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Consistently inconsistent: teachers' beliefs about help seeking and giving when students work in groups

Marold S. Wosnitza^{a,b}*, Nina Labitzke^a, Amanda Woods-McConney^b and Stuart A. Karabenick^c

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While extensive research on student help-seeking and teachers' help-giving behaviour in teacher-centred classroom and self-directed learning environments is available, little is known regarding teachers' beliefs and behaviour about help seeking or their role when students work in groups. This study investigated primary (elementary) school teachers' self-reported help-giving behaviour when teaching science in small group settings. Specifically, examined were the strategies teachers typically encourage in a group learning setting, their self-reported responses to specific student requests for help and their self-described role in a group learning situation. Results indicated that half of the teachers encouraged students to seek help from other groups or the teacher, while the rest discouraged help seeking from inter-group and from the teacher, preferring that their students keep to their own groups. The reasons reported for both strategies were manifold and ranged from the development of self-directedness, collaboration and problem-solving skills to issues of classroom management. However, what the teachers encouraged was not what they consequently reported they typically do. All of the teachers, regardless of whether they encouraged or discouraged help seeking, reported that they would not deny any request for help. These findings imply that teachers may not be as mindful about how they communicate helpseeking expectations in a group learning context, which has implications for both teachers and teacher educators.

Keywords: help seeking; group work; help giving; primary science; teacher role

1. Introduction

Independence and autonomy are values that are strongly promoted in most Western cultures. Help seeking on the other hand has traditionally been viewed negatively as an indicator of the learner's immaturity, dependence on others and incompetence (Newman, 2000). Extensive research over the last decades, however, has shown that help seeking can be considered an essential skill to promote one's learning (Karabenick & Newman, 2009). Research has made a clear distinction between help seeking that is highly dependent and that which is important for learning (Ames, 1983; Nelson-Le Gall, 1981, 1985; Newman, 2000). Highly dependent help seeking that avoids effort and instead emphasises getting the answer in order to avoid doing

^aInstitute of Education, RWTH Aachen University, Aachen, Germany; ^bSchool of Education, Murdoch University, Perth, Australia; ^cCombined Program in Education and Psychology, University of Michigan, Ann Arbor, MI, USA

^{*}Corresponding author. Email: marold.wosnitza@rwth-aachen.de

the work is considered less adaptive and termed *executive help seeking* (Nelson-Le Gall, 1981, 1987). For example, learners who ask for the correct answer while completing assignments without much previous effort immediately benefit from the help because they can complete the work. However, not having profited from the help received previously they remain dependent when similar difficulties arise.

In contrast, *instrumental help seeking* (Nelson-Le Gall, 1981, 1987) is a more adaptive form of help seeking because it can increase the learner's knowledge and skills. Such help-seeking requests as hints and explanations rather than answers can be considered an adaptive strategy of self-regulated learning (Karabenick, 2011; Newman, 2002). Adaptive help seeking is viewed as an important component of successful self-regulated learning (Boekaerts, Pintrich, & Zeidner, 2000; Karabenick & Newman, 2009; Nelson-Le Gall & Resnick, 1998; Pintrich & Zusho, 2002) and part of the essential skills of engaged learners (Karabenick & Newman, 2009).

Numerous studies have determined the person and situation factors that have an impact on whether students seek help executively, instrumentally or do not ask for help at all. First, learners' characteristics play a role. If students are self-efficacious, have high global self-esteem and are not test anxious, they are more likely to seek help in an adaptive and strategic manner (Karabenick & Knapp, 1991; Ryan & Shin, 2011). In contrast, students who are not confident of their own abilities and have low self-esteem are less likely to seek help, as they fear that their need for help indicates a lack of competence (Ryan, Gheen, & Midgley, 1998; Ryan & Shin, 2011).

Secondly, personal achievement goal orientation predicts individual's helpseeking behaviour (e.g. Butler & Neuman, 1995; Karabenick, 2003; Roussel, Elliot, & Feltman, 2011; Ryan & Pintrich, 1997; for a review see Butler, 2006). Mastery goal-oriented students tend to engage in instrumental help seeking, while performance goal orientation is linked with help-seeking avoidance or executive help seeking (Karabenick, 2003; Karabenick, Zusho, & Kempler, 2005; Roussel et al., 2011). Along with personal goal orientation, students' perceptions of their classroom goal structure are also associated with their help-seeking behaviour. Teachers who communicate that understanding, intellectual development and improvement are the main reasons for engaging in schoolwork set up a mastery goal structure (Ames, 1992; Ames & Archer, 1988). Consistent with personal goal orientation, perceived mastery classroom goals are positively related to instrumental help seeking; that is, students who feel that the focus is on learning and understanding are more likely to seek instrumental help (Karabenick, 2004; Ryan et al., 1998). Perceived emphasis on demonstrating ability and outperforming others – performance classroom goals – is related to a higher level of help-seeking avoidance. If students perceive the classroom goal structure as performance oriented, they might try to show that they are more able, or at least not less able than others (Turner et al., 2002). Karabenick (2004) found that especially in the latter case – in classes with a perceived focus on trying not to reveal any incompetency (performance-avoidance goals) - students feel more threatened and are thus less likely to seek help or tend to just ask for the correct answer (executive help seeking) in order to hide their knowledge gap.

Lastly, teachers exert significant influence on their students' help-seeking behaviour. As already indicated, they do so by establishing – implicitly and/or explicitly – mastery or performance goal structures in the classroom. Teachers who, for example, demonstrate that learning from mistakes and asking questions are necessary parts of learning promote the use of instrumental help-seeking strategies among their students (Turner et al., 2002). The way teachers respond to help seeking also

determines the readiness for asking questions when students feel a need for support (Karabenick & Sharma, 1994). If they take the time to respond carefully and provide valuable explanations instead of simple and perfunctory answers, teachers are very likely not only to promote students in their learning, but also to exemplify that help seeking is an important learning strategy. In order for students to seek help, they not only need to hear that questions are welcome in general, but they also require the experience of a supportive teacher response to their specific question (Kozanitis, Desbiens, & Chouinard, 2007). These studies provide evidence for a direct relationship between students' perception of their teachers' immediate reaction to their help seeking and their instrumental help-seeking behaviour. Similarly, primary school students also reported being less likely to avoid seeking help when they perceive their teachers as supportive (Friedel, Marachi, & Midgley, 2002).

In light of these findings, it is surprising that research on help seeking has given limited attention to the changing nature of learning environments. To date, most of the empirical research has examined help seeking in environments that are implicitly constructed for students' solo learning, on their own or within a classroom environment. Research on help seeking in group learning activities remains limited (Karabenick & Newman, 2009).

Webb and colleagues (Webb, 1991; Webb & Farivar, 1999; Webb & Mastergeorge, 2003) have investigated help seeking in small group settings with specific focus on students' intra-group interactions. Their studies stressed the importance of not only the right kind of help received – timely, relevant and elaborated explanations – but also of how the help is sought – students asking other students specific and precise questions rather than general and unfocused ones in the group setting. In addition, it is important for help seekers to actively apply the received explanations to the task at hand to further their understanding and to practice, so that the help giver and help seeker are equally responsible for a successful outcome of the helping process. Further, the quality and frequency of helping behaviours are influenced by the quality of the groups' socio-emotional interactions. Negative group processes, such as put-downs or insults, are linked to reduced help seeking (Webb, Ing, Kersting, & Nemer, 2006) as well as low-quality helping interactions (Kempler & Linnenbrink, 2006). Lee (1997) furthermore reported that there is less help seeking between 'unequal-status' than between 'equal-status' members of a group.

As with help seeking in a traditional classroom setting, intra-group help seeking is influenced by the classroom culture within which collaborative learning takes place. Webb et al. (2006) maintain that performance goal orientation severely impedes the facilitation of collaboration in general and help seeking in particular. However, classroom culture is not only important for intra-group helping behaviour, but also when groups seek help from persons who do not belong to the group, such as the teacher. For example, Karabenick and Newman (2004) investigated helpseeking behaviours of students who were pre-assessed for their help-seeking avoidance tendency and had to work in pairs on difficult tasks either under mastery or performance goal conditions. The pairs were allowed to ask for help from an external source; overall, students who performed their tasks under mastery goal conditions asked more frequently for assistance. Interestingly, individual students' help-seeking avoidance tendency along with the goal orientation conditions influenced the pairs' help-seeking behaviour. Dyads in which one student had a high help-seeking avoidance tendency asked for help less under performance goal orientation conditions than under mastery goal orientation conditions. On the other hand,

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if both members were high in help-seeking avoidance, they had similar help seeking in both performance and mastery goal orientation conditions. Nadler (2002) explored inter-group helping relations and suggests that groups may create, strengthen or challenge power relations between group members through help-seeking and help-giving behaviours.

While extensive research on student help-seeking and teachers' help-giving behaviour in teacher-centred classrooms and self-directed learning environments is available, not much is known regarding help seeking in group learning situations (Karabenick & Newman, 2009). Considering the general increase of collaborative and cooperative learning environments in educational contexts, this lack of research bears attention. While studies in other teaching and learning contexts like selfdirected learning or problem-based learning provide evidence that teacher behaviour is important for successful group learning processes and successful help seeking, no studies have systematically investigated teachers' beliefs and their behaviour regarding students' seeking help from the teacher (help seeking) in group learning situations. This leads to questions about how teachers generally facilitate help seeking (seeking help from teachers or other students) when students work in groups and how they define their own role in this context. For practitioners and educational researchers, an understanding of these processes may also provide valuable insights into the implementation of group learning in which students get the help they need and, ultimately, may offer helpful starting points for the enhancement of educational practice. Therefore, the present study explored teachers' help-giving and self-reported behaviour to address three research questions regarding students working in groups:

- (1) What student help-seeking strategies do teachers typically encourage and for what reasons?
- (2) How are teachers' self-reported responses to specific student requests for help (help giving) related to their encouragement of the behaviour?
- (3) How are 1 and 2 related to the classroom mastery and performance achievement goal structures that teachers promote?

2. Method

2.1. Participants

Teachers who teach science (n = 83) from 12 primary schools in rural and remote Western Australia and 35 primary schools in the Perth metropolitan area participated in the project. These teachers had on average 14.50 years (SD = 11.82) of teaching experience in primary schools with a range from 1 to 42 years of experience. There were 66 female and 17 male participants with ages that ranged from 22 to 64 years (M = 39.37, SD = 11.56).

2.2. Procedure and questionnaire design

As part of a larger study examining primary students and teacher learning behaviour in small group learning situation in science, school principals who accepted an invitation nominated one or more teachers from their school to take part in this study. Those nominated and who agreed were considered to be representative of science teachers at their school. All participants were assured total confidentiality. Data were analysed using descriptive and non-parametric methods for the quantitative data.

Content analysis with inductive category development was carried out for all openended questions. First the data from each question were structured with identified emergent categories. A second coder then coded 25% of the data. Inter-judge agreements were between $\kappa = .73$ and $\kappa = .75$ for all coding processes. Where disagreements occurred, responses were re-examined and then coded by agreement.

2.2.1. Encouragement strategies typically used in a group setting

Teachers were asked to choose the strategy they usually use in a typical group learning situation. Because teachers may have different conceptions of what is meant by 'group learning situation', we provided a typical scenario for all teacher participants to use when they explained what they do in their classroom setting. The scenario described the following situation:

Imagine you are teaching Year 4/5 students and have designed a group learning activity for your students that will last about 90 min. Their assignment is to complete a typical science activity and students in each group are expected to apply the concepts that were discussed the week before to solve a problem. The whole class of 24 students is organised into 6 groups with 4 students in each group.

What do you typically do?

Strategy 1 I encourage students in groups to work out any problems amongst themselves and **not** to ask others or me for help (intra-group)

Strategy 2 I encourage groups to ask me for help

Strategy 3 I encourage students in one group to ask help from **students in another group** (inter-group)

After selecting the strategy they typically use in this type of group learning situation, teachers were also asked to explain *why* they chose the specific strategy.

2.2.2. Typical responses when students ask for help

Teachers were also asked to note their responses to different help-seeking approaches. Specifically, teachers were asked how they would typically react if students asked them or students from another group for help in this type of group learning situation. The responses included options that represented executive help-giving behaviour (give the answer/allow students from the other group to give them the answer), instrumental help giving (give an explanation/allow students in the other group to give an explanation) and no help giving (ask them to solve the problem on their own).

2.2.3. Classroom goal structure in group learning situation

Teachers were first asked to describe their role in a group learning setting. Specifically, teachers were asked *what they do* in a group learning context and *why they do it*. This was to gain insight into the classroom context, and to better understand the classroom goal structures teachers create in group learning situations.

3. Results

Based on their ratings on scales that ranged from 1 to 6, all teachers felt, on average, well prepared to teach science (M = 4.38, SD = 1.05) and to facilitate group learning

(M=4.76, SD=.92). The data furthermore showed that the teachers were very positive with regard to their view of the effectiveness of group learning. They reported that group learning is effective for learning science (M=4.95, SD=.82), learning to learn (M=4.91, SD=.85), learning social skills (M=5.19, SD=.85) and student motivation (M=4.88, SD=.83).

3.1. Help-seeking encouragement strategies in a typical group learning situation

Teachers were asked to identify the strategy they usually use in a typical group learning situation when students seek help in order to identify those who would encourage help seeking in a group learning situation (TEHS) and teachers who would encourage students not to seek help in a group learning situation (TENHS). TEHS consists of teachers who would usually adopt strategy 2 or 3 (see Section 2.2.1) and TENHS consists of teachers who would usually adapt strategy 1. Some teachers (26.5%) chose a combination of two, while some (16.9%) chose three strategies. Teachers who chose the combination of 2 and 3 were automatically coded as TEHS. Nineteen teachers (22.9%) could not be unambiguously identified as either TEHS or TENHS. In these ambiguous cases, two researchers examined the individual cases and classified the responses based on statements that were included in each teacher's reasons for choosing a specific strategy. This ex-post classification was based on key words such as 'initially', 'the first thing', 'their first strategy', which helped determine a preferred strategy or the one most likely to be used first. For example, one teacher (T23) who chose strategies 1, 2 and 3 wrote:

- (1) This would be the first thing to do before they asked others or myself for help. As it would encourage them to problem solve together as a group! Which is one of the reasons they are in a group!
- (2) This would be their last option. They would need to discuss what they have tried first before I offered suggestions
- (3) We encourage students to search for knowledge from a variety of sources!

This teacher was coded as TENHS because of the specific reference to the first strategy. After agreement between coders regarding ambiguous cases, each of the teachers was classified as either TEHS or TENHS. Five cases (6.0%) could not be derived from the statements and overall 40 teachers were identified as TEHS and 38 as TENHS. There was no significant difference for gender ($\chi^2 = 1.53$, df = 1, ns) or rural and metropolitan teachers ($\chi^2 = .51$, df = 1, ns), while a significant difference was found between younger (22–35 years of age) and older (>50 years of age) teachers with significantly more younger teachers (65.5%) than older teachers (34.5%) classified as TEHS ($\chi^2 = 4.13$, df = 1, p < .05).

3.1.2. Reasons for specific help-giving strategies in a typical group learning situation

The categories for each strategy with example quotes and information about the distribution of the reasons are presented in Table 1. Five categories of reasons for discouraging help seeking emerged. The potential to *develop self-direction and problem-solving skills* (52.9%) was cited most frequently, followed by a desire to *enhance cooperation* between the students (19.6%) and to provide the possibility for students to *learn from each other* (9.8%). The latter two categories may, at first,

Table 1. Categories of reasons for strategy choices.

Category	Examples	%
Strategy 1: I encourage students is ask others or me for help	n groups to work out any problems themselves and no	ot to
Development of self-directedness and problem-solving skills	Encourage problem-solving skills; to encourage ownership of learning; give children time to work through difficulties (T54) It is important that they learn to effectively problem solve within a small group and on their own. To give it time to work through a situation. I would like them to develop their own individualised way of thinking (T59)	52.9
Enhances cooperation	It encourages verbal interaction within their own group (T30) Because they brainstorm, listen to others point of view. Share their thoughts and come to a common conclusion (T9)	19.6
Learning from each other	Children learn from each other (T64) When students are required to explain to other students they are more likely to retain knowledge (T15)	9.8
Classroom management	As it keeps students focused on the activity. If I let them talk to other groups too much then those students I have separated will have the opportunity to interact and behave negatively. (T28) If students are asking other members from other groups for help the classroom may start to get unmanageable – too many students walking around, noise levels increase (T19)	9.8
Monitoring the learning process	Provides me with the information on where the gap in their learning is (T3)	7.9
Strategy 2: I encourage groups to Facilitation of learning and support	ask me for help I can then make sure they understand what is required, and can help them to start the activity while not giving them the complete answer (T16) It helps them to feel comfortable and supported; lets them know that I care; it allows them to interact with an adult mentor; it helps them to then develop their skills and strategies to learn (T33)	60.4
Classroom management	It also allows other groups to remain on task (T12) Speaking to other groups distracts them from their task (T13)	25
Monitoring the learning process	Then the teacher can monitor their progress and maybe give them another opportunity for a similar task (T14) I am able to monitor who & how the groups are analysing and investigating (T65)	14.6
Strategy 3: I encourage students in Learning from each other	Peer tutoring is a great way to learn (T29) Children can talk in language they understand and teaching someone else something helps reinforce what you've learnt (T51)	54. 5

Table 1. (Continued).

Category	Examples	%
Development of self-directedness and problem-solving skills	Fosters interaction and problem-solving. Understanding comes from doing not being told (T76) It encourages students to become less reliant on	25.5
Enhances cooperation	adults. (T72) They are all part of a team. (T20)	15.4
Monitoring the learning process	It enhances cooperation between the groups (T11) This also gives the teacher an opportunity to see how/what the helping student says – can assess from this. (T55)	5.5

seem inconsistent with the strategy of encouraging students not to ask for help if they are interpreted in the context of individual students. Therefore, it is important to view the results in the context of a group learning situation where teachers may want to develop interactions within the small group. The fourth category of classroom management-related factors emerged for 9.8% of the teachers, while 7.9% of the teachers explained that they want to monitor the learning process.

Three categories of reasons emerged for teachers who encourage students to ask them (the teacher) for help. Facilitation of learning and support was mentioned most frequently (60.4%), while classroom management (25%) and monitoring the learning process (14.6%) were the other reasons that where mentioned by the teachers for this strategy.

Interestingly, the four categories that emerged for teachers who would encourage students to ask for help from students in other groups are the same as those that emerged for teachers who would discourage help seeking outside of the small group. Of the five categories that emerged for the first strategy (not encouraging students to ask others for help), classroom management did not emerge for this third strategy of encouraging students to ask other students for help. Although the four categories were the same, the distribution was different. The main reason for encouraging students to ask students from other groups for help was to enhance learning from each other (54.5%). The development of self-directedness and problem-solving skills (25.5%) and the enhancement of cooperation (14.5%) were also offered by the teachers, while the possibility to monitor the learning process was the least cited reason at 5.5%.

Teachers' help giving and their encouragement to ask for help in a typical group learning situation

As described earlier, two types of teachers emerged in relation to the strategies they encourage in a typical group learning setting, those who encourage help seeking (TEHS) and teachers who encourage students not to seek help in a group learning situation (TENHS). In terms of the relationship between the teachers' help-giving orientation and what they report they would actually do in the typical situation, only one teacher (TENHS) reported that s/he would not give an answer if their students requested help. The remaining 77 teachers reported that they would provide

explanations regarding how to start or how to go about solving the problem. It is interesting to note that both the TEHS and the nearly all TENHS reported that they would provide help if asked. This result shows that these teachers' orientation to help giving is not related to their self-reported practice if they are asked for help.

In the scenario where students ask students from another group for help there are similar results, with 87.9% of *all* teachers (TEHS and TENHS) who reported that they would allow students of the other group to give an explanation about how to solve the problem or to help them start solving the problem. Only 4.5% of the teachers would allow the students of the other group to answer the question, while 7.6% would not allow any help giving at all. There is no significant difference between TEHS and TENHS.

3.3. Teacher's self-reported role and classroom goal structure

Research showed a relation between perceived classroom goal structure and helpseeking behaviour (e.g. Karabenick, 2004). It was expected that how teachers define their role would be related to their degree of encouragement. Therefore, teachers' responses in regard to how they define their role in group learning situations were categorised with two groups of teachers identified: teachers that provide a learning environment which reflects a mastery orientation (MO) and teachers that provide a learning environment which reflects a performance orientation (PO) when applying group learning in their science classes. For example, MO responses include 'I ask open-ended questions: to allow the students to relate their knowledge to other experiences' (T11) or 'to encourage students to be more responsible for their learning' (T20). PO responses, on the other hand, include 'provide instructions, ...' (T8) or 'to ensure students follow task' (T17). Most teacher responses were categorised as PO with nearly two-thirds coded as PO (62.1%) and only one-third (37.9%) as MO. Contrary to the expectations the analysis showed no significant differences between MO teachers (52%) and PO teachers (48.8%) ($\chi^2 < 1$) regarding their encouragement strategies for help seeking in a typical group learning setting.

4. Discussion

While the help-seeking behaviours of individuals have received considerable attention, there is little evidence in the traditional classroom setting for help seeking in small work groups (Karabenick, 2011; Karabenick & Newman, 2009). This study aimed to better understand these phenomena by studying self-reported teacher strategies and help-giving behaviour in typical group learning settings.

According to the study's results teachers differ in the way they would encourage help seeking in primary science group learning settings. About half of the teachers stated that they would promote student help seeking either from another student group and/or from the teachers themselves, whereas the other teachers would encourage their students to stay in their own groups and work out problems amongst their own group members (intra-group). Most of the teachers in the second group explain that they use this strategy because they want students to develop self-directedness, collaboration and problem-solving skills. These arguments are consistent with research showing that these types of skills are enhanced by working *in* a group (Qin, Johnson, & Johnson, 1995; Springer, Stanne, & Donovan, 1999). Interestingly, the same argument comes from teachers who would encourage their

students to ask other students for help. These teachers see potential in the extension of collaboration beyond group boundaries. On the other hand, different explanations are provided by teachers who would promote help seeking under the condition that they themselves, as the teacher, would be the source of help giving. These teachers report that help seeking is fruitful since it helps them manage the class – which was also the reason teachers gave for not encouraging help seeking in group learning – and because they considered it important to facilitate learning.

Interestingly, what the teachers encourage is not what they consequently report that they would actually do. All of the teachers, regardless of whether they encourage or discourage help seeking, report that they would help their students if one approached them for help. In light of help-seeking research, the result is reassuring since it shows that students seem to be receiving help when requested. Furthermore, nearly all teachers use an adaptive help-giving approach, as nearly all of them would provide an explanation rather than an answer or would allow students in other groups to do the same. On the other hand, this inconsistent behaviour of teachers may also confuse students, and it is very likely that such inconsistent behaviour will discourage help seeking if students are faced with difficulties.

The similarities of reasons that lead teachers to the decision to encourage or discourage help seeking may reflect the contradictory message teachers could be getting from the literature, teacher education preparation or professional development and their own experience, and thus may be an explanation for their inconsistent behaviour. On the one hand, teachers want to give their students space to develop self-direction, problem-solving skills, team skills and independence. This means that students must face problems and need to solve them as a group. On the other hand, learning processes also rely on teachers who help students when they have problems. The artistry of effective help giving in small group learning situations is reflected when teachers provide students with an environment in which they know they can ask for help, while at the same time recognising situations when they really need help. Unfortunately, teacher help giving and student help seeking can be an area in which teachers do not explicitly communicate their expectations to their classes. Instead, teachers may respond to requests for help rather than establish clear guidelines around student requests for help. Effective teachers create classroom environments, whereby asking for help is not seen as a weakness even in an achievement-oriented learning situation. Furthermore, effective teachers also explicitly teach students to recognise when they need help from the teacher and encourage their students to ask for help when they, despite all group efforts, could not solve a problem at hand.

The evidence here suggests that teachers take classroom time to explicitly teach help seeking and communicate their support for instrumental help seeking (Karabenick & Berger, 2013). They can communicate their lack of support for executive help seeking since it does not increase students' learning, knowledge and skills. Furthermore, it is essential that teachers are aware of when *not* to interfere with student approaches to finding a solution by offering help when students have not identified their own need for help. This approach would allow teachers to be consistent in their practice by focusing on the positive aspects of help seeking and offering help when needed.

Research has shown a relationship between classroom goal structure and student help seeking (<u>Butler & Neuman, 1995</u>; <u>Karabenick, 2004</u>), and it would then logically be expected that this relationship was reflected in the way teachers encourage or discourage their students to seek help. Consistent with the literature, it was expected that

mastery-oriented teachers would encourage their students to ask for help and performance-oriented teacher would encourage students not to seek help (Karabenick, 2004; Ryan et al., 1998; Turner et al., 2002). The results do not support this assumption and instead the data indicate that the opposite is actually occurring. One can only speculate about the reasons for this outcome. The results could be supported by teacher beliefs that groups who want to develop learning and problem-solving skills have to work out their problems on their own and that 'one or more members of a group have the necessary resources for task performance and success will follow if members "just put their heads together". (Karabenick & Newman, 2004, p. 2)

An interesting additional result is that younger teachers seem to be more open to

An interesting additional result is that younger teachers seem to be more open to encourage help seeking and are less performance oriented in group learning situations. One explanation for this could be that in recent years group learning is considered an essential component of school instruction for promoting active student engagement (Veenman, Denessen, van den Akker, & van der Rijt, 2005) and has become common practice in the classroom (e.g. Gillies, 2004). This development goes hand in hand with an attitude change towards group learning that is reflected in the results of this study. For example, 30 years ago, many teachers were sceptical towards cooperative learning settings and did not believe that this approach would help students improve their academic and knowledge skills (Rich, 1990). This perception seems to have changed and has lead to the development of a number of programmes in primary science education like Primary Connections in Australia (Hackling, Peers, & Prain, 2007), with a clear focus on collaborative learning.

This study relies on self-reported data with the inherent limitations of such studies. Therefore, it can be seen as a first step in understanding the help-giving behaviour of teachers in group learning environments. Further observational studies of teachers' actual teaching behaviours in the classroom are the logical next step in better understanding teacher help giving in group settings; that is, studies in which the effect of teachers' help-giving behaviour on students' help-seeking behaviour in group learning settings — in schools as well as higher education settings — would add to our understanding. A further limitation of this study is the specific group of participating teachers who have all an overall positive attitude to group learning. Future research would benefit from inquiries with teachers who are more negative or neutral to this type of teaching. Finally, the sample in this study is very specific (primary school science teachers in Western Australia). Further studies with a variety of schools, subjects and countries would add to our understanding of help seeking and help giving in group learning settings.

In summary, teachers reported positive views of the effect of group learning on their students' learning process. At the same time their encouragement strategies for help seeking in the group learning setting were inconsistent with their self-reported behaviour. These findings have implications for both teachers and teacher educators. Firstly, we suggest that teachers reflect about their expectations not only with regard to student tasks but also regarding the rationale supporting their help-seeking encouragement strategies. Secondly, we suggest that teachers clearly communicate these expectations to students when they use group learning as an instructional activity. Thirdly, teachers must avoid inconsistent behaviour since this may confuse students and has the potential to discourage them to seek help. Finally, teacher educators can facilitate clear help-seeking communication for future teachers by highlighting the importance of help seeking and help giving in the curriculum of pre-service teacher education.

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