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Scandinavian Journal of Educational Research

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/csje20

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To cite this article: Geir Nyborg, Liv Heidi Mjelve, W. Ray Crozier, Anne Arnesen, Robert J. Coplan & Anne Edwards (2023): Teachers' Strategies for Helping Shy Students: Findings from a National Survey in Norway, Scandinavian Journal of Educational Research, DOI: 10.1080/00313831.2023.2196534

To link to this article: https://doi.org/10.1080/00313831.2023.2196534

Published online: 05 Apr 2023.

SCANDINAVIAN JOURNAL OF EDUCATIONAL RESEARCH
https://doi.org/10.1080/00313831.2023.2196534

Teachers' Strategies for Helping Shy Students: Findings from a National Survey in Norway

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ABSTRACT

The goals of this study were to investigate strategies that teachers may use to help students with their shyness at school and to explore potential effects of demographic variables (i.e., teacher experience, class size, grade level) on teachers' strategies. Participants were a national sample of $N = 275$ teachers (from 230 elementary schools) in Norway, who reported their frequency of use of different strategies and rated their perceived effectiveness for helping shy students across four domains: (1) encouraging oral participation; (2) promoting social relationships; (3) reducing anxiety; and (4) whole-class strategies. Across domains, common themes included teachers' sensitivity to individual shy students, reduction of stress associated with novel situations, involving peers, focus on social skills, and building trusting relationships with shy students. Demographic variables had only limited effects on strategy use/effectiveness. Findings are discussed in relation to previous theory and research related to teachers' strategies for assisting shy students at school.

ARTICLE HISTORY
Received 15 November 2021
Accepted 20 March 2023

KEYWORDS
Shyness; students; classroom practices; teacher reported strategies; elementary school

Introduction

The central aim of this study is to investigate Norwegian elementary-school teachers' reported use and evaluation of intervention strategies to help shy students across a range of domains at school. A second aim is to investigate potential effects of demographic variables (i.e., teacher experience, class size, child grade level) on these strategies. For the purposes of our research, *shyness* is defined as a temperamental (or personality) trait characterized by heightened feelings of wariness in the face of social novelty, reticence and withdrawn behaviors in social situations, and embarrassment and self-consciousness in situations of perceived social evaluation (Coplan & Rubin, 2010; Crozier, 1995). Theoretical models of the development and implications of shyness all highlight the school context as representing unique and daunting challenges for shy students (Coplan & Arbeau, 2008; Evans, 2001; Henderson & Fox, 1998; Kalutskaya et al., 2015). For example, volunteering answers to questions, asking for help from a teacher, speaking up in class, and participating in classroom discussions are all important learning situations that many shy children find uniquely difficult

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(Crozier, 2020). One recurrent finding is that shy children are speech reticent across a range of situations at school (Evans, 2010). This can contribute to teachers underestimating the abilities of shy students (Coplan et al., 2011) and may deprive the student of opportunities to gain confidence by being praised for contributions to classroom discussion or for answering questions correctly.

Less structured social gatherings during the school day, such as recess, can also be challenging for shy students (Coplan et al., 2013). Evidence indicates that in comparison with their more sociable peers, shy students' educational attainments are relatively lower (Crozier & Hostettler, 2003; Hughes & Coplan, 2010), their performance on tests of language development is relatively poorer (Evans, 2010), and they are more likely to have difficulties in adjustment to school (Evans, 2001; Rudasill & Rimm-Kaufman, 2009). Shyness is also associated with anxiety at school (Weeks et al., 2016), which itself is correlated with academic and adjustment difficulties (Owens et al., 2012). Importantly, results from several longitudinal studies indicate that shyness in childhood is predictive of later school adjustment difficulties, including lower social competence (Baardstu et al., 2022), peer problems (Baardstu et al., 2020), symptoms of anxiety and depression (Karevold et al., 2012), and reduced academic achievement (Stenseng et al., 2022). Of particular note, extreme shyness in childhood is one of the strongest predictors of the later development of clinical anxiety disorders (Sandstrom et al., 2020).

Teachers' Strategies for Shy Students

A number of studies have explored teachers' use of various intervention strategies in response to different classroom behaviors, including shyness. In a pioneering study, Brophy and Bohrkemper (1989) interviewed a sample of experienced elementary school teachers ($n = 98$) about their general and specific strategies for working with *problem student types*, including shy and withdrawn students. Three general approaches were identified: (1) modeling or some form of instruction to encourage greater participation in class; (2) attempts to provide a supportive environment for the child and boost their self-esteem; and (3) shaping desirable behavior by means of incentives or a contract system. Frequencies of the reported use of more specific strategies addressed at shyness were also presented. These included: (1) enlisting peer support; (2) assignment to specific roles in the classroom; (3) reassurance; (4) praise for academic success; and (5) encouraging the student to speak up. There was little use of punishment or threats.

Several studies have asked teachers to respond to vignettes depicting hypothetical students displaying shy and other behaviors. For example, Coplan et al. (2011) reported that elementary-school teachers' most typically selected social learning strategies (e.g., use of encouragement and praise) and peer-focused strategies when responding to shy behaviors. Similarly, Deng et al. (2017) reported greater use of social learning strategies for hypothetical shy students, relative to average and exuberant students, among a sample of pre-service elementary-school teachers. Items referred to promotion of social skills, involving a classmate in problem solving, praising the student for appropriate behavior, and encouraging him or her to join in activities. Conversely, participants were less likely to use 'high-powered' strategies (direct intervention, punishment) with shy students. Most recently, Nadiv and Ricon (2020) also reported that teachers used more social learning (verbal encouragement, modeling, reinforcement) and peer-focused strategies with shy students than with exuberant or average students. The study also found that, with shy students, teachers used social learning and peer-focused strategies more than high-powered strategies.

Using a different design, Thijs et al. (2006) examined teachers' reported practices working with shy (socially inhibited), hyperactive and average kindergarten children, using a questionnaire instrument specifically designed to assess teaching practices. Principal-components analysis of the instrument identified two factors, which were labeled *Behavior Regulation*, with items referring to setting clear limits on behavior, punishing socially disturbing behavior, and speaking individually to the child about his/her behavior – and *Socioemotional Support*, with items referring to encouraging the child to play with other children, intervening if the child feels ill at ease, and making the

child feel safe. Teachers reported greater use of socioemotional support with shy children relative to the other two groups.

Finally, other studies have taken a more qualitative approach. For example, Mjelve et al. (2019) conducted interviews and focus groups with experienced teachers, who indicated their sensitivity to how shyness impedes student engagement in activities that require oral contributions. The strategies that they reported using could be classified into four areas: (1) encouraging oral participation; (2) promoting social relationships; (3) reducing anxiety; and (4) whole-class strategies. These strategies formed the basis of the questionnaire that was constructed for the research reported here.

The Present Study

Studies incorporating hypothetical students or that request participants to report on strategies in general have been informative about teachers' appreciation of shyness as a problem for students' learning and adjustment and about the range of intervention strategies that are used. In the present study, we took a different approach, asking a large sample of teachers to reflect upon their experiences with an individual shy student and specific strategies that they used. Further, we asked teachers to rate both the frequency of use and perceived effectiveness of their selected strategies across a range of contexts. A national sample of elementary school teachers was asked to consider a range of strategies for assisting a shy student across the four domains identified by Mjelve et al. (2019): (1) oral activity in the classroom; (2) social interaction with peers; (3) anxiety; (4) strategies involving the whole class. Our study adds to the extant literature by systematically investigating the range of strategies used by teachers with specific shy students across contexts and circumstances.

To date, we have not uncovered any previous research that has specifically investigated how characteristics of the teacher, shy student, or classroom might affect teachers' use and perceived effectiveness of these strategies. In this study, we investigated three factors: class size, grade level, teacher experience. Class size might influence strategy use, since teachers of smaller classes might have more time to devote to individual children, have greater opportunity to become aware of shy behaviors and anxieties that might pass unnoticed when there are more students requiring attention, and be better able to monitor any changes in shyness. These may influence the teacher's choice of strategies. Grade level might also be a factor. Shyness might have become entrenched among older children. Moreover, the nature of shyness changes with age, with self-consciousness and concern with what others think becoming more salient (Crozier, 2010). Furthermore, some strategies might be more appropriate at different ages dependent upon the nature of classroom activities and organization, for example, intervening to help individual shy children during recess. Finally, teachers with greater experience might have developed a more effective repertoire of classroom management strategies in general and with shy students; they may also be more likely to have encountered shy students across their career (Deng et al., 2017).

Method

Participants

The total number of elementary teachers in Norway at the time of data collection was 20 267. Using Yamane's formula with 95% confidence level interval and with 5% acceptable level of error (Yamane, 1967), 392.26 teachers (rounded up to $n = 400$) were selected as the respondents, in order to generalize the results to the Norwegian population of elementary classroom teachers. We sought as large a sample as possible to mitigate any possible effects of clustering of teachers within schools (Batistatou et al., 2014). We expected approximately 20% declining rates of the web-based survey completion (Baruch & Holtom, 2008) and over-sampled schools to ensure that the selected sample represents 20% of the schools in each region. An invitation and information about the study was sent to the leadership of 40% randomly selected schools (grades 1–7), recruited

from public lists in 20% randomly selected municipalities in all regions across Norway. The school leadership was asked to inform their classroom teachers about the study. Then, the schools returned a list of e-mail addresses for interested teachers to whom we sent an individual informed invitation to consent to participate. Those who gave their consent were given access to the online questionnaire. Schools were subsequently invited in four waves until at least 400 teachers had agreed to complete the questionnaire.

Those who agreed to participate were sent two reminders. This procedure resulted in responses from 305 teachers (80% females) in 286 schools (18%). The schools ranged in size, were located in both urban and rural districts in all regions of the country, and included students from a variety of socioeconomic backgrounds. The mean school size (297) and mean class size (23) were close to national averages. Also, the gender distribution of teachers (81% females) was similar to the national distribution of elementary teachers (see Table 1). For the present study, teachers who indicated that they had no previous experience in teaching a *shy student* ($n = 30$) were excluded. The final sample size was $N = 275$ teachers from 230 elementary schools (15%).

Missing Data

Ninety-five teachers (24%) of the 400 who initially had agreed to participate in the study did not return completed on-line questionnaires. This is in line with previous research on online surveys, a lower response rate than for other data collection methods was expected (e.g., Baruch & Holtom, 2008). However, missing teachers worked in the same schools as those who participated. Nevertheless, we have no information as to why these teachers did not complete the questionnaire. Table 1 provides information about the student, teacher, and school characteristics of the sample.

Measures

Each participant completed a questionnaire that included 35 strategies in the domains of (1) student oral activity in the classroom (8 strategies); (2) student social interaction with peers (7 strategies); (3) student anxiety (13 strategies); and (4) whole-classroom strategies (7 strategies). The questionnaire also included items about the teacher (their age, gender and teaching experience), the shy student (gender and grade level), the shy student's class (size) and school (size).

Table 1. Student, teacher, and school characteristics ($n = 275$).

Characteristic		*n* (%)
Students identified by teachers as shy	Female	203 (74 [a])
	Male	72 (26 [a])
Shy students per grade	1st	25 (9.1)
	2nd	36 (13.1)
	3rd	39 (14.2)
	4th	45 (16.4)
	5th	37 (13.5)
	6th	37 (13.5)
	7th	56 (20.4)
Teachers reporting experience with a shy student	Female	223 (81.1)
	Male	52 (18.9)
Years worked as a teacher	< 5 years	53 (19.3)
	5–10 years	51 (18.5)
	> 10 years	171 (62.2)
School and Class Size	Sample (*SD*)	Norway
Number of elementary schools	230	15%
Mean school size	297 (173.5)	225
Mean class size[b]	23 (10.4)	25

Note. [a] = gender distribution similar to the national percentage of elementary teachers in Norwegian elementary schools.
[b] = Class size ≤ 15 is defined as a small class in Norway (The Norwegian Directorate for Education and Training, 2021).

To establish consistency in participants' understanding of shyness, teachers were provided with a definition of shyness: "that is, students you think show withdrawn behavior in a way that can hinder their social and academic learning and development". It was made explicit that teachers should focus on either on one shy student they were currently teaching – or a shy student they had taught previously (but not shy students in general). The rationale for this approach was that teachers would more likely to remember or recall strategies if they were linked to specific shy students. For each of the 35 strategies, participants were first asked to rate the usefulness of that strategy and then whether they had previously used it in their work with a shy student (the rationale for presenting items in this order was to maximize the chances of obtaining ratings of perceived usefulness). Examples of these strategies include "allow the shy student to present orally together with peers/ other students" (from the domain of student oral activity in the classroom) and "talk with the child about his/her feelings from recess" (from the domain of student anxiety). *Perceived usefulness* was rated on a 4-point scale (from 0 "not useful" to 3 "very useful"; as well as an option for "don't know"). They were then asked to respond whether they *used* the strategy on a two-point scale, choosing 'Yes' or 'No'.

A panel of teachers who had experience working with shy students ($n = 10$) evaluated the strategies for face validity. Following this, 54 classroom teachers from an opportunity sample of 18 schools participated in a pilot study in which the questionnaire form and structure was tested and adjusted before it was administered to the sample of teachers in this study. Assessment of demographic information includes items pertaining to Class Size (open-ended item), Grade Level (grades 1 through 7), and Years of Teacher Experience (three categories: <5, 5-10, >10). Questionnaires were in Norwegian and were completed online.

Analytic Strategies

Frequencies and descriptive statistics were first computed for teachers' reported use and usefulness of each strategy in the four domains. To investigate the potential links between frequency of use and demographic variables (class size, grade level, teacher experience), a series of χ^2 analyses was computed. For ratings of usefulness, a series of independent samples *t*-tests and one-way ANOVAs were applied. Given the number of strategies, Bonferroni corrections were used to adjust the significance level for these analyses. To calculate the correction of critical *p*-values, we divided the original alpha level (.05) by the number of strategies in each of the four domains (i.e., for *Oral* there were 8 strategies which gave a corrected critical *p*-value .05/8 = .006; for *Anxiety* there were 13 strategies which gave a corrected critical *p*-value .05/13 = .004; for *Social* and *Whole Class* there were 7 strategies which gave a corrected critical *p*-value .05/7 = .007). Finally, because of the small number of responding teachers in each participating school ($M = 1.19$), it was not deemed necessary to take clustering of the sample into account when conducting our analyses.

Results

Teachers' Perceptions of Strategies

The first set of analyses described the frequency of use and perceived usefulness of the 35 teacher strategies across the four domains. The results are displayed in Tables 2–5. The most frequently used strategy in the *oral* domain was 'using nonverbal signs to encourage the shy students to raise a hand to answer aloud' (see Table 2). In the *social* domain, the most frequent strategy was 'focusing on improving the shy student's social skills' (see Table 3). For *anxiety*, the most frequent strategies were 'assessing the child's needs when making seating arrangements' and 'ensuring he/she has a safe place to sit' (see Table 4). Of note, two other strategies in this domain were also reported by more than 90% of participants: 'talk with the child about his/her feelings', thought, and behavior in different situations'; and 'making it clear to the child that the teacher is available to him/her

Table 2. Frequencies of reported use and rated means, SD and 'Don't know- responses' of usefulness of ORAL strategies ($n = 275$).

Strategies	Frequency of Use (%)	Ratings of Usefulness		
		M	*SD*	DK (%)
1. Use non-verbal signs to encourage the shy student to raise hands to answer aloud (e.g., small hints, comments, touches on the shoulder)	251 (91.3)	1.8	.95	6 (2.2)
2. Allow the shy student to present orally together with peers/other students	239 (86.9)	2.0	.95	21 (12.0)
3. Give the student a prepared question and ask the student to respond aloud to this	207 (75.3)	2.0	.97	30 (10.9)
4. Allocate defined roles/ tasks during groupwork that involves the shy student.	205 (74.5)	2.2	.85	48 (17.5)
5. Organize loud reading activities in class according to a specific and predictable order (e.g., the students read in a predictable order).	190 (69.1)	1.9	1.1	53 (19.3)
6. Give the shy student the text to be read in advance	185 (67.3)	2.0	1.1	50 (18.2)
7. Practice with the shy student in one-on-one setting to present oral/read aloud in class	154 (56.0)	2.1	.99	59 (21.5)
8. Ask social competent students to support the shy student during group activities.	70 (25.5)	2.0	.95	46 (16.7)

Note: Response options: 0 = not useful; 1 = kind of useful; 2 = quite useful; 3 = very useful.
DK = Don't know.

during the school day'. As well, the least frequently used strategies in the questionnaire were both also in the *anxiety* domain: 'arrange that an adult meets the child at the school entrance before the day begins'; and 'allow the child to stay in during recess'. Finally, four of the seven strategies in the *whole class* domain were reported by more than 95%, with the most frequent being the strategy of 'being clear about which rules/expectations apply to social behavior in class' (see Table 5).

Also of note, mean ratings of *usefulness* of strategies were quite consistent with the frequencies of use data (see Tables 2–5), with the aforementioned most used strategies also uniformly receiving high ratings of usefulness (i.e., $M = 2.5$ on a scale from 0 to 3). Across the set of 35 strategies, the correlation between frequency of use and the percentage of responses falling within the 'Very Useful' rating category was Spearman's rho = .774.

Demographic Variables

Class Size

For class size, significant effects of *frequency of use* were found for one strategy (see Table 6). In the whole-class domain, teachers of larger classes were significantly more likely to report using the strategy 'accentuate individual achievements at school in class'. For ratings of *usefulness,* a

Table 3. Frequencies of reported use and rated means, SD and 'Don't know- responses' of usefulness of SOCIAL Strategies ($n = 275$).

Strategies	Frequency of Use (%)	Ratings of Usefulness		
		M	*SD*	DK (%)
1. Focus on improving the shy student's social skills	243 (88.4)	2.1	.86	22 (8)
2. Make peers aware of the shy student's strengths / resources	218 (79.3)	2.2	.87	32 (11.6)
3. Make plans for the recess/break times together with the shy student (e.g., activities, whoever he/she should be with)	171 (62.2)	1.9	1.1	62 (22.5)
4. Establish social activity groups (e.g., kitchen groups) based on the shy student's needs	166 (60.4)	2.2	.85	72 (26.2)
5. Organize conversation groups (e.g., girls' groups) based on shy student needs	159 (57.8)	2.0	.87	36 (13.1)
6. Give responsibility to some of the shy student's peers to follow up him/her during recess	138 (50.2)	1.4	1.0	80 (29.1)
7. Make sure that the shy student has a specific role/task during the break time/ recess	106 (38.5)	1.5	1.0	112 (40.7)

Note: Response options: 0 = not useful; 1 = kind of useful; 2 = quite useful; 3 = very useful.
DK = Don't know.

Table 4. Frequencies of Reported Use and Rated Means, SD and 'Don't know- responses' of Usefulness of Helping with Anxiety (n = 275).

Strategies	Frequency of Use (%)	Ratings of Usefulness		
		M	*SD*	DK (%)
1. Assess the child's needs when making seating arrangements and ensure that he/she has a safe place to sit (e.g., next to a friend).	263 (95.6)	2.6	.7	6 (2.2)
2. Talk with the child about his/her feelings, thoughts and behavior in different situations.	254 (92.4)	2.2	.9	10 (3.6)
3. Make it clear for the child that I am available to him/her during the school day.	251 (91.3)	2.3	.9	18 (6.5)
4. Have contact that is more frequent with the child's parents than with parents to the classmates.	234 (85.1)	2.2	.8	25 (9.1)
5. Allow the child staying alone/allow him/her to be quiet during discussions in class.	215 (78.2)	1.6	1.0	30 (10.9)
6. Ask other adults during recess to follow up with the child.	200 (72.7)	2.0	1.0	36 (13.1)
7. Talk with the child about his/her feelings about/experiences from recess.	177 (64.4)	1.9	.9	53 (19.3)
8. Arrange subtle adjustments for the child (e.g., give him/her their own written assignments; give the work plan on the desk).	153 (55.6)	1.9	1.0	75 (27.3)
9. Meet the child outside the classroom in advance of class to prepare/remind him/her what is going to happen.	143 (52.0)	1.8	1.0	76 (27.6)
10. Allow the child not being verbally active during group work.	135 (49.1)	.8	.9	47 (17.1)
11. Give the child the opportunity to write a log/personal message to me as a teacher.	109 (39.6)	1.8	1.1	115 (41.8)
12. Allow the child stay inside during recess.	84 (30.5)	.4	.7	58 (21.1)
13. Have an arrangement with the child that an adult meets him/her at the school entrance before the school day begins.	76 (27.6)	1.6	1.2	128 (46.5)

Note: Response options: 0 = not useful; 1 = kind of useful; 2 = quite useful; 3 = very useful.
DK = Don't know.

significant effect was also found in the whole-class domain for the strategy 'accentuate individual achievements at school in class', with teachers of small classes reporting lower usefulness ratings for this strategy than teacher of larger classes (see Table 7).

Grade Level

Significant effects for child grade level were found for *frequency of use* of only one strategy (see Table 6). In the social domain, teachers of younger children were more likely to report using the strategy 'make plans for the recess'. For ratings of *usefulness,* a significant effect was found in the social domain for the strategy 'make plans for the recess', with teachers of younger classes reporting higher usefulness ratings for this strategy than teachers of older children. Teachers of younger children also rated the *anxiety* domain strategy 'have an arrangement with the child that an adult meets him/her at the school entrance before the school day begins' as more useful than teachers of older children (see Table 7).

Table 5. Frequencies of reported use and rated means, SD and 'Don't know- responses' of usefulness of whole class strategies (n = 275).

Strategies	Frequency of Use (%)	Ratings of Usefulness		
		M	*SD*	DK (%)
1. Be clear about which expectations/rules apply to social behavior in class	271 (98.5)	2.6	.67	1 (0.4)
2. Prioritize to move around in class to observe what is happening and maintain contact with pupils	267 (97.1)	2.6	.65	5 (1.8)
3. Teach social skills in class	267 (97.1)	2.6	.70	4 (1.5)
4. Have conversations with the class about time spent in recess	265 (96.4)	2.5	.68	7 (2.5)
5. Talk openly about (the teachers) personal experiences to normalize difficult feelings and thoughts	226 (82.2)	2.3	.79	30 (10.9)
6. Usually use more interactive teaching methods and group work than full-class blackboard teaching	210 (76.4)	2.0	.93	45 (16.4)
7. Accentuate individual achievements at school in class	149 (54.2)	1.4	1.1	66 (24.0)

Note: Response options: 0 = not useful; 1 = kind of useful; 2 = quite useful; 3 = very useful.
DK = Don't know.

Table 6. Frequencies and Chi-Square results for class size, grade level and teachers experience on use of strategies with the domains.

Domain	Strategies (abbreviated)	Class Size				
		≤ 15 students (%)	≥16 students (%)	χ^2 (1, $n = 267$)		*phi*
Whole Class	Accentuate individual achievements	31.4	59.3	11.82*		.220
		Grade Level		χ^2 (1, $n = 275$)		*phi*
		Grades 1–4 (%)	Grades 5–7 (%)			
Social	Make plans for the recess	74.5	48.5	18.645*		-.268
		Teacher Experience				
		< 5 years (%)	5–10 years (%)	> 10 years (%)	χ^2(2, $n = 275$)	Cramer's V
Oral	Give prepared question	58.5	72.5	81.3	11.546**	.205
	Practice in one-on-one setting	45.3	39.2	64.3	13.114**	.218
	Give text to be read in advance	50.9	56.9	75.4	14.108**	.227

*$p \leq .007$ using Bonferroni correction. **$p \leq .006$ using Bonferroni correction.

Teacher Experience

Significant effects for teacher experience were found for *frequency of use* of three strategies, all in the oral domain (see Table 6). As compared to their less experienced counterparts, more experienced teachers were more likely to report using the strategies of: (1) give the student a prepared question and ask the student to respond aloud to this; (2) practice with the shy student in one-on-one setting to present oral/read aloud in class; and (3) give the shy student the text to be read in advance.

For ratings of *usefulness,* significant effects were found for three strategies (see Table 7). For the oral domain strategy 'organize loud reading activities in class according to a specific and predictable order', results from post-hoc comparisons (Tukey HSD) indicated that the least experienced group of teachers rated this strategy as less useful than the most experienced group of teachers. For the oral domain, results indicated that most experienced teachers rated the strategy 'allocate defined roles/tasks during group work that involves the shy student' as more useful than both medium-

Table 7. Independent-samples t-tests for class size and grade level, and ANOVA for teacher experience means of usefulness of strategies.

Domain	Strategy (abbreviated)						
		Class Size					
		≤ 15 students	≥16 students	*t* (df)		*p*	η^2
		M (SD)	*M (SD)*				
Whole Class	Accentuate individual achievements	.82 (.91)	1.49 (1.04)	3.468 (201)		< .001*	.06
		Grade Level					
		Grades 1–4	Grades 5–7				
		M (SD)	*M (SD)*				
Social	Make plans for the recess	2.13 (.999)	1.65 (1.12)	3.287 (188)		< .001*	.05
Anxiety	Adult meets student at the entrance	1.82 (1.11)	1.22 (1.84)	3.147 (145)		< .001***	.06
		Teacher Experience			*F* (df)	*p*	η^2
		< 5 years	5–10 years	> 10 years			
		M (SD)	*M (SD)*	*M (SD)*			
Oral	Organize loud reading activities	1.36 (1.1)	1.74 (1.04)	2.05 (1.03)	7.48 (2, 219)	< .001**	.06
	Defined roles/tasks during group work	1.84 (.92)	1.87 (.83)	2.31 (.80)	8.001 (2, 224)	< .001**	.07
Anxiety	More frequent contact with parents	2.23 (.83)	1.87 (.89)	2.34 (.72)	6.601 (2, 247)	.002***	.05

*$p \leq .007$ using Bonferroni correction. **$p \leq .006$ using Bonferroni correction. ***$p \leq .004$ using Bonferroni correction

experienced and least-experienced teachers. Finally, for the anxiety domain, the most experienced teachers reported higher usefulness ratings of the strategy 'have contact that is more frequent with the child's parents than with parents to the classmates' than did the least experienced teachers.

Discussion

The primary goals of this study were to explore Norwegian elementary-school teachers' reported use and evaluation of a range of intervention strategies thought to assist shy students across different domains at school. We also sought to examine the potential effects of a set of demographic variables on teachers' use and evaluation of these strategies. To accomplish these goals, a large sample of elementary school teachers from schools across Norway completed questionnaires assessing their frequency of use and perceived effectiveness of 35 strategies that might be used with shy students whom they taught.

Among the results, common themes across domains included teachers' sensitivity to individual shy students, reduction of stress associated with novel situations, involvement of peers, focus on social skills, and building trusting relationships with the shy student. As well, demographic variables were found to have only limited effects on strategy use and perceived effectiveness. In the following section, each of these findings is discussed in more detail.

Frequencies of Reported Teachers' Strategies

There was considerable variation in reported frequencies of use. Of note, eight strategies were reported to be used by at least 90 percent of teachers. Four were in the *Whole Class* domain: (1) teach social skills in class; (2) have conversations with the class about time spent in recess; (3) be clear about which expectations/rules apply to social behavior in class; and (4) prioritize moving around in class. Two were in the *Anxiety* domain, including seating arrangements and talking to the child about their feelings, thoughts, and behavior in different situations. The remaining most often reported strategies were in the *Oral* strategies domain, using nonverbal signs to encourage the shy student to raise hands to answer aloud. Of note, the *least* frequently used strategy (arranging for an adult to meet child at beginning of school day) was nevertheless reported by 28 percent of the teachers, suggesting that the strategies included in the questionnaire on the basis of previous interviews and focus groups with teachers were not idiosyncratic.

Themes in the most used strategies included: (1) sensitivity to individual students; (2) reduction of stress associated with novel situations; (3) involvement of peers; (4); focus on social skills; and (5) building trusting relationships with the shy student. Taken together, these strategies resembled those reported from previous questionnaire studies where participants were asked to rate the likelihood that they would use specific strategies for shy students in response to hypothetical vignettes (Coplan et al., 2011; Deng et al., 2017; Nadiv & Ricon, 2020). Similar strategies were identified in interview studies conducted with teachers (Brophy & Bohrkemper, 1989). A questionnaire study with teachers of kindergarten teachers also reported greater use of socioemotional support with socially inhibited children relative to average and hyperactive children (Thijs et al., 2006). The content of these themes also reflects theoretical models of the development of shyness that emphasize a high reactivity to novelty and the emergence of socio-evaluative concerns in peer contexts (Coplan & Rubin, 2010; Crozier, 1995).

The most frequently used strategies to promote shy student's oral activity in class refer to using nonverbal signs to encourage the shy student to answer aloud, allowing them to present orally together with other students, and giving them a prepared question ahead of time to respond to. These strategies focus on *overcoming obstacles* to speaking up in class (Nyborg et al., 2020). Theory and research highlight that novel situations (Kagan, 1997) and those where the children believe themselves to be at risk of being negatively evaluated (Crozier, 1995) are frequent elicitors of shyness (Coplan & Rubin, 2010), so it is unsurprising that teachers' strategies focus on reducing the

uncertainties involved in making oral contributions. These strategies also invoke common psychological techniques used to ameliorate symptoms of social anxiety, such as graduated exposure, whereby children work to obtain anxious-provoking goals by breaking them down into smaller and more palatable steps (Hirschfeld-Becker & Biederman, 2002).

The most frequently used strategies in the section on promoting shy student's relationships with peers reveal teachers' sensitivity to shy students' needs in the context of peer relationships, whether by aiming to improve their social skills, manage recess periods, and making fellow students aware of the shy child's strengths and resources. Again, these approaches mirror successful intervention techniques for shy and anxious children, including focusing on promoting social skills and facilitating positive social interactions (Coplan et al., 2010). The most frequently used strategies in the section on helping shy students with their anxiety refer to using seating arrangements and ensuring that the shy child has a safe place to sit, talking with the child about their anxieties, and making it clear that the teacher is available to the child. Establishing close relationships with teachers has been demonstrated to reduce anxieties among shy students (Baardstu et al., 2022) – so there is also good reason to believe that these strategies will be effective as described. Finally, for whole class strategies, the most used strategies refer to being clear about expectations/ rules for social behavior in class, teaching social skills in class and prioritizing moving around the class to observe what is happening and to maintain contact with students. There is empirical support for these strategies as well, as previous studies have indicated that more positive classroom climates serve to improve the school functioning of shy students (Spangler Avant et al., 2011).

Including a variety of strategies within each section affords a level of detail that teachers and other professionals working with shy children can find useful. For example, a consistent theme across responses to the strategies in the anxiety section is the reliance on 'protective' strategies, or, in clinical psychological terminology, 'safety behaviors' (Gray et al., 2019). Seating arrangements would be an example of these behaviors if shy children only sit beside peers who provide no challenge to them or, as the strategy puts it, provided a 'safe place to sit'. Such an arrangement might also result in a shy child being placed beside classmates who are more willing to speak up, thereby reducing the responsibility of the shy child do so and providing somewhere to 'hide'. Although these can help a child cope with their anxiety in the short term and might be necessary during the early stages of helping a shy student, they are likely to prove less productive in the longer term. They impede the development of more effective coping strategies and reduce opportunities to practice social skills that can increase self-confidence and thereby reduce fears (Arbeau et al., 2012). They give time for fears to grow.

Perceived Usefulness of Teachers' Strategies

There is evidence from ratings of strategy usefulness that teachers do recognize the limitations of protective strategies. Two strategies that received the most 'not useful' responses are in the anxiety section: allowing the child to stay indoors during recess and allowing the child not to be verbally active during group work'. It is noteworthy that both strategies allow the student to avoid challenges. Nevertheless, despite these low ratings, these were reported being used by significant numbers of teachers (31%; 49%, respectively).

There is considerable variation in the ratings of the effectiveness of the strategies. Four of the five highest-rated strategies are in the *Whole-Class* domain, suggesting that good teaching methods for the class are also effective for shy students. Other highest-rated strategies are in the *anxiety* domain, referring to taking seating arrangements into account and making clear to the student that the teacher is available during the day.

Effects of Demographic Variables

There were relatively few significant effects of class size, grade level or teacher experience on teachers' reported frequency of use or usefulness of the 35 strategies. In this regard, the relative use and

usefulness of these strategies did not vary substantially or systematically across these different contexts (i.e., smaller vs. larger class sizes; in classroom of younger vs. older children) or teacher characteristics (i.e., more vs. less experienced). One interpretation of these results is that teachers felt that the same sub-groups of strategies for assisting shy students could be applied across most classroom contexts – and that additional experiences over time did not substantially alter these beliefs.

Since this study was carried out in a Norwegian culture, it is also relevant to consider the results in light of the essential demand on Norwegian schools and teachers to offer students an *inclusive learning environment* (Ministry of Education & Research, 1998; Nilsen, 2018). Inclusion is largely carried out through classroom-based adapted education. Accordingly, our results could indicate that the teachers in the study had access to a range of strategies to implement inclusive education to shy students across various circumstances and as such had the means to follow up the requirements of the educational act.

Of the few observed significant differences, some appear to be more impactful than others. For example, teachers of larger classes reported accentuating the achievements of individual shy students more often – and consider this strategy as more potentially useful – than teachers of shy students in small classes. This is perhaps unsurprising, given that the achievements of any individual students are less likely to stand out in the context of larger classes. But others may shed some light on possible best practices for shy students at different ages. For example, teachers of younger children found helping children make plans for recess more effective in promoting positive social experience than did teachers of older children. Recess can be a particularly stressful time for shy students in elementary school, where they are prone to withdrawing from opportunities for social interactions, watching other children without joining in, and playing quietly alone (Coplan et al., 2013).

Strengths, Limitations, and Future Directions

The present study is distinctive in a number of respects. First, teachers rated their strategy use and usefulness as they applied to a specific shy student whom they currently or previously taught, as opposed to responding about hypothetical shy children (e.g., Coplan et al., 2011). Teachers in the present study also rated the target child on strategies for areas previously identified by experienced teachers as problematic for shy students, including oral participation in class, interactions with peers, and anxiety. This contrasts with previous questionnaire-based research into classroom strategies, which have not sampled different aspects of school life that shy students find challenging. A further set of seven strategies were targeted at the whole class, not only those aimed at the individual shy child. This aspect too has not been studied in previous research, even though in practice teachers will be managing shyness within the classroom setting, and teachers in previous interview studies have described the value of such an approach (Mjelve et al., 2019).

Notwithstanding, our results should be considered within the context of some limitations, with an eye toward future directions. First, questionnaire methods only provide a 'snapshot' of the reported use of strategies and future research is necessary to examine the use of individual strategies in greater detail and to investigate the processes of change that occur. Such studies should also directly assess teachers' behaviors toward shy students using naturalistic observations (Roorda et al., 2013), as teachers' responses cannot in themselves show that change has taken place. Relatedly, we did not distinguish between teachers' responses pertaining to current versus previously taught shy students – which might be of interest to do in future research.

Second, although it was novel to incorporate teachers' ratings of their perceived effectiveness of each strategy, such ratings do not provide objective data on the effectiveness of these strategies. Children's perspectives must also to be taken into account. Longitudinal designs involving measures of behavior would provide empirical evidence of changes in shy behaviors. There are studies of treatments of individual shy, inhibited or socially withdrawn children outside the school environment (see Cordier et al., 2021, for a meta-analysis of such studies), but whether such research would be a priority, given that shyness is not generally classified as a special need, is a

moot question. In any case, teacher's ratings of a set of strategies that they report having used in the classroom and which they report as being effective can be informative for teachers and other educational professionals who might be considering the application of particular strategies.

Third, we deemed it important to sample teachers from across Norway, including urban and rural areas and schools of different sizes. However, it is difficult to construct a representative sample of teachers at a distance and to deal with missing responses from teachers who expressed willingness to contribute but who did not do so despite reminders. Those teachers who responded to our questionnaire are not necessarily a representative sample of elementary-school teachers, and it is likely that there is an over-representation of teachers who have an interest in learning more about shyness among their students and who are willing to share their experiences with other teachers.

In conclusion, the teachers in our sample appear to have access to a repertoire of strategies to help shy students. These are targeted at increasing shy students' oral contributions in the classroom, helping improve social interactions with classmates, and overcoming anxiety. There is an emphasis on developing trust and fostering the child's sense of safety, but care needs to be taken in implementing such strategies to ensure that this is not at the cost of the risk taking that is valuable in learning. Dissemination of findings about teachers' reported use and evaluation of this set of possible strategies should be valuable to education professionals including teachers, school counselors and psychologists.

Disclosure Statement

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

Funding

This work was supported by The Research Council of Norway (Norges forskningsråd) under grant number 254982.

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