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A Gifted Child's Education Requires Real Dialogue: The Use of Interactive Writing for Collaborative Education

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Abstract

This paper reports the findings of two studies which compared the responses to using dialogue journals by teachers of the gifted and talented and their students. The purpose of this research was to learn more about the ways that such interactive writing can enable GT students to collaborate effectively in their own education. Study 1 sought to determine the types of discourse functions teachers used in the journals they kept with their instructor in a graduate practicum and with the GT students they taught in that practicum. They interacted differently with their instructor than with their students in ways consistent with their role: they commonly used questions, a controlling behavior, when journaling with students. Study 2 examined whether teachers could vary their responses to students' journals to make them more collegial and less controlling. Together these studies supported the use of dialogue journals to promote mutuality in the educational process.

Research indicates that gifted and talented students want to be actively involved in their own education. The research on learning styles confirms the importance gifted and talented students themselves place on being able to learn actively and independently (Boutinghouse, 1984; Dunn & Griggs, 1985; Dunn & Price, 1980; Price, 1981; Scruggs & Mastropieri, 1984; Stewart; 1981); the research on locus of control documents the importance that gifted and talented students place on being able to control or affect what happens to and for them (Carland, 1981; Freehill, 1982; Harty, Atkins, & Hungate, 1984; Jeter & Chauvin, 1982; Middleton, Littlefield, & Lerhrer, 1992; Milgram & Milgram, 1975,1976; Passow, 1979; Saureman & Michael, 1980; Whitmore, 1986; Yong, 1994).

Maker (1982) recommends that "learning environments for gifted children must (a) be student centered rather than teacher centered, and (b) encourage independence rather than dependence" (p. 85). The research that directly supports this recommendation for less teacher-centered pedagogy (Shore, Cornell, Robinson, & Ward, 1991) resonates with the work of other influential educators (e.g., Bruner 1962, 1978; Shor & Freire, 1987; Vygotsky, 1978) who believe that collaboration between teachers and students is essential for promoting successful learning.

In order for true collaboration of this type to take place, however, teachers need to be willing and able to shed some of the traditional vestments of classroom power, and students need to be willing and able to assume this responsibility effectively. This research explored the potential of dialogue journals to be an effective component of collaborative, student-centered learning for gifted and talented students.

Dialogue journals have been defined as "a written conversation between two persons on a continued basis, about topics of individual (and eventually mutual) interest" (Staton, Shuy, Peyton, & Reed, 1988, p. 312). In addition to self generation of topics and interactive responses, dialogue journals encourage the use of functional writing, that is, writing for a particular purpose (Shuy, 1987). If, as Vygotsky (1962) suggests, thoughts represent internal dialogue, then the analysis of personal writings such as those in dialogue journals should be done by looking at the ways journal responses parallel other types of language usage. Shuy (1988) identified 16 language or discourse functions that have been used extensively to analyze response patterns in dialogue journals. Examples of Shuy's discourse functions include reporting opinions, responding to questions, complaining, giving directives, and requesting information. These response categories are equally applicable to analyzing dialogue journals' potential for promoting student-teacher collaboration in the classroom.

Studies have been done to learn more about dialogue journals' effectiveness in enhancing language development in various populations of students: young children (Garcia, 1990; Hall & Duffy, 1987), elementary (Reed, 1988), middle school (McWhirter, 1990), high school and college (Kitagawa & Kitagawa, 1987; Roderick & Berman, 1984), hearing-impaired (Mettler & Conway, 1988; Staton, 1985), bilingual (Hudelson,

Putting the Research to Use

Dialogue journals demonstrably promote communication. Teachers in these studies clearly found that journaling enhanced their ability to communicate *to* their students about both cognitive and affective matters. They also found that journals were an effective way for them to learn *from* a source they thought to be authoritative, their course instructor. However, if, as Study 2 showed, teachers can learn to participate in journaling with what Shuy (1987) calls "shared mutuality," they can overcome role behavior and be open to learning from their students through the journaling process. Only then can it achieve its full potential as a means by which gifted students can successfully engage in self-directed learning in collaboration with their teachers.

1989; Peyton, 1990; Peyton & Seyoum, 1989; Urzua, 1987), Native American (Catho, 1987), mentally retarded (Farley, 1985), learning disabled (Gaustad & Messenheimer-Young, 1991; McGettigan, 1987; Staton & Tyler, 1987). These studies document that students representing a broad range of age, ability, and language facility can successfully participate in interactive writing with their teachers.

The only study that was found on the gifted was done by Farley and Farley (1987), who reported on the match between learning characteristics of the gifted and the use of dialogue journals using a case study of a young gifted child who was maintaining a dialogue journal with her father as she was beginning to read and write. They reported that

> the documented learning styles of the gifted and the characteristics for maintaining dialogue journals are uniquely compatible: gifted children are seen as dynamic communicators and dialogue journals are seen as a dynamic approach to communication. (p. 101)

Most studies on the use of dialogue journals have focused on the ability of the process to enhance language development or content mastery (Atwell, 1987; Bailes, Searls, Slobodzian, & Staton, 1986; Bode, 1989; Danielson, 1988; Fulwiler, 1987; Gambrell, 1985; Jackson, 1992; Keeft, 1987; Manning & Manning, 1989; Staton, 1980; Urzua, 1987) and have not studied their pedagogical potential for facilitating a collegial approach to learning. It is clearly important for gifted students to develop communication skills (Alexander & Muia, 1982; Dearborn, 1979; Freehill, 1982; Goldberg, Passow, & Lorge, 1980; Perrone & Male, 1981), and dialogue journals can contribute to that development. However, dialogue journals also promote what Shuy (1987) called shared mutuality: "two people interacting through the medium of language" (p. 890) in ways that are not bound by traditional teacher-student status roles. This dimension of dialogue journals is central to their being able to promote a successful collaborative teaching-learning relationship.

Purpose

Study 1 examined whether teachers who were using dialogue journals as a component of a student centered, interest-based practicum would deviate from traditional teacher-directed roles in their responses both in the journals they kept with their own seminar instructor and in the journals of the students with whom they also journaled. Based on the findings of Study 1, Study 2 examined whether teachers, when trained with an alternate model, would avoid using questions, a typical teacher role behavior, in responding to their students' journals. Also in Study 2, students were asked for their opinions about the value and collaborative potential of maintaining dialogue journals.

For each of the three consecutive summers of this research, teachers were trained in the use of dialogue journals as one component of their 6 week, university based summer practicum in gifted education. Students were selected to participate in the 3-week summer program for high-ability students based on similar but not identical criteria. The evidence that they were in the top 5-8% was documented by a combination of indicators including standardized test achievement test scores and classroom teacher judgments regarding the student's academic ability and motivation.

In Study 1 teachers maintained dialogue journals with their seminar instructor and with their own class of 15-18 students. In Study 2 teachers and students maintained three way journals. Teachers exchanged journals with both their seminar instructor and a teacher peer. Students exchanged journals with both their classroom teacher and a student peer. Together these studies provide information about both teachers' ability to engage students with genuine mutuality and students' ability and interest in sharing journal dialogues.

Study 1

The purpose of this study was to investigate in what ways teachers who were participating in a program that actively promoted student-centered learning naturally extended these principles in the use of dialogue journals. Did they engage in interactive writing with their students in ways that were consistent with traditional teacher directed strategies? Would they engage in dialogue journals with shared mutuality?

Method

Subjects. Subjects for this study were 11 teachers, 10 of whom were female, and 195 students, 56% male and 44% female. Sixty-three percent of the students were in Grades 1-3, and 37% were in Grades 4 7.

Procedure. Teachers attended a 3-week instructional seminar prior to the students' 3-week program. During this seminar, teachers were guided in the development of curriculum units around the interests their class of students had specified on program applications.

During the final week of the seminar, teachers received training in techniques for using dialogue journals with their students but not in the Shuy discourse functions (1988) that would be used later in the analysis of the journal entries. Teachers were expected to maintain dialogue journals with each of the students in their class as well as with their course instructor (this researcher) throughout the 6 weeks of the practicum.

Data Analysis. Teachers', students', and the seminar instructor's journal entries were analyzed for fluency and flexibility using the 16 discourse functions identified by Shuy (1988). For purposes of analysis, fluency was defined as the number of times a discourse function was used and flexibility as the number of different discourse functions used. The discourse functions were not mutually exclusive, so it was possible for a single entry to be classified in more than one function. For example, in this response a returning teacher is sharing both personal information and predicting:

> I have become much more realistic this summer in predicting the amount of information I can squeeze into

3 weeks. I don't think I will feel as frustrated [about this as I did last summer].

Prior to doing the analysis, this researcher exchanged samples of the dialogue journal entries with other experienced researchers until there was interrater reliability of $p > .90$ agreement in classifying the discourse functions. No one involved in the study knew of the discourse functions at the time the journals were done, but the 16 functions accounted for all responses.

Results and Discussion

In both their personal and classroom journals, all teachers initiated topics, maintained sustained interactive dialogue on a broad array of topics, and demonstrated their varied use of Shuy's discourse functions. The ways in which they did so, however, showed evidence of role-related responses (see Figure 1) that were more typical of stereotypical teacher-directed pedagogy than of shared mutuality in the teaching/learning process.

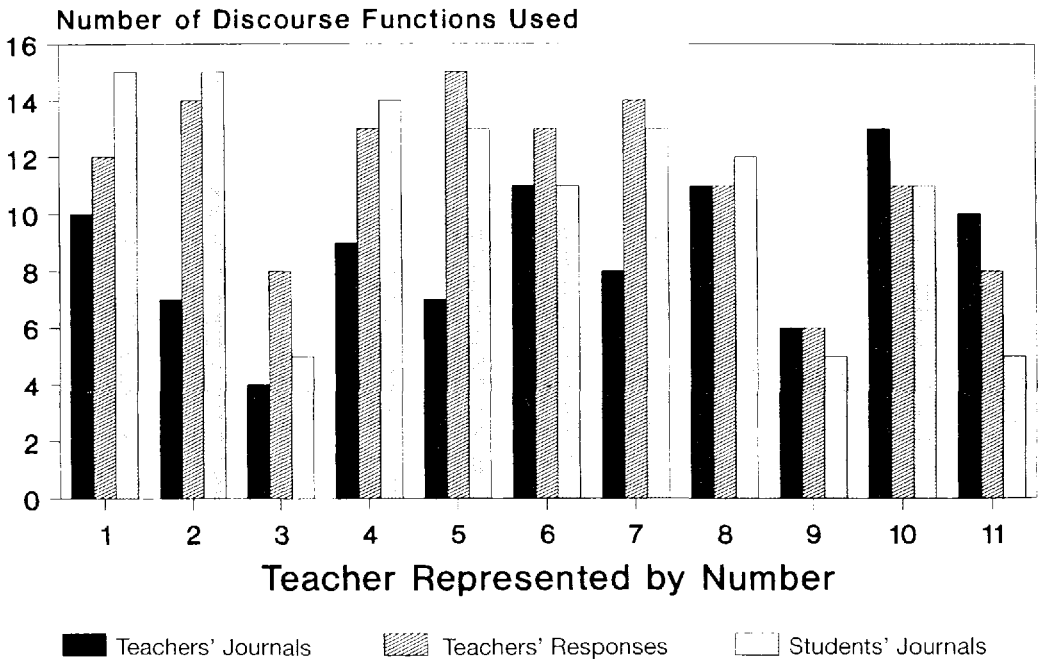
Teachers as models for the uses of language functions. Seven of 11 teachers used at least two more discourse functions in responding to their students than in their personal journals, two used an equal number, and two used fewer with their own students. Clearly these teachers had intuitively modeled broader use of language functions in the journals with their students than they had used in their personal journals. This finding was consistent with Jackson (1992), who reported in her analysis of middle school students' responses that "teachers' responses stimulate growth by modeling an appropriate advance in language functions" (p. 56).

One might hypothesize that teachers, as mature communicators, would be expected to use more language functions than their students. However, these same teachers responded differently when they were in the role of student in the graduate classroom than they did when they were teachers with their own students. Only 3 of 11 teachers used 11 or more discourse functions in their personal journals. In contrast, 8 teachers used 11 or more language functions in the journals they maintained with their students.

Role-related responses. When teachers were in the role of teacher, their journal entries reflected additional types of stereotypical teacher responses. For example, the teachers used their personal journals to reflect on their praxis:

I keep backing up my lesson plans because we just don't get as much done as I plan but the pace feels right for the kids.

Figure 1
Fluency of Discourse Function Use



> Thank you for the suggestions! I originally thought of doing activities like you suggested but became sidetracked somewhere along the way.

Teachers also saw the journals as a way they could meet their students' individual cognitive and affective needs:

> I have one boy that seems so sharp but is so shy and guarded. I don't know if he's enjoying this. Maybe he will share something in his journal.
>
> I have a student named ___ who has torn a paper from her journal and handed it to me on the way out. She is upset that the other kids don't talk to her. I will find a new station for her to sit. ___is very sensitive towards others. She may make friends with___.

One teacher concluded that the way she liked to use her personal journal would be the way that she would expect her students to use it: "I think I'm going to like this dialogue journal! There is so much going on in class that I find it very comfortable to rehash each day." On journal use with her kindergarten and first-grade students, she wrote:

> I think this dialogue journal is going to be interesting with my little ones. I think my direction is going to be a period toward the end of the day when they can rethink the day and write or draw some of the important things they thought of during the day.

Application of shared mutuality approach in journals. In these journals, teachers responded in rather traditional, stereotypical, teacher directed ways regardless of whether they were doing so in the role of teacher or of student. Staton et al. (1988) stated that one benefit of using dialogue journals with students was that it allowed a deviation from the traditional power imbalance between teacher and student. Teachers in this sample, however, seemed to maintain the traditional imbalance. The discourse functions most heavily utilized by all teachers in this sample were also typical of controlling teaching behaviors: reporting opinions, evaluating, reporting general facts, and requesting opinions. In response to a fifth-grade female who had apologized for her behavior in class the previous day and promised to try to be better, the teacher said:

> That's all you can do is try, but really try to settle down. You are doing such a great job on your architecture model. I believe when you settle down a little more, you can finish way ahead.

The functions that teachers used least with their students were the very ones which one would expect to find between equal partners engaged in conversation. As colleagues might exchange feelings in a conversation, the teachers, in responding as graduate students, often complained, apologized, or requested procedures. However, none complained to their students, and only four teachers apologized or asked for procedures from their students. Teachers did, however, respond respectfully to students who did. A returning fourth-grade student wrote:

> Today was the first day of computers. I have been meaning to say this for at least 2 years but we didn't write journals then. I think kids who know about computers shouldn't have to do all the stuff they already know. P.S. If it's possible, show this to [the computer teacher].

The teacher responded by acknowledging the concern, taking action, offering some "teacher" perspective, and finally thanking the student for airing the concern.

> I bet it's frustrating for you to sit and listen when you already know it. I will bring your feelings to [computer teacher and program director]. I think [computer teacher] just has to be absolutely sure that everyone knows. Thanks for sharing with me.

Responses reflect individual differences among teachers. All teachers evaluated and reported opinions and general facts to most or all of their students. Beyond the common use of those three discourse functions, however, teachers seem to have responded individually to the students since no other discourse function was used by all teachers with all of their students. For example, although all teachers requested opinions from some students in each class, only four did so from all the students within that class.

Table 1
Study 1: Individual Differences in the Flexibility of Teacher Responses to GT Students

	Number of GT Student Journals Per Class			
	0	**1-2**	**3-4**	**5-6**
Shuy Discourse Functions				
Reporting opinions	0	0	0	11
Reporting personal facts	2	5	2	2
Reporting general facts	1	1	2	7
Responding to questions	3	3	4	1
Predicting	4	3	4	0
Complaining	11	0	0	0
Giving directives	2	3	4	2
Apologizing	7	3	1	0
Thanking	3	5	1	2
Evaluating	0	0	0	11
Offering	2	1	7	1
Promising	2	3	5	1
Question asking	2	3	2	4
Requests for information	2	3	2	4
Requests for procedures	7	3	1	0
Requests for opinions	0	3	3	5

Note. For each of the 11 teachers a stratified random sample balanced for gender and grade level was analyzed. Results are shown as the number of teachers using that discourse function with the number of students indicated.

There was some interesting variance among the other discourse functions in the teacher responses: only three teachers shared personal facts with all students in their class; two did so with some of their students, and six seldom did. There did not appear to be a relationship between the student's age and the teacher's willingness to share personal information since some teachers of primary and some of intermediate students chose to share.

Similarities of response patterns between teachers and their students. The content of the journals teachers wrote in their role as students was quite similar to that written by the elementary and middle school students. For example, a fourth-grade student wrote:

> The first thing I thought when I came in the room was that I didn't know anything about this class and everyone else did. But it turned out quite differently. I think I am going to like it here.

A teacher wrote in her own journal:

> Day 1: There goes my summer! I sure hope you are going to make me feel ok. Right now my stomach has a few butterflies.
>
> Day 2: Well I think I've figured out where I want to be in 2 1/2 weeks [end of seminar]. I now feel like I am on the right course.

Another teacher acknowledged her concerns but began to address them as she continued to write:

> OK I'll confess—seeing IQ scores higher than mine really scares me (terrifies). I mean, can I, mere mortal, stimulate these kids in ways others haven't?
>
> It is an awesome responsibility. I like the topic areas I've self-selected. I am also interested to find many familiar names in the class of kids I've had over the years.

To have elicited such openness, this researcher as instructor surely must have leveled the playing field of instruction. However, the analysis of the instructor's own responses to the graduate students revealed that her most frequently used discourse functions were the *same* traditional responses as those the graduate students had used when they had been in the role of teacher: evaluating, reporting opinions, responding to questions, and giving general facts. The instructor did model broad use of the discourse functions by using 15 of the 16 language functions, which was more than all but one of the graduate student teachers had in any of their journal responses. Like her students when they were in the role of teachers, the instructor never complained to her students. Thus the instructor, who philosophically believed in a collegial approach to learning, had not spontaneously modeled it in her journal responses, even with age peers; role behavior dominated.

Conclusions

The nature and type of responses teachers used in their own journals and with their students demonstrated clearly that they both used and encouraged their students to use key elements of the dialogue journal process: self-generated, interactive, and functional use of language to communicate on a wide variety of topics. The types of discourse functions most used by students and by teachers, however, were consistent with those one would expect to find in interaction among teachers and students who were behaving in ways their traditional roles suggest.

In their own evaluation of the journaling process, teachers felt that the dialogue journals were valuable because they were enjoyable, served as a good source for giving and getting ideas, and allowed them to personalize instruction in both the cognitive and affective domains. They strongly endorsed using dialogue journals, but some were concerned about how one could maintain the process over time with more students. So, although journaling promoted teacher-student interaction, in many ways it was just a variant of traditional instructional practice. Neither teachers nor instructor spontaneously crossed traditional teacher-student roles to engage in fully collaborative, collegial learning. Whether they could learn to do so was explored in the next study.

Study 2

Although questions can and should be a natural part of written or oral conversation, they also typify power and control in a teaching-learning environment. Questions are the prime example of the status difference between student and teacher. When they are genuine, as in the Socratic method, questions help students engage complex ideas for themselves. But they can also be asked for other reasons: the ability to ask them (and elicit a response) is a primary way of showing and effecting control in a relationship. Goody (1978) states that

> the use of questions in the teaching situation is structured by the fact that the teacher-pupil relationship always tends to be defined in terms of status inequality, with superiority stressed as intrinsic to the teacher's role. (p. 41)

The complex act of questioning has been the subject of much study (e.g., Bloom, 1956; Dillon, 1981; Goody, 1978; Sacks, Schegloff, & Jefferson, 1974) by researchers who have sought to learn how to use them more effectively in the instructional process. Sanders (1966) reported that teachers spend as much as 90% of their instructional time with students asking questions. If one wants to modify the typical student-teacher interaction patterns, one must address the use of questions. Shuy (1987) reported that, in classrooms using dialogue journals, the number of questions overall went down from 35% in class discussions to 15% in the dialogue journals. Despite his belief that journaling led to what he called "shared mutuality" between teachers and students, Shuy (1988) also reported that students responded to questions in their journals at twice the rate teachers did. Although the use of questions diminished in the journals in ways consistent with the concept of shared mutuality, they remained an important teacher imperative. Since the use of questions so often inhibited shared mutuality, this study examined whether, if asked to, teachers could learn to emphasize other types of responses.

In Study 2 students were asked to give their perceptions of the types of journal responses they received from others and to evaluate the value they saw in journaling. This study also explored whether there were differences in these opinions by gender, age, or type of person with whom students exchanged the journals. Study 2 was replicated in two consecutive summer practica. Three fourths of the students and one half of the

teachers maintained dialogue journals both summers in which Study 2 was conducted.

Method

Subjects. Subjects were the elementary and middle school students who met the program selection criteria.

Study 2, year 1:

N = 147 (54% male, 46% female), Grades 1-3 (15%), Grades 4-6 (66%), Grades 7-9 (19%).

Study 2, year 2:

N = 240 (69% male, 31% female), Grades 1-3 (35%), Grades 4-6 (47%), Grades 7-9 (18%).

Procedure. In Study 2 teachers were shown the results of Study 1 and explicitly asked to avoid the use of questions in their responses to their students by using the Shuy discourse functions (1988) as cues to assist them in varying their responses.

First-year teachers maintained three-way journals by exchanging with a returning teacher and their seminar instructor throughout the 6-week practicum. All teachers maintained three-way journals with each of the 15-18 students in their class during the 3-week student program. Students maintained three-way journals by journaling with their teacher and with a student peer in the class.

During the final week of the program in both summers of Study 2, students were asked to complete a written questionnaire on the components of the journaling in which they had participated. Teachers were asked to assist students with reading or writing responses if necessary.

Evaluation instrument. A multiple-item questionnaire was developed by this researcher based on a similar survey of preservice teachers' views on maintaining dialogue journals (Schmidt & Martin, 1991). Schmidt and Martin (1991) found that college students reported that questions were the first or second most used response from each of the three course instructors with whom they journaled.

For this study, the first sequence of questions asked elementary and middle school gifted students to give their opinions about the value they saw in dialogue journaling by responding to prompts using a Likert 4 point scale going from *strongly agree* to *strongly disagree*. Questions included whether journal writing was fun, easy, hard, boring; whether they liked to write, liked to get responses, would keep a journal if no one responded; and whether journals helped them learn. Students were then asked, again using the 4-point Likert scale, to describe the nature of the responses they received from others. Were the responses encouraging remarks, questions, suggestions, good ideas, boring, interesting, helpful? Finally, the students were asked to comment in open ended statements on the value of the journaling. They were asked to explain why journaling with a teacher and journaling with a teacher and another student were both good and bad.

Data analysis. Univariate analyses, frequencies, *t*- and Tukey posthoc tests for the total sample were calculated. In addition, a three-way analysis of variance (Year x Gender x Grade Level) investigated the relationships among those variables. A subset of the total sample (n =101) participated in both years of Study 2. Because there were no significant differences in the findings of the test-retest sample from those of the total sample, the findings for the total sample (N =387) will be reported.

Results and Discussion

Students across both years of this study reported very positive attitudes toward maintaining dialogue journals: 73% found journaling easy, 83% liked writing to their teachers, and 89% liked getting responses from them. The major differences between years were that during the second year more students reported liking writing to and getting responses from their teachers (p >.001) and reported that journaling was fun (p >.001).

Table 2
Study 2: GT Student Assessment of Journaling Process

	% of Students Who Said	
	Year 1	Year 2
Journaling is		
Fun	56	72**
Boring	44	47
Easy	73	73
Hard	22	20
Liked writing to my teacher	79	86**
Liked writing to other students and my teacher	58	50*
Liked writing to another student	62	49**
Liked getting responses from other students	65	51**
Liked getting responses from my teacher	86	91*
Would keep without responder	48	53
Helped me learn	51	55

Note. * p >.01; ** p >.001 difference between year 1 and year 2 of Study 2

Questions about two-way (teacher-student) journaling showed remarkable consistency across years, but those about three-way journaling (teacher-student-student/peer) did not. Developmental and gender differences that emerged in the first year reappeared even more strongly in the second year for both types of journaling.

Developmental differences. Significant developmental differences emerged with implications for the ways interactive writing should be used in the instructional process. More students in Grades 1-3 reported liking two-way journaling than did students in Grades 7-9 (p >.01). Students in Grades 1-3 apparently were not developmentally ready for three-way journaling because they were significantly less likely than the older students to report giving responses to (p >.0001) and getting responses from (p >.001) their peers. The youngest group commonly complained about the difficulty they had in reading their peers'

handwriting and that their peers did not have interesting ideas to share. This may indicate that students develop the ability to appreciate and discriminate among the ideas they receive from others at an earlier age than they develop the abililty to craft and communicate ideas effectively to others.

Gender differences. Gender emerged as an especially important variable both within and across years in this study. In both years, significantly more females than males reported finding journal writing easy ($p > .05$), liking to write to other students ($p > .01$), liking getting responses from other students ($p > .05$), and liking writing to both a peer and their teacher ($p > .01$); females were significantly less likely to report that the responses they received were boring ($p > .001$). Attitudes among both genders became more pronounced the second year. Compared with the first year, significantly more females agreed that journal writing was easy ($p > .01$) and that they liked writing to another student ($p > 01$) and getting responses from that student ($p > .03$). Conversely, significantly more males reported finding journaling boring ($p > .001$). These gender differences emerged again in the types of reponses students reported getting from their peers. In both years, significantly more females than males found their peers' responses to be encouraging, to contain good ideas, and to be interesting; fewer females thought the responses they got were boring (all at $p > .01$).

Students' perceptions of teachers' responses. The teachers in this study had been asked to minimize the use of questions by deliberately varying the ways in which they responded to their students, and the students affirmed that their teachers did so successfully. As Table 3 shows, students were less likely to think that their teachers' responses were questions than that they were the type of responses found in professional discourse among colleagues involved in shared learning. Except for finding that their peers were more likely to make interesting responses than encouraging ones, the rank order of response types students reported having gotten from their peers was identical to the rank order of response types they perceived they had received from their teacher. Male and female students perceived having received similar types of responses from their teachers, but not from their peers.

Students' evaluation of the journaling process. Students perceived and evaluated the use of dialogue journals in ways that were remarkably similar to the teachers' responses reported in Study 1. In their open ended responses, many students described dialogue journals as being enjoyable and a good way to communicate and learn. Students emphasized the collegial value they saw in the technique, particularly the way it promoted the giving and getting of interesting ideas. They said: "it's good because she can learn from you and you can learn from your teacher," "the journal tells Mrs. K how me and her are feeling," "it gives you a one on one basis for learning," and "it was like a conversation on paper."

Some students, like some teachers, voiced concerns about time (both that they did not have enough time to write and that journaling took too much class time), about having difficulty in coming up with ideas or thinking the responses were not interesting, and about not liking to write or not being comfortable with sharing with others in this way. The same students who made negative comments about two-way journaling were also likely to make them about three-way journaling.

Table 3
Comparison of GT Student Assessment of Two- and Three-Way Journal Responses

	Type of Journaling	
	Two-Way GT Student/ Teacher	Three-Way GT Student/ Teacher/Peer
Percentage of Students Who Said Responses Were		
Encouraging remarks	84 (78)	52 (32)**
Interesting	80 (80)	65 (47)†
Good ideas	80 (77)	52 (38)†
Suggestions	70 (65)	39 (29)*
Helpful	71 (74)	45 (35)*
Questions	56 (61)	41 (41)
Boring	6 (10)	16 (8)**

Note. Data for Study 2, year 2 reported in parentheses adjacent to year 1 data. Differences between year 1 and year 2 *$p > .01$, **$p > .001$.

Students thought that maintaining journals with peers demonstrated that they and their classmates could communicate and provided another source of good ideas and suggestions. They appreciated the opportunity it offered to exchange views with peers whose interests, knowledge, and perspectives differed from their own, as well as with peers of similar background. They liked being able to "express ideas secretly" and "to make friends privately." One student said that "it's just like writing notes." Students described the teacher and student journals as "three-way talking," "an opportunity to get broader views," "a way to learn how young people agree and disagree with other young and old," and "like [being] in their shoes." They cautioned that "students might want to share only with a peer or only with a teacher."

Comparison of two- and three-way journaling. Students' enthusiasm for maintaining dialogue journals with their teachers increased with their experience in doing it. The second year they tried it, 72% of students reported that two-way journaling was fun, whereas the first summer, only 56% did ($p > .001$). Similarly, the percentage reporting liking to write to their teachers increased from 79% to 86% ($p > .007$), and the percentage reporting liking to get responses from their teachers increased from 86% to 90% ($p > .01$). Slightly more, however, found two-way journaling boring the second year than the first year (44% to 47%, $p > .03$).

Three-way journaling, though, consistently got less favorable reviews from students the second year. Whereas 63% reported liking three-way journaling the first year, only 50%

did so the second year ($p > .01$). Furthermore, they reported receiving significantly fewer and less varied responses from their peers the second year (all $p > .01$). A substantial change in the age composition of the group may account for this finding: Grades 1-3 more than doubled (to 35% from 15%), Grades 4-6 declined (to 47% from 66%), and Grades 7-9 declined marginally (to 18% from 19%).

Conclusions

These studies found that, under the proper conditions, interactive writing between teachers and gifted students can indeed promote collaborative learning. Teachers do not spontaneously journal with students in ways that are most conducive to this mode of learning; they typically respond by asking questions -a common form of controlling behavior. When shown the proper models, however, they can learn to use discourse functions other than questions, ones that create an interactive, collaborative learning environment. Future studies might look for additional benefits of such modeling. For example, one might directly teach the discourse functions to both students and teachers.

Journaling is a form of communication that is based on, and can help engender, trust. While the gifted students of all ages in this study demonstrated both that they enjoyed journaling with their teachers and could effectively participate in it, older students were more likely than younger ones to enjoy three-way journaling with age peers. The unique relationship that emerged between student and teacher may have come to be increasingly valued by the students in ways that overrode the benefits of the three-way dialogues. The limited time that the students had together (3 weeks) may have made it difficult to develop the trusting relationship with a previously unknown peer that three-way journaling requires. It may also be that the increased satisfaction students reported finding in journaling with their teachers made journaling with a little-known peer pale by comparison.

Significant gender differences emerged. Although not surprising, they invite us to explore their implications for instructional practice. Research tells us that young female students across ability levels (American Association of University Women, 1992; Stromquist, 1994) and within populations of identified gifted students (Kerr, 1985; Subotnik & Arnold, 1993; Terman & Oden, 1959; VanTassel-Baska, Olszewski-Kubilius, & Kulieke, 1994) respond positively to instructional practices that emphasize personalized interactions. Although we know that female gifted students respond to modifying traditional classroom practice in ways designed to appeal to females (Eccles, 1985; Kerr, 1991; Lupkowski & Assouline, 1992), we know less about the effectiveness of these approaches with males. Certainly we want to learn more about the benefits that the personalized format of interactive writing provides gifted females; however, it is equally compelling to explore the ways that males might also come to value the dialogue journal process to the extent that females already seem to. This might enhance the shared mutuality, success, and enjoyment of learning for all learners and their teachers.

Dialogue journals offer multiple potential benefits to teachers of the gifted. They can foster student-centered learning by enabling teachers to take into account students' interests and individual learning styles by communicating to those students on both cognitive and affective matters. These help teachers to individualize instruction, but not necessarily to promote self-directed learning. Although one half of the teachers in this study identified getting personalized feedback on their teaching as the primary benefit of journaling with their course instructor, only one thought its primary value was in eliciting feedback from students. Until teachers come to value journaling for its ability to promote two way communication—both to and from students—it will not fully realize its potential for promoting self-directed learning.

Although the majority of students and teachers in this study endorsed the use of dialogue journals, some did not. Individual differences must be considered in this as in other educational strategies. We have just begun to explore the collaborative potential of this technique for students and, more recently, for preparing teachers (Bahruth & Howell, 1987; Canning, 1991; Irujo, 1987; Roderick, 1986; Schmidt & Martin, 1991; Surbeck, Hanna, & Moyer, 1991). As we continue to study the use of interactive writing in the educational process, we should do so collaboratively. That is how we can best understand the way students and teachers will benefit from this approach over time.

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