 year)	139	41
Master (5 years)	8	2
Master (5 +1 year)	18	5
Other	36	11
Teaching level		
Primary school	213	63
Secondary school	85	25
Across all grades	37	11
Administration	4	1
Public school	310	91
Private school	29	9
School size		
<100 students	68	20
100–199 students	85	25
200–399 students	142	42
>400 students	44	13
Contact teacher		
Yes	187	55
No	152	45

teachers agreed that they differentiated, and eight out of ten agreed that there was space for differentiated instruction in Norwegian schools.

Further, the questionnaire asked the teachers to what degree they agreed (Likert scale 1–5) that they needed more knowledge about gifted students and adaptation. Nine out of ten teachers said they needed more knowledge and information in this area. To investigate a possible relationship between the background variables (research question 1a), we performed a Pearson correlation between experience measured in years and the question, "To what degree do you agree or disagree that you need more knowledge about gifted students?" The correlation was significant, with a small negative correlation r =-.11 (p = .05), indicating that the more experienced teachers were less in agreement with the statement that they needed more knowledge about gifted students. However, because the correlation was small, it is unclear whether it should be further interpreted. The other background variables had no significant correlations.

The second research question was, *How do Norwegian teachers evaluate different characteristics of gifted students, and how do they describe gifted students?*

We analyzed the "characteristics of giftedness" scale and looked at the teachers' descriptions to answer this question. All answers were on a fiveitem Likert scale. A total of 288 respondents answered the questions. See, Table 3 for the descriptive results. We tested the scale's internal consistency using Cronbach's α , which gave a result of .75. This result was adequate (Pallant, 2016) but indicated that some items needed further clarification. The internal consistency indicated that the characteristics in the scale were related to each other; however, we analyzed them separately to determine which characteristics the teachers agreed with most.

The teachers mostly agreed on the positive characteristics; eight out of ten agreed that gifted students performed well and were inquisitive. Three out of four agreed that gifted students were willing to learn and showed an advanced language. The teachers were more diverse in terms of the students' negative characteristics. Two out of ten agreed that gifted students could be irritating, while almost half (46%) agreed that they might be "know-it-alls" and that they might show disruptive behavior (48%).

The survey asked the teachers to describe gifted students using an open-ended question (n = 268). In the quantitative content analysis, we developed 19 different codes (see, Table 4). The maximum number of codes was 9, the minimum was 1, and the mean was 2.93. The codes were related to cognitive traits in the student such as intelligence, creativity, and curiosity or behavior in school, such as hardworking, motivated, and problematic behavior. There were differences in the teachers' answers; some were long and detailed, and some were relatively short. Some (10%) teachers mentioned that gifted students were diverse, making it difficult to sum it up in a few sentences.

Table 3. Frequencies on characteristics of gifted

	Totally agree (1)%	Somewhat agree (2)%	Neither agrees nor disagrees (3)%	Somewhat disagree (4)%	Totally disagree (5)%	Mean	SD
1. Performs well at school	43.2	39.0	14.0	3.2	0.6	1.79	0.85
2. Disruptive	3.6	44.7	33.1	11.6	7.0	2.74	0.96
3. Unsocial	2.6	21.1	47.0	17.8	11.5	3.14	0.97
4. Creative	19.6	39.5	33.3	6.5	1.0	2.30	0.90
5. Energetic	12.7	37.6	44.1	4.9	0.7	2.43	0.80
6. Diligent	19.9	37.6	31.4	10.8	0.3	2.34	0.93
7. Inquisitive	36.8	41.8	17.8	3.6	0	1.88	0.82
8. Quiet	4.9	23.0	56.1	13.8	2.3	2.86	0.80
9. Irritating	2.7	15.4	39.1	16.1	26.8	3.49	1.12
10. Extroverted	5.0	25.2	59.8	9.6	0.3	2.75	0.71
11. Social	7.9	28.1	50.7	12.9	0.3	2.70	0.81
12. Show an advanced language	28.6	45.7	22.0	3.0	0.7	2.01	0.83
13. Know-it-all	8.3	37.6	35.6	10.9	7.6	2.72	1.02
14. Willing to learn	35.8	40.1	19.5	4.6	0	1.93	0.86
15. Introverted	1.3	15.3	65.4	11.6	6.3	3.06	0.76

Table 4. Characteristics Developed from the Teachers' Descriptions (n = 268).

Character trait	Ν	%
Cognitive attributes		
Intellect	91	34
Need individual adaptation	79	30
Subject knowledge	63	24
Different	53	20
Learn fast	50	19
Joy of learning	47	18
Curious	17	6
Creative	10	4
Behavior in school		
Boredom	84	31
Problematic behavior	52	19
Perform well in school	39	15
Motivated	33	12
Hardworking	28	10
Fast	28	10
Diverse group	28	10
Independent	25	9
Challenging	25	9
Active	19	7
Underachiever	13	5

Note: Max codes 9, min 1. Mean 2.93. SD 1.43

Because statistically speaking, each teacher should have one gifted student at any time, we were interested in how many teacher-identified gifted students were in our material. Three out of four teachers reported that they had experience with gifted students. Each teacher has had six gifted students (the total reported number was 1,253 from 214 teachers, M 5.94), averaging three girls and three boys. Those with gifted students (44%) reported two gifted students each, one boy and one girl. We performed paired samples t-tests to evaluate the gender difference for reported boys (M 1.42, SD 1.20) and girls (M 1.34, SD 1.36; t(91) =1.82, p = .41, two-tailed), which was insignificant (total boys M 3.64, SD 3.65; total girls M 3.24, SD 3.95; t(164) = 1.81, p = .07, two-tailed).

Discussion

Norwegian teachers have been almost unanimous in requesting more knowledge about gifted students in our study. Mostly, the teachers have gained knowledge through their own experiences and did not report teacher education as an essential part. Tirri (2017) stated that teachers are vital agents in developing talent. Furthermore, teacher education is the key to producing teachers with proper knowledge about students with extraordinary learning potential and how to facilitate them appropriately. Teachers need knowledge about different

characteristics, tools for identification, adaptation in school, and differentiation. However, our results show that 14% of the teachers reported no knowledge about gifted students. Almost 90% said they needed more knowledge. According to a Norwegian official report (2016: 14, 2016), giftedness is not essential in teacher education. We also saw the same tendency in our results. Mellroth (2021) found that the teachers they interviewed stated a duty to acquire knowledge about gifted students and the duty and right to disseminate their knowledge to other teachers. In line with this, there seems to be a need to include giftedness as a course in Norwegian teacher education (Brevik et al., 2018). Teacher education should provide teachers with the necessary knowledge to identify gifted students and provide for them in school.

Statistically, each teacher should have around one gifted student at any time. However, only 44% of the teachers in our study reported they currently had one or more gifted students, and 74% reported they had a gifted student during their career. This result might indicate that some gifted students were not recognized as gifted by their teachers because of limited knowledge or a more limited conception of giftedness. This result might also be a consequence of a lack of consensus regarding what constitutes giftedness and the lack of uniform policies in Norway (NOU 2016:14, 2016; Smedsrud, 2020).

Characterization of gifted students

The Norwegian teachers characterized gifted students mainly in a positive light. The characteristics they agreed most with were "performs well at school" (82%), "inquisitive" (79%), and "willing to learn" (76%). In their open-ended descriptions, the most used characteristics were "intellect" (34%), "boredom" (31%), "need for individual adaptation" (30%), and high "subject knowledge" (24%). Norwegian teachers primarily identified gifted students as intelligent, high achievers, curious but bored, and needing individual adaptation. This result is in line with previous studies from Sweden (Mattsson, 2010; Persson, 1998), Australia (Lee, 1999), the USA (Rizza & Morrison, 2003), and Finland (Laine et al., 2016).

The student characterized by the teachers seems to be the golden student every teacher wants. This student is willing to learn, intelligent, diligent, hardworking, learns fast, and performs well. One problem is that this is not always the case. There is no absolute relationship between extraordinary learning potential and school achievement; gifted students might underachieve (Betts & Neihart, 1988; Rubenstein et al., 2012; Subotnik et al., 2011). In our study, the Norwegian teachers thought about a gifted student as mainly a high-achieving student. We saw this when looking at the frequencies of "performs well" and "diligent." When combining "totally agree" and "somewhat agree," 82% of the teachers agreed on the characteristic of "performs well," and 58% agreed on "diligence." These results indicate that the teachers focused on results, meaning underachievers might go unnoticed. If teachers do not recognize that gifted students might underachieve, these students could potentially lose out on beneficial interventions and facilitation in school (Reis & McCoach, 2000).

An interesting result is that 48% of the teachers agreed on the disruptive characteristic, and 19% described problematic behavior in their descriptions. It seems disruptive or problematic behavior is something that many of the teachers were experiencing. This result goes against other research, for example, a Spanish study indicating that teachers nominated students with positive behavior, not disruptive behavior (Hernández-Torrano et al., 2013).

Limitations of the study

Although the current study obtained answers from teachers from the entire country, more than half of the teachers were from the same area, limiting the generalizability of the study. There was also missing data because not all teachers answered all the questions, especially the open-ended questions. However, we received answers from two-thirds of the teachers to the open-ended questions. The current study has provided valuable insights into teachers' views on gifted education in Norway.

Implications and further research

Teachers are essential for developing gifted students' potential (Gagné, 1995; Renzulli & Renzulli, 2010). According to the results of our study, the teachers wanted and needed more knowledge about giftedness and gifted students. They displayed a mostly positive view of gifted students and characterized them as intelligent, performing well in school but bored, and, to some degree, displaying disruptive behavior. Even though each teacher should have one gifted student at any given time, only 44% of the teachers believed they currently had gifted students. This result might indicate that some gifted students go unnoticed in Norway. It seems that giftedness should be considered a topic of higher value in Norwegian teacher education.

Because this was a relatively small study, there is a need for more in-depth research on this phenomenon in the Norwegian context. Areas for further research could be more in-depth research with teachers on their views, characterization, and conceptualization of giftedness or gifted students. Because the terminology and conception regarding giftedness are vague, it is crucial to investigate how teachers conceptualize this phenomenon.

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No potential conflict of interest was reported by the author(s).

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References

- Ackerman, C. M. (1997). Identifying gifted adolescents using personality characteristics: Dabrowski's overexcitabilities. *Roeper Review*, 19(4), 229–236. https://doi.org/10.1080/ 02783199709553835
- Betts, G. T., & Neihart, M. (1988). Profiles of the gifted and talented. *Gifted Child Quarterly*, *32*(2), 248–253. https://doi. org/10.1177/001698628803200202
- Børte, K., Lillejord, S., & Johansson, L. (2016). Evnerike elever og elever med stort læringspotensial: En forskningsoppsummering. Kunnskapssenter for utdanning.
- Brevik, L. M., & Gunnulfsen, A. E. (2016). Differensiert undervisning for høytpresterende elever med stort læringspotensial. Acta Didactica Norge, 10(2), 212–234. https://doi.org/10.5617/adno.2554
- Brevik, L. M., Gunnulfsen, A. E., & Renzulli, J. S. (2018). Student teachers' practice and experience with differentiated instruction for students with higher learning potential. *Teaching and Teacher Education*, 71, 34–45. https://doi. org/10.1016/j.tate.2017.12.003
- Cao, T. H., Jung, J. Y., & Lee, J. (2017). Assessment in gifted education: A review of the literature from 2005 to 2016. *Journal of Advanced Academics*, 28(3), 163–203. https://doi. org/10.1177/1932202X17714572
- Cross, T. L. (2002). Competing with myths about the social and emotional development of gifted students. *Gifted Child Today*, 25(3), 44–45. https://doi.org/10.4219/gct-2002-76
- The Education Act. (1998). Lov om grunnskolen og den vidaregaåande opplæringa (pp. 07-17-61). https://lovdata. no/dokument/NL/lov/1998-07-17-61
- Endepohls-Ulpe, M., & Ruf, H. (2006). Primary school teachers' criteria for the identification of gifted pupils. *High Ability Studies*, 16(2), 219–228. https://doi.org/10.1080/ 13598130600618140
- Gagné, F. (1995). From giftedness to talent: A developmental model and its impact on the language of the field. *Roeper Review*, 18(2), 103–111. https://doi.org/10.1080/ 02783199509553709
- Gagné, F. (2015). Academic talent development programs: A best practices model. Asia Pacific Education Review, 16 (2), 281–295. https://doi.org/10.1007/s12564-015-9366-9
- Gorard, S. (2001). Quantitative methods in educational research: The role of numbers made easy. Continuum.
- Gubbins, E. J., Siegle, D., Ottone-Cross, K., McCoach, D. B., Langley, S. D., Callahan, C. M., Brodersen, A. V., & Caughey, M. (2021). Identifying and serving gifted and

talented students: Are identification and services connected? *Gifted Child Quarterly*, 65(2), 115–131. https://doi.org/10.1177/0016986220988308

- Haug, P. (2020a). Tilpassa opplæring. In M. H. Olsen & P. Haug (Eds.), *Tilpasset opplæring*. Cappelen Damm akademisk. 11-40.
- Haug, P. (2020b). 'It is impossible to avoid policy' comment on Mel Ainscow: Promoting inclusion and equity in education: Lessons from international experiences. Nordic Journal of Studies in Educational Policy, 6(1), 17–20. https://doi.org/10.1080/20020317.2020.1730092
- Hernández-Torrano, D., Prieto, M. D., Ferrándiz, C., Bermejo, R., & Sáinz, M. (2013). Characteristics leading teachers to nominate secondary students as gifted in Spain. *Gifted Child Quarterly*, 57(3), 181–196. https://doi. org/10.1177/0016986213490197
- Hodges, J., Mun, R. U., Jones Roberson, J., & Flemister, C. "Tedd." (2021). Educator perceptions following changes in gifted education policy: Implications for serving gifted students. *Gifted Child Quarterly*, 65(4), 338–353. https:// doi.org/10.1177/00169862211023796
- Idsøe, E. C. (2014). *Elever med akademisk talent i skolen*. Cappelen Damm AS.
- Idsøe, E. C., & Skogen, K. (2011). Våre evnerike barn en utfordring for skolen. Høyskoleforlaget.
- Laine, S. (2010). The Finnish public discussion of giftedness and gifted children. *High Ability Studies*, 21(1), 63-76. https://doi.org/10.1080/13598139.2010.488092
- Laine, S., Kuusisto, E., & Tirri, K. (2016). Finnish teachers conceptions of giftedness. *Journal for the Education of the Gifted*, 39(2), 151–167. https://doi.org/10.1177/ 0162353216640936
- Lee, L. (1999). Teachers' conceptions of gifted and talented young children. *High Ability Studies*, 10(2), 183–196. https://doi.org/10.1080/1359813990100205
- Lie, B. (2014). Eksepsjonelle og dobbelteksepsjonelle elever: Begavede elever og begavede elever med lærevansker. Cappelen Damm akademisk.
- Mattsson, L. (2010). Head teacher's conception of gifted students in mathematics in Swedish upper secondary school. *Nordic Studies in Mathematics Education*, 15(3), 3–22. https://pure.au.dk/portal/en/activities/nordic-studies-inmathematics-education-tidsskrift(97e3799f-0504-42f0-9782-6973e5a62fbc).html
- Mattsson, L., & Bengmark, S. (2011). On track to gifted education in mathematics in Sweden. In B. Sriraman & K. H. Lee (Eds.), *The elements of creativity and giftedness in mathematics* (pp. 81–101). Sense Publishers. https://doi.org/10. 1007/978-94-6091-439-3_6
- Mellroth, E. (2021). Teachers' views on teaching highly able pupils in a heterogeneous mathematics classroom. *Scandinavian Journal of Educational Research*, 65(3), 481-499. https://doi.org/10.1080/00313831.2020. 1716065
- Ministry of Education and Research. (2010). Nasjonale retningslinjer for grunnskolelærerutdanningen 5.-10. trinn. https://www.regjeringen.no/globalassets/upload/kd/rund

skriv/2010/retningslinjer_grunnskolelaererutdanningen_ 5_10_trinn.pdf

- Neuendorf, K. A. (2017). The content analysis guidebook. SAGE Publications, Inc. https://doi.org/10.4135/ 9781071802878
- Norwegian Directorate of Education and Training [NDET]. (2014). Veilederen Spesialundervisning. https://www.udir. no/laring-og-trivsel/sarskilte-behov/spesialundervisning/ Spesialundervisning/
- Norwegian Directorate of Education and Training [NDET]. (2021a). *Tilpasset opplæring*. https://www.udir.no/laring-og -trivsel/tilpasset-opplaring/
- Norwegian Directorate of Education and Training [NDET]. (2021b). Lærere i grunnskolen etter kjønn alder og innvandrerbakgrunn. https://www.udir.no/tall-og-forskning/statis tikk/ansatte-i-barnehager-og-skoler/larere-i-grunnskolenetter-kjonn-alder-og-innvandrerbakgrunn/
- Norwegian Directorate of Education and Training [NDET]. (2021c). Antall lærere og lærerårsverk i grunnskolen. https:// www.udir.no/tall-og-forskning/statistikk/ansatte-i-barneha ger-og-skoler/antall-larere-og-larerarsverk/
- The Norwegian Education Mirror. (2019). The Norwegian directorate of education and training. https://www.udir.no/in-english/education-mirror-2019/
- NOU 2016:14. (2016). Mer å hente. Bedre læring for elever med stort læringspotensial. Kunnskapsdepartementet. https://www. regjeringen.no/no/dokumenter/nou-2016-14/id2511246/
- Pallant, J. (2016). SPSS Survival Manual (6th ed.). Open University Press.
- Persson, R. S. (1998). Paragons of virtue: Teachers' conceptual understanding of high ability in an egalitarian school system. *High Ability Studies*, 9(2), 181–196. https://doi.org/10. 1080/1359813980090204
- Persson, R. S. (2010). Experiences of intellectually gifted students in an egalitarian and inclusive educational system: A survey study. *Journal for the Education of the Gifted*, 33 (4), 536–569. https://doi.org/10.1177/016235321003300405
- Reis, S. M., & McCoach, D. (2000). The underachievement of gifted students: What do we know and where do we go? *Gifted Child Quarterly*, 44(3), 152–170. https://doi.org/10. 1177/001698620004400302
- Renzulli, J. S. (2012). Examining the role of gifted education and talent development for the 21st century: A four-part theoretical approach. *Gifted Child Quarterly*, *56*(3), 10. https://doi.org/10.1177/0016986212444901
- Renzulli, J. S., & Renzulli, S. R. (2010). The schoolwide enrichment model: A focus on student strengths and interests. *Gifted Education International*, 26(2–3), 140–156. https:// doi.org/10.1177/026142941002600303

- Rizza, M. G., & Morrison, W. F. (2003). Uncovering stereotypes and identifying characteristics of gifted students and students with emotional/behavioral disabilities. *Roeper Review*, 25(2), 73-77. https://doi.org/10.1080/ 02783190309554202
- Rubenstein, L. D., Siegle, D., Reis, S. M., McCoach, D. B., & Burton, M. G. (2012). A complex quest: The development and research of underachievement interventions for gifted students. *Psychology in the Schools*, 49(7), 678–694. https:// doi.org/10.1002/pits.21620
- Sekowski, A., & Łubianka, B. (2015). Education of gifted students in Europe. *Gifted Education International*, 31(1), 73–90. https://doi.org/10.1177/0261429413486579
- Shaywitz, S. E., Holahan, J. M., Freudenheim, D. A., Fletcher, J. M., Makuch, R. W., & Shaywitz, B. A. (2001). Heterogeneity within the gifted: Higher IQ boys exhibit behaviors resembling boys with learning disabilities. *Gifted Child Quarterly*, 45(1), 16–23. https://doi.org/10. 1177/001698620104500103
- Smedsrud, J. (2018). Forsering og akselerasjon for evnerike elever: Det dårligste av de beste alternativene. *Psykologi i kommunen*, 3(2018), 5–9. https://psykisk-kommune.no/ fagartikkel/forsering-og-akselerasjon-for-evnerike-eleverdet-darligste-av-de-beste-alternativene/19.48
- Smedsrud, J. (2020). Explaining the variations of definitions in gifted education. *Nordic Studies in Education*, 40(1), 79–97. https://doi.org/10.23865/nse.v40.2129
- Smedsrud, J., Nordahl-Hansen, A., Idsøe, E. C., Ulvund, S. E., Idsøe, T., & Lang-Ree, O. C. (2018). The association between math achievement and perceived relationship in school among high intelligent versus average adolescents. *Scandinavian Journal of Educational Research*, 63(7). https://doi.org/10.1080/00313831.2018.1476406
- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking giftedness and gifted education: A proposed direction forward based on psychological science. *Psychological Science in the Public Interest*, 12(1), 3–54. https://doi.org/10.1177/1529100611418056
- Tirri, K. (2017). Teacher education is the key to changing the identification and teaching of the gifted. *Roeper Review*, 39 (3), 210–212. https://doi.org/10.1080/02783193.2017. 1318996
- VanTassel-Baska, J., & Hubbard, G. F. (2016). Classroombased strategies for advanced learners in rural settings. *Journal of Advanced Academics*, 27(4), 285–310. https:// doi.org/10.1177/1932202X16657645
- Walsh, R. L., & Jolly, J. L. (2018). Gifted education in the Australian context. *Gifted Child Today*, 41(2), 81–88. https://doi.org/10.1177/1076217517750702