

Hoenny Center for Research and Development in Teaching

Teacher Research Series, Report No. 1

Informal Peer Teaching: Seventh graders reflect on helping and being helped at learning stations in a social studies classroom

Peggy Emling, Edwardsville (Illinois) Central Unit School District 7,
Mary E. Bickel, and J. Terry Gates, The Hoenny Center, St. Louis, Missouri

© Hoenny Center for Research and Development in Teaching
www.hoennycenter.org

Contents

Introduction	1
Procedures	2
Results	4
I. Response Categorization	4
Collation of Results – Response Categorization	10
II. Pattern Categorization	11
Discussion and Conclusions	16
References	19
Appendix A – On Field-Based Hoenny Center Research...	23
Appendix B – Transcription and Tabulation of Responses...	26
Appendix C – Supporting Detail ... Pattern Categorization	37

Introduction

Peggy Emling: In order to study the Louisiana Purchase and the journey of Lewis and Clark, my seventh-grade students worked for nine days, spread over three weeks, at four learning stations in late spring 2003. I separated each class into four groups and assigned them a rotation of the four centers. Activities at the stations included the following: drawing maps; learning vocabulary words; researching plants, animals and people; and analyzing many aspects of the Lewis and Clark expedition. Students spent about two class periods at each station and kept their work in their own folders until they had completed all of the projects.

Although this was not a group project, I expected and, in fact, I instructed students to assist each other with the work. Here was an informal peer-teaching opportunity. I organized students using a heterogeneous (mixed-ability) grouping strategy. Also, we spent some time at the beginning of the project discussing how to help other students and how to get help without cheating. We tried to make the distinction between cheating and sharing. One student put it this way: "Cheating is *giving* another student the answers. Sharing is helping another student *find the resources* to get the answer." Most students seemed to understand this difference during the time that we spent on this project.

I created a questionnaire to debrief the students on their informal peer-teaching opportunity and to encourage them to take their helping abilities seriously as part of our classroom learning processes.

In our review of the research literature (Puchner, 2000), we found over 100 studies that explored questions closely related to peer teaching in k12 schools. Of those, only ten (10) were recent empirical studies of middle school students' instructional abilities (Davenport and Howe 1999; Gillies 2002; Hernandez 2001; Linchevski and Kuscher 1998; Peklaj and Vodopivec 1999; Saner et al 1994; Stevens and Slavin 1995; Webb, Nemer, et al 1998; Webb, Troper, et al 1995; and Webb, Nemer, and Zuniga 2002.) Only four (4) explored the phenomenon using ethnographic or attitude-measurement strategies. (Matthews 1992; McMahon and Goatley 1995; Mulryan 1994; Ramsay and Richards 1997.)

This project's intention is to debrief these students mainly about their motivations and rewards, and less about their recollections of teaching strategies they used in helping each other with the Lewis and Clark stations task. Our purpose in this project is merely to read and record student responses, find emergent patterns, describe what we find, and then reflect on the descriptions. No attempt is made to generalize any further than on the group we are studying and their responses to the teaching-learning situation they encountered. Because there is likely to be some 'slippage' among a) attitudes as a psychological construct, b) open-ended responses (as we collected here), and c) more precise measures of affect, the analysis was kept as broad as possible. The categorization process we used in this project was consistent with the questionnaire's focus on motivations and rewards rather than other dimensions of response.

Procedures

The intent of the questionnaire was to elicit information about students' actual behaviors and recollections regarding their own recent peer-teaching experiences during the stations project. By doing this, respondents would more likely use recent memory, rather than views about teaching in general, to respond to the questions. Using these recollections, we also focused on students' attitudes and preferences within the experience.

All 94 students completed the questionnaire in class at the end of the stations project. They were asked to respond anonymously in a short-answer format to the following questions:

1. Did anyone help you?
2. Did you help anyone else?
 - 2a. If yes, why do you help other students?
 - 2b. How did you help?
 - 2c. How did you know that person needed help? (Did they ask you or did you volunteer?)
 - 2d. How successful were you in helping that student?
3. How do you ask for help? from other students or from the teacher?
4. What kind of person do you like to work with? List more than one characteristic.
5. Why do you like to work with those types of people?

There were 94 completed, usable questionnaires. These were transferred to the analysts and discussed in several monthly meetings of the Edwardsville Group of the Hoenny Center Professional Partners. The analysis process included two phases: a) a categorization of each response from all students and b) a categorization of response patterns within each student's questionnaire. The analytical approach we used here is rationalized in Appendix A.

Two transcriptions of the data from the questionnaires were created: a) a word processor document with a list of responses following each question posed to the students, and b) a spreadsheet containing each response set placed in a row after the sequence number assigned to each completed questionnaire (See Appendix C).

After this, we coded the responses, using the following intuitive, judgment-grounded approaches:

Response categorization: As noted above, student responses were copied into a word processor document. Aside from corrections for a few spelling errors and except for responses to Question 2b (where only the verbs were listed), all responses used in this report are exact quotes from the students. The entire range of responses from all students for each question appears in Appendix B; a sampling is used in the report narrative below.

Questions 1, 2, 2b, and 2c required simple tallies. Questions 2a, 2d, 3, 4, and 5 elicited more extended responses. These were coded provisionally by noticing similarities and differences between responses: If a response to a question was the same or nearly the same as the one before it, the response was coded and grouped with the first response of its type. If the response was different, it was given a different code. In this way, homogeneous lists of responses emerged.

To arrive at a final categorization framework, lists were displayed under each question and assigned provisional category names. Then we gradually combined these provisional category lists using broader determinations of similarity and difference until there were only two to four lists under each open-ended question. When this combining process was completed, only three (3) of the 1067 responses tallied, coded and categorized had aspects of two categories (see 2a.4 and 2c below). We then gave titles to the final lists. The final tally count of responses for each questionnaire item, and the categorization framework that resulted from the grouping process, are reported in *Response Categorization* below and in Appendix B.

Pattern categorization: For the purpose of discovering patterns of response from single individuals, each student's questionnaire was considered as a whole, focusing on their reflections about informally tutoring their peers. Each student's responses were copied into a spreadsheet row (horizontal); the column headings on the spreadsheet (vertical) paraphrased the questions. Each row was examined and coded as above, with similar patterns coded with the first of its type. Provisional categories resulted from this process, and these were collapsed until there were two distinct categories.

This coding process had the potential for revealing differences among individual students by considering combined (rather than separate) written responses and reflections. Sample rows are displayed as illustrations in the narrative after the *Pattern Categorization* heading below; the entire spreadsheet is in Appendix C.

Results

I. Response Categorization

Student responses led to groupings under various categories for each question.

Questions 1 and 2 required simple Yes/No answers and tabulations only.

Question 2a implied three categories of response (*Focus on Learner, Reciprocity, Belief/Preference*) and one combined-response category.

Question 2b resulted in a list of action verbs that students used in their responses when referring to tasks, facts and strategies.

Question 2c elicited two types of response ("They asked" vs. "I volunteered") and some students gave an extra brief explanation.

Question 2d generated two categories of response: *General Evaluation* and *Focus on Learner*.

Question 3 generated two categories of response: *General Actions and General Quotes*, and *Specific Focus/Strategy and Specific Quotes*.

Question 4 generated four categories of response: *Personality, Interaction, Achievement/Task*, and *Intelligence*.

Question 5 yielded three categories of response: *Academic Benefits, Personal and Social Benefits*, and *Personality*.

The following narrative discusses the results. It is organized according to the order of the questions on the questionnaire.

1. Did anyone help you? YES=80, NO=13, blank=1. Total number of respondents, 94.
[Note: A YES respondent added "my mom when I was sick" and a NO respondent added "did it on my own."]

2. Did you help someone else? YES=86, NO=7, blank=1.
[Note: Four YES respondents added examples of the type of help they gave --book source, color, gave book, told the directions.]

Chart 1: Tabulations, questions 1 and 2

	Yes	No	(blank)
1. Did anyone help you?	80	13	1
2. Did you help anyone else?	86	7	1

Important: Many of the ninety-four students gave more than one answer to each question. Beginning with 2a.1 below, the numbers in parentheses nearest the category titles refer to the total frequencies of responses, not numbers of students. The list below each category title includes responses given by the most students and a few other representative examples. For all responses coded under each category, see Appendix B.

2a. Why do you help? Student responses to this question generated the following categories: 1) *Focus On Learner*, 2) *Reciprocity*, 3) *Belief /Preference*, and 4) *Combination*.

As they expressed their reasons "why," students may have implied a variety of underlying motivations that would blur the lines between categories. However, an attempt was made to place statements in separate categories based on the words that students actually chose to write. Interviewing students would clarify differences between categories and uncover deeper meaning. When a response included aspects of two categories, it was listed under *Combination*.

It was interesting to note that, in spite of the teacher's directions asking students to work together, none of the students said they helped others because their teacher instructed or encouraged them to do it. A few representative examples are given under each category.

2a.1: *Focus On Learner*: Forty-five (45) responses focus on OTHER students and THEIR learning needs, academic achievement, learning tasks, or classroom behavior (the last item in the list below). Respondents don't specifically mention their own role in the process.

- They needed help (11)
- 'Cause they just don't understand / they didn't get it (4)
- They couldn't find the information they needed (3)
- Looked like they were struggling (3)
- It made them stop talking

2a.2: *Reciprocity*: In fourteen (14) responses to the question "Why do you help?" students specifically mentioned both the respondent her/himself as a helper of peers, as well as the student being helped. Respondents spoke in terms of relationships: mutual benefit, fairness, empathy, or altruism. In this *Reciprocity* category, respondents mentioned their needs or benefits, in connection with the needs of those students whom they helped. (As you saw in the *Focus on Learner* category above, respondents mentioned the student they were helping but didn't mention their own needs or interests as helpers.)

Three statements in this category, e.g., "I know what it feels like to be clueless," (for the other two, see Appendix B) express empathy toward other students and imply reciprocity, yet don't indicate that the students expect benefits in return.

- Because they need it and so do I (4)
- They helped me (3)
- What goes around comes around
- I know what it feels like to be clueless

2a.3: *Belief/Preference*: Thirty-five (35) responses speak in general terms of helpfulness, being nice, or doing what's right regarding manners, feelings, or actions. Most are abstract statements of belief mentioning one side, or the other, of a helping relationship.

- Nice thing to do / I'm nice / It's nice to give a helping hand (15)
- They asked / asked nicely (7)
- Some are my friends / they're my friends (3)
- Right thing to do (2)

2a.4: Combination: Three (3) responses were coded under two categories above.
So they feel comfortable doing what is asked by the teacher (2a.1 and 2a.2)
It wouldn't be nice if you know the answer and someone's struggling (2a.2 and 2a.3)
Felt that it was good to help them understand it (2a.1 and 2a.3)

2b. How did you help? Ninety-eight (98) action verbs dominated the responses that referred to different tasks, facts and strategies. From the many brief responses, it wasn't possible to tell whether a student was actually trying to teach another student something, or just helping the other student do the job and get finished. Only the verbs are listed because of the similarity of assistance offered – mostly with study materials. Although respondents used words that might imply a range of help from surface to deeper levels (“pointed,” “showed,” “taught,” “explained”), most helping activities were at the basic level of using classroom resources. The few exceptions were: “showed them how I did it,” “helped them figure out the answer,” “explained how,” “gave hints, clues.”

Told (26) (26.5%)
Helped find a page number (20) (20.4%)
Showed (14) (14.3%)
Gave (8) (8.2%)
Explained, taught (8) (8.2%)
[miscellaneous] (22) (22.4%)

2c. How did you know that person needed help? (Did they ask you or did you volunteer?) They asked (65), [I] volunteered (16), both (2). Extra comments included: "They looked puzzled / struggling / stressed" (4)

2d. How successful were you in helping that student? Responses to this question generated two categories: 1) The *General Evaluation* category includes comments that indicate the respondent's overall evaluation of her/his own success as helper. Respondents basically said how they did in general terms. 2) The *Focus On Learner* category has statements that explain specific reasons for success in terms of the learner. Here, respondents measure their own success as a helper by the success of the students whom they helped.

2d.1: General Evaluation (55)
Very / I hope very... (28)
Good (5)
Pretty successful (3)
Amazingly successful
I was successful in my mission, captain.
Not very

2d.2: Focus On Learner (39)
They found what they needed (5)

They found the answer (4)

They understood (3)

That person found the answer by herself 'cause I gave her a hint

3. How do you ask for help? from other students - from a teacher - both. Some respondents merely circled one of the options: *from other students* (7), *from a teacher* (6), or *both* (20). These circled responses were not included in the categorization below.

Two categories were noted in the extended responses to this question: 1) *General Actions and General Quotes* and 2) *Specific Focus/Strategy and Specific Quotes*.

3.1: General Actions and General Quotes (56)

Raise my hand (14)

"Will you / could you help me?" (7)

Asked kindly / nicely (7)

"Can you help me?" "Please?" (3)

I don't get this (2)

Ask bluntly

I go up, make eye contact, and ask them to help using "can you help me?"

3.2: Specific Focus/Strategy and Specific Quotes (14)

I ask where to find answers / and what books to use (7)

I'm having trouble with... (2)

I ask if they got number 3 and, if they did, I ask how they got it (2)

I go "Will you help me find this?" (2)

4. What kind of person do you like to work with? List more than one characteristic.

Overall, respondents gave 279 descriptors (4.1-4.4) of the kind of person with whom they would like to work, many more than twice the responses elicited by any other question. (Question No. 5 had 121 responses, the next most numerous.) The wide range of responses resulted in these categories: 1) *Personality*, 2) *Intelligence*, 3) *Achievement/ Task*, and 4) *Interaction*. Four additional responses were not definite enough to fit any of the four categories and are listed under "Other."

Most other comments (4.2, 4.3) focused on the "working together" or "work" aspect of the question. These were categorized as either *Interactive Characteristics*, or *Achievement/Task-Oriented Characteristics*. An important additional category *Intellectual Abilities* (4.4) consisted of responses that distinguished variations in levels of expertise among students independent of personality, interactive, or task-oriented characteristics of peers.

4.1: Personality (128)

Although responses in this category include personal qualities that may be beneficial when students are learning together, respondents listed the general traits only and did not mention their part in a collaborative working relationship.

Nice (31)

Kind / Considerate / Understanding / Cares about others (12)

Friendly /Friend (11)
Funny (7)
One that doesn't talk much (5)
Reliable / Dependable / Responsible (4)
Respectful / Polite (3)
Not bossy (3)
Patient (2)
Not someone who says, "I'm too busy. Ask someone else."

4.2: Interaction (56)

Because of the wording of question No. 4 above, any response may imply interaction. However, the responses placed in this *Interaction* category focus on process, rather than personality, and give a stronger indication of the respondent's awareness of a self-other relationship, or an active exchange between two people.

The descriptions of behavior range from responding and helping in general, to the fairness of sharing work, to academic and social benefits. Most of the descriptions are from the point of view of respondents who wished to receive the benefits of a helpful interaction. Although the *Achievement/Task* category below contains comments that focus only on "work," responses that refer to "sharing" and "work" were kept in this category.

Helpful / Helps out / Willing to help / Someone who'll help me, if I need help /
I don't care who it is, just as long as they work with me and help me (20)
Sharing / Does their share of the work / Someone I can help and they can help me/
Someone who will share the work and have equal amounts of work and someone
who doesn't just sit there and give me all the work (7)
Hints, but not giving the answer / Gives clues / A person who makes me find stuff on
my own / Gives good information / Know they didn't give me false information
(6)

4.3: Achievement/Task (46)

Responses in the *Achievement/Task* category emphasized student abilities that would especially apply to class achievement and the work involved in classroom tasks, rather than more general personal, social, or intellectual traits. In addition, this category of responses did not refer to the possibility of using those abilities for the benefit of other students, as in the *Interaction* category above.

Organized (23)
Who gets the work done (5)
Hardworking (4)
Someone who's making good progress
Who doesn't mess around

4.4: Intelligence (46)

The category *Intelligence* consists of responses that distinguish various levels of expertise independent of social, interactive, or task-oriented characteristics of peers. Students' descriptions focused on the ability of another student and excluded a focus on the process of working together.

The large number of *Personality* responses greatly outweighs those in the *Intelligence* category. Some reasons for fewer responses in this category may have been: a) Respondents may not have the range of vocabulary necessary to distinguish intellectual abilities from other qualities. b) Respondents may think that they themselves have the intellectual ability to learn on their own, but that they learn most easily with classmates who have compatible personalities and positive social qualities. c) Their intuition may tell them that what is often called intellectual ability extends beyond verbal and mathematical skills, and is more closely associated with their peers' personal qualities (see 4.1). d) Some respondents may assume that their preferred working partners have sufficient intellectual ability to help them learn. e) The question inquired about *working* together rather than *learning* together, and making that change in the question may increase the number of responses in this category. (One respondent does not think "smart ones" are helpful.)

Smart / Intelligent / More intelligent / Bright / Someone who gets things easily /
Know what they are doing (38)

Creative (3)

Not smart ones because they don't help

4.5: *Other* (4)

There was not enough information for these to be categorized.

It doesn't matter (2) / Don't care / No one

5. Why do you like to work with those types of people?

Responses to this question may be organized in the following categories: 1) *Academic Benefits*, 2) *Personal and Social Benefits*, and 3) *Personality*.

Respondents indicated personal, social and academic benefits when working together with certain classmates. In addition, some respondents listed personality traits, as many did in response to question No. 4, rather than give a deeper analysis of "why" they liked working with certain kinds of students. The emphasis on academic benefits (5.1) somewhat outweighs the focus on personal and social benefits (5.2).

5.1: *Academic Benefits* (56)

In giving reasons for preferring to work with certain peers in the classroom, respondents focused on their own academic success, their helper's intellectual ability, classwork efficiency, or even a relaxed learning atmosphere. Some respondents acknowledged or implied their collaboration with a classmate; others preferred the benefit of independent "side-by-side" effort.

'Cause people who like to get their work done like me will get good grades and be successful / Get the assignment done with a good grade / I want to get my work done and get it done right / Get stuff done better (9)

They know what they're doing / They know the answers / They know the material
They probably listened and know where the answer is / If they don't know what they're doing they give the wrong answer (6)

Get done faster / Get more work done / work done (4)

Makes learning fun / They're fun to work with / 'Cause I like laughing and working as well / I get my work done and have a good time (4)

They inspire me to get my work done

5.2: Personal and Social Benefits (49)

In the previous category, statements about academic benefits also implied personal or social benefits. Statements in this category describe personal and social benefits *without* referring to academic benefits. Most statements imply the interaction that occurs in a collaborative group setting, but could also refer to a situation outside of the classroom. Six of the statements (see Appendix B) indicate a preference for working independently, rather than in a group.

Easier / it's all around easier / easier to talk to (11)

Will help me / will help me if I need it (8)

They were my friends (4)

Because they will leave you alone

5.3: Personality (15)

Although some of the following responses may indicate a reason why and may be an implied benefit, respondents are really giving further descriptions of the kind of student they prefer to work with. Some respondents have extended their descriptions begun in Question No. 4.

'Cause I am the same way / Because that is what kind of kid I am / They are like me (4)

They seem pretty nice (3)

They are good (2)

They aren't mean

Collation of Response Categorization: The following collates the results of the Response Categorization process explained and tabulated above:

1. *Did anyone help you?* Almost all students (85.1%) received help from peers on the social studies stations task.
2. *Did you help anyone else?* Almost all students (91.5%) helped other students on the task.

Combining these two reveals a widespread collaborative atmosphere in the project, with the overwhelming majority of respondents gaining the experience necessary to provide good answers to the remainder of the questionnaire.

2a. *If yes, why do you help other students?* Almost half of the responses (46.4%) revealed a focus on the learners' needs or learning tasks, about a third (36.1%) on personal beliefs or preferences, and less (14.4%) on reciprocity or fairness as motivations for helping other students. A few (3.1%) of the responses combined two of these categories. This suggests about a 46/54 split between learning-task motivations and personal/social motivations.

2b. *How did you help?* Respondents listed action verbs to describe ways that they helped other students. As noted above, "Although students used words that might imply that they were giving a range of help from surface to deeper levels ('pointed',

'showed', 'taught', 'explained'), most helping activities were at the most basic levels of using the classroom resources." Only eight responses (8.2%) included such pedagogical indicators as 'explained' or 'taught.'

2c. *How did you know that person needed help? (Did they ask you or did you volunteer?)* Most responses (74.7%) indicated that students were approached for help by others. Only 23.0% volunteered their assistance, and 2.3% did both. This indicated most likely a personal attention to one's own classroom tasks during the learning stations process, but (combined with Ques. 2 above) a willingness to help someone who asked for it.

2d. *How successful were you in helping that student?* This question asked for an expression of efficacy. Slightly over half (58.5%) of responses indicated that the respondent's personal reactions were measures of efficacy, while slightly fewer (41.5%) measured efficacy by referencing the learner. This is an interesting finding, especially in a model of teaching where efficacy is measured in terms of learner outcomes.

3. *How do you ask for help? from other students or from the teacher?* Phrased this way, this question elicited some confusing data and will be rephrased in subsequent versions. We were intending a report of different strategies that students use to ask for help from peers vs. professional teachers. Of the 70 usable responses, 20% listed specific approach strategies and the usefulness of some of these was questionable. A more useful way to get at this has not yet been tested by us.

4. *What kind of person do you like to work with? List more than one characteristic.* Almost half of the responses (45.7%) were listings of personal traits independent of the academic tasks, one third (32.9%) focused on task/learning-related characteristics, and an interesting fifth (20.0%) found ways to point to traits that suggested successful interactive possibilities with other people.

5. *Why do you like to work with those types of people?* Just under half of the responses (46.7%) listed school-related reasons for liking to work with people referenced in question 4, and just over half (53.3%) listed personal reasons or referred to social relationships in response to this question.

II. Pattern Categorization

We then looked for patterns in combined responses from each of the 86 respondents who answered "yes" on question 2 – "Did you help anyone else?" The focus of this phase of the analysis was on these students as teachers rather than as learners. The task was to make determinations about each questionnaire as a whole rather than to tally responses singly. Question 3 - "How did you ask for help?" - was not included in this phase of the analysis because a) the question was ambiguous for our purposes (see above), and b) the responses to Question 3 related more to students as classroom 'citizens' rather than as teachers or learners.

During the process of considering whole questionnaires in this analysis, we quickly discovered that responses to questions 2a-d, 4 and 5 were most useful and therefore the Pattern Characterization was based on them. These questions required respondents to extend, explain or justify their experience as peer teachers. Questions 1 and 3 permitted respondents to identify themselves as students of peers or the professional teacher; Question 2 did not require an extended response but functioned to define the group of questionnaires considered in this analysis phase.

- [2. Did you help anyone else?]
 - 2a. If yes, why do you help other students?
 - 2b. How did you help?
 - 2c. How did you know that person needed help? (Did they ask you or did you volunteer?)
 - 2d. How successful were you in helping that student?
- 4. What kind of person do you like to work with? List more than one characteristic.
- 5. Why do you like to work with those types of people?

As in the *Response Categorization* process, this also was an intuitive type of analysis. We intended to discern patterns of response that would reveal the perspectives of these students toward helping others learn. Coding decisions were based on the extent to which each student's responses, when read in combination, seemed reflective of a more or less unified perspective about helping someone else with a learning task. Also, as in the *Response Categorization* phase, a coding process was used where the responses on a single questionnaire, taken as a whole, were deemed similar to or different from the one examined just before.

After recording the responses from each respondent in a spreadsheet, we examined the responses from a single respondent (a row on the spreadsheet) and coded it. To arrive at a decision about a row's similarity or uniqueness when compared with others, we made judgments about the ways in which each response in the row supported or detracted from the emerging direction of the respondent's point of view. The first questionnaire was then assigned a code "A". If the synthesis of responses from the second student seemed to have a similar direction and energy (or 'vector'), the same code was used. A different code "B" or "C", etc., was used if the vector was different. Each respondent's questionnaire (spreadsheet row) was treated in the same way. Initially, several category codings resulted, but, as in the *Response Categorization* process, categories were collapsed until there were two reasonably discreet categories.

A coding decision was clear when a respondent's answers tended either toward a self- or an other-directed orientation to reflecting on helping peers, and our initial coding decisions seemed to have this salient feature. We then reviewed all our codes, using that self/other distinction. Coding decisions were difficult when responses seemed mixed between orientations. Here is an example of one such difficult response set:

Q- aire no.	2. Did you help any- one else?	2a. If yes, why did you help?	2b. How did you help?	2c. How did you know that person needed help?	2d. How successful were you...?	4. What kind of person do you like to work with?	5. Why ... those types of people?	Code (0= n/a, insuff. info.)
61	yes	Because they need it and so do I.	where to find words and how to use them in a sentence	They asked and I volunteered.	Very successful.	quiet; will help me; knows directions and how to do things	Because they listen and don't talk while I'm trying to work, and one who listens to the teacher and listens for directions 'cause I don't.	A

In this example, the responses to Ques. 2a, 2d, and 4 tended toward a self-oriented perspective. However, responses to 2b, 2c, and 5 contained other-oriented specifics, and specific behavioral descriptions were taken to be more revealing of the respondent's perspective in this analysis when the vector was not clear. This example was coded "A" for that reason.

After this process was concluded we used categorization codes from the Response Categorization phase (above) to further challenge the assignment of codes at this phase. Where two or more responses reflected a similar attitudinal 'region' as the categorization in phase one, this was taken as verification; if not, a discussion resulted in a decision about categorization.

The following tables (Charts 2 and 3) show several examples typical of questionnaires categorized as Pattern A (*Other-, results-, or task-oriented reflections*) or Pattern B (*Personal/ social motivations and actions*). The spreadsheet showing all examples is located in Appendix C.

Pattern A – Other-, results- or task-oriented reflections: The response patterns categorized in Pattern A revealed an orientation toward the learning of others, the accomplishment of the assignment, and/or the maintenance of classroom values and routines. Reflections to Ques. 2a such as “[I helped because] they might have got it wrong or got an F”, and Ques. 2d such as “They eventually got the answer”, combined with responses to Ques. 4 such as “[I like to work with people who] get their work done and help out” dominated this group. This pattern mirrors conceptually the *Focus on Learner* category (2a.1) in the section above. Chart 2 illustrates Pattern A by displaying several such individuals’ responses:

Chart 2: Responses typical of Pattern A – Other-, results-, or task-oriented reflections

2. Did you help anyone else?	2a. If yes, why did you help?	2b. How did you help?	2c. How did you know that person needed help?	2d. How successful were you...?	4. What kind of person do you like to work with?	5. Why ... those types of people?
y	so they wouldn't spend a whole hour looking up an answer	pg nos; where they could find it	they asked	Good. They found what they were looking for.	help w/o giving answers; help me if I need it	easier for me to get help than to find it on my own
y	to allow them to find answers	shared resources	I volunteered.	Very. They found the info.	honest; kind; willing	Because they make great partners and friends.
y	He couldn't find something.	showed him where to find answer on a piece of paper	They asked me.	I was successful.	smart; works hard	They are good and help me.

Pattern B - Personal/social motivations and actions: The response patterns categorized in Pattern B revealed an orientation toward personal or social interests and perceived benefits. Reflections to Ques. 2a such as “I helped [because I wanted] to be nice,” etc., combined with responses to Ques. 5 such as “[I like to work with] my friends” dominated this group. Table 2 illustrates this pattern by displaying several individuals’ responses typical of Pattern B:

Chart 3: Responses typical of Pattern B – Personal/social motivations and actions

2. Did you help anyone else?	2a. If yes, why did you help?	2b. How did you help?	2c. How... know that person needed help?	2d. How successful were you...?	4. What kind of person do you like to work with?	5. Why ... those types of people?
y	to be nice	find pg nos	they asked	very successful	nice; sharing; quiet	nice types of people; don't try to cheat
y	Because what goes around comes around.	explained question; showed where to find ans.	looking stressed; asked if she needed help; she said yes	after help, she found the answer on her own; "So I was successful."	understanding; flexible; good attitude	easier to work with; we can consult on ideas
y	to be nice	Find a definition or a place on the map.	They asked me.	Good. They got it once I helped.	kind; friendly; nice	Because they usually can help you.
y	They asked nicely.	find a page no.	They asked me.	It was very successful.	friends that are nice and polite	Because they are easier to talk to.

The pattern categorization process resulted in a finding that 51 respondents (54.3%) seemed to use Pattern-A justifications or reflections (*Other-, results-, or task-oriented reflections*); and 35 respondents (37.2%) used Pattern-B justifications or reflections (*Personal/social motivations and actions*). Pattern A is thought by us to be closer than Pattern B to a pedagogical perspective when teaching others. Eight (8) questionnaires (8.5%) were coded with a "0" either because the responses contained too little information for coding A or B, or the response to Ques. 2 ("Did you help someone else?") was 'No' and this was supported by other information provided in the questionnaire by the respondent.

Discussion and Conclusions

The purpose of this project was to use a questionnaire to debrief seventh-grade students about their experience in an informal peer-teaching situation. As noted above (p. 2): "This project's intention is to debrief these students mainly about their motivations and rewards, and less about their recollections of teaching strategies they used in helping each other with the Lewis and Clark stations task. Our purpose in this project is merely to read and record student responses, find emergent patterns, describe what we find, and then reflect on the descriptions." In all except Question 3 ("How do you ask for help?") responses were usable for analytical purposes, and the questionnaire achieved its general purposes. Ninety-four (94) questionnaires yielded useful data, but subsequent versions of it will undergo refinements to clarify Ques. 3 and to minimize the "parroting effect" created by the phrasing of the questions themselves when extended responses are needed. For example, 31 of the 94 responses to Ques. 2d ("How successful were you...?") included the word "successful" in the response. This question in subsequent versions of this questionnaire would yield more useful responses if it asked "In what ways were you successful?"

Finding A: Taking coded and tallied responses to all questions as a whole set of indicators, there was an almost even split between personal/social characteristics (46.5%) and task/learning characteristics (40.9%). The remainder (12.0%) referenced characteristics such as reciprocity motivations and interactive potential of peers.

Finding B: Holistic pattern analysis supported a different finding. Considering only the 86 questionnaires of students who helped each other, three-fifths (59.3%) of the respondents (those coded as Pattern A) suggested a learner-centered orientation, a sound basis for developing peer-teaching abilities in these students. The remainder (40.7% - Pattern B) indicated personal or social orientations for interacting with peers about schoolwork.

Given the orientation of this research project toward peer teaching, there was an interesting difference between percentages in these two classes of findings (Finding A vs. Finding B): 40.9% of the responses seem related to pedagogical (i.e., task/learning) characteristics, while c. 60% of the holistic patterns seem related to this view.

Several explanations for this difference seem possible (in addition to the exploratory nature of the questionnaire itself). Individual response categorization revealed the lexicon these respondents used in dealing with this questionnaire. Some parts of this lexicon undoubtedly came from the questions themselves (e.g., "I volunteered," "They asked," "I helped," "I was successful"), while other expressions undoubtedly are traceable to the instructions given before the task by the teacher. Even discounting these influences, however, the ways that respondents framed their thoughts and recollections revealed the clear patterns outlined above in the Response and Pattern Categorization sections.

Related to this was an interesting difference between responses to Ques. 2b ("How did you help?") and Ques. 2d ("How successful were you...?"). Only 8.2% of responses to Ques. 2b ("How did you help?") included terms from a pedagogical lexicon ("explained,"

"taught"), but 57.4% of responses to Ques. 2d measured efficacy in terms of learner outcomes, clearly a pedagogical measure.

An explanation for this difference (beyond the wording of the questions themselves) eludes the analysts. Interviews and/or focus group techniques will be used to explore more deeply the relationship between peer helpers' means and ends in this kind of situation. In using such techniques we can also expand our understanding of the lexicon used by this age of person to discuss their perspectives on helping their peers learn.

Question 3 ("How did you ask for help...?") yielded a wide variety of responses because of the ambiguous wording of the question. The word "How" allowed most respondents to give descriptions of their attention-getting actions and their manner of speaking, rather than give specific steps to solve learning problems. In addition, it would have been logical for some respondents to take the question rhetorically (i.e., "How *should* you ask for help?") in a school classroom. Re-wording the question might have elicited responses that described differences in approach *strategies*, rather than specific approach *actions*, when asking help from peers or their teacher.

The categorization processes used here were necessary and reasonably successful. In the Response Categorization, students' unique expressions were revealed and their peer-teaching lexicon became apparent. In the Pattern Categorization the separate responses gathered strength when combined and defined metaphorical vectors. This suggests that subsequent projects include some version of the holistic Pattern Categorization analysis because individual differences between respondents are illuminated when the respondent's lexicon coalesces to imply an orientation toward peer learning and teaching. Reframing the questions to reduce "parroting" and to elicit more specifics will improve our confidence in both categorization processes.

Our assumption was that, by asking questions based on recent experience, the responses would validly measure the students' perspectives on the peer-helping features of the social studies project. It is also possible that their responses were wishful thinking, projections of their intentions and hopes rather than descriptions of empirical reality.

It was also possible that peer teaching was too limited a view of this phenomenon. That is, some unexplored percentage of these students may have been affected more by the collaborative learning features of the stations project (learning with buddies, peer supervision, peer modeling, etc.) than they were by specific pedagogical help from their peers.

The issue of differences in intellectual ability between peer learners came up in this research, largely in respondents' descriptions of people with whom they liked to work. This aspect of grouping and pairing in collaborative learning has been explored extensively, but it remains unclear how this figures in peer teaching when students have the option to select their peer teacher. Further research is needed here. Since intellectual ability was the least frequently mentioned characteristic of preferred working partners, it would be of interest to know if the results would be materially different if the wording of Question 4 was changed from "What kind of person do you like to *work* with?" to "What kind of person do you like to *learn* with?"

In sum, it was clear that this procedure revealed support for subsequent projects that illuminate certain broad peer teaching interests we thought might be in students' minds when the questionnaire was created, generally: a) a focus on school-related tasks and/or the

learning needs of other students, and b) a focus on the respondent's personal preferences or reported perceptions about social interactions, presumably held by the respondent whether in the classroom or not.

Peggy Emling: The survey revealed that an overwhelming majority of students had helped another student or they themselves had been helped. While I was heartened to think my students were helping each other rather than cheating, this was such an informal way of determining the difference that it is difficult to say how much of a success it was to provide an atmosphere of collaboration, both as a peer-teaching tool and as a way to learn the material. At the very least, the class discussions helped some students focus on the fact that they had a choice in how they "helped" each other. Instead of giving an answer to another student, they knew they could help a student get to the page where the answer could be found. Or, instead of asking for the answer, students knew that they should ask for help in finding the answer. It is a small distinction, but one that the class discussed as the difference between "cheating" and "sharing," and one that might show students how to be teachers rather than enablers.

We used the term "learner" throughout this paper to refer to those expressing a need or desire for help, those who appeared to need help even though they did not express it verbally, and those who benefited from the help given by another. Because very high percentages of students (over 85%) both gave and received help from their peers, this means that they were both learners and teachers. The learning of nearly each of these students was undoubtedly shaped *both* by the processes of learning from and teaching the others. As Joubert famously said: "To teach is to learn twice."

References

Excerpted from Laurel Puchner, *Annotated bibliography of sources related to peer teaching*. St. Louis: Hoenny Center, 2003.

Davenport, P. and C. Howe (1999). "Conceptual gain and successful problem-solving in primary school mathematics." *Educational Studies* 25(1): 55-78.

This article describes a study designed to determine whether sixth grade students working collaboratively on problem solving in math would benefit more than a control group working individually. The study found no significant difference overall between the two groups in terms of math performance. Some differential effects were found for ability level and gender.

Gillies, R. M. (2002). The residual effects of cooperative-learning experiences: A two-year follow-up. *Journal of Educational Research* 96 (1), 15-20.

This study compared small-group interactions of 5th grade children who had been trained in small-group and interpersonal behavior two years earlier to small-group interactions of children who had not been trained. The subject matter was social studies. Researchers found that the children in the trained group were more cooperative and displayed higher quality verbal interactions than their peers who had not received the earlier training. Specifically, the previously trained children displayed more on-task behavior, listened to each other more, provided more explanations and used higher-level language strategies.

Hernandez Garduno, E. L. (2001). "The influence of cooperative problem solving on gender differences in achievement, self-efficacy, and attitudes toward mathematics in gifted students." *Gifted Child Quarterly* 45(4): 268-82.

This study examined gender differences in achievement and affective variables in a sample of gifted students in 7th and 8th grade. Students were assigned to either a cooperative problem solving math condition or a competitive whole group condition. The treatment was two weeks long. Results showed no achievement differences. Students in the competitive condition had more favorable attitudes towards math.

Linchevski, L. and B. Kutscher (1998). "Tell me with whom you're learning, and I'll tell you how much you've learned: Mixed-ability versus same-ability grouping in mathematics." *Journal for Research in Mathematics Education* 29(5): 533-54.

This is a report of three studies examining effects of mixed-ability (untracked) versus same ability (tracked) systems on 7th and 8th grade students of different ability levels in math. Results indicate that weak students made gains in mixed-ability as opposed to same-ability grouping, but that mixed-ability grouping was not detrimental to high-ability children in mixed-ability as opposed to same-ability grouping.

Matthews, M. (1992, October). "Gifted students talk about cooperative learning." *Educational Leadership*: 48-50.

This article reports results of interviews with gifted students in grades 6-8 concerning whether they prefer working in cooperative learning groups with other gifted students or with children of mixed abilities. The students interviewed saw no benefits for themselves of working in mixed-ability groups, and they resented having to explain things to their peers. The author recommends implementing cooperative learning carefully with gifted students.

McMahon, S. L. and V. J. Goatley (1995). "Fifth graders helping peers discuss texts in student-led groups." *The Journal of Educational Research* 89(1): 23-33.

This study qualitatively examined how 5th graders who had experience with student-led groups interacted with peers who did not have experience. The results indicated that children did figure out how to effectively facilitate each other's learning, but that monitoring by teachers was essential to the process.

Mulryan, C., M. (1994). "Perceptions of Intermediate students' cooperative small-group work in mathematics." *Journal of Educational Research* 87(5): 280-290.

This study observed interactions of 5th and 6th graders working together cooperatively in math and interviewed students and teachers about their perceptions of small group work in math. A major finding was that high achievers participated more than low achievers in the small groups.

Peklaj, C. and B. Vodopivec (1999). "Effects of cooperative versus individualistic learning on cognitive, affective, metacognitive and social processes in students." *European Journal of Psychology of Education* 14(3): 359-373.

This study examined effects of cooperative learning versus individualistic learning on the following variables in 5th graders: academic achievement in math and Slovene language, attitudes towards subject matter, metacognition, and social functioning. The study found strong positive effects of cooperative learning on achievement in both subjects but no differences between the two conditions for the other variables.

Puchner, Laurel. (2000). *Executive Summary of Research Related to Teaching by Elementary and Secondary School Students*. St. Louis, MO: Hoenny Center for Research and Development in Teaching.

This surveyed the literature on k12 practice in which peer teaching was (or could be inferred to be) one of the central interests of the research. Nearly 100 studies are collated in this report. Many academic and social benefits of k12 peer teaching are confirmed by the research, however teaching itself was studied by only a few of the researchers cited.

Ramsay, S. G. and H. C. Richards (1997). "Cooperative learning environments: Effects on academic attitudes of gifted students." *Gifted Child Quarterly* 41(4): 160-68.

This study examined the attitudes of gifted and non-gifted middle school children (grades 6-8) toward cooperative learning (CL). They found that gifted children might have better attitudes towards subjects in which CL is not a dominant form of instruction.

Saner, H., McCaffrey, D., Stecher, B., Klein, S., and Bell, R. (1994). The effects of working in pairs in science performance assessments. *Educational Assessment, Vol. 2* (4), pp. 325-338.

This study examined whether assessments that require students to work collaboratively provide an independent assessment of each students' ability. Participants were 5th and 8th grade students, and the subject area was science. The study found that scores received by students when they were working with partners should not be considered an independent assessment of the student's ability. Individual scores on students' work completed after working in pairs appeared to be influenced both by their own work and by their partner's work.

Stevens, R. J. and R. E. Slavin (1995). "The cooperative elementary school: Effects on students' achievement, attitudes and social relations." *American Educational Research Journal* 32(2): 321-351.

This article describes a study examining implementation of a two-year cooperative learning program in two treatment schools. The study also monitored three comparison schools in the same district with similar student achievement, ethnicity and socioeconomic status. After the second year there was a significant difference favoring the treatment schools on several achievement and social outcomes. Participants of the study were in 2nd through 6th grade.

Webb, N. M., K. M. Nemer, et al. (1998). "Equity issues in collaborative group assessment: Group composition and performance." *American Educational Research Journal* 35(4): 607-51.

This article addresses the issue of whether group assessment is fair. A study of 7th and 8th graders found that individuals perform differently depending on the composition of their group, which may be unfair.

Webb, N. M., J. Troper, et al. (1995). "Constructive activity and learning in collaborative small groups." *Journal of Educational Psychology* 87: 406-423.

This study examined types of interaction related to learning by 7th graders in small groups. The study found that receiving explanations and providing elaborate explanations were the best predictors of achievement.

Webb, N. M., Nemer, K. M. & Zuniga, S. (2002). Short circuits or superconductors? Effects of group composition on high-achieving students' science assessment performance. *American Educational Research Journal*, 39 (4), pp. 943-989.

This article examined achievement outcomes and group interactions of high-achieving 8th grade students in homogeneous high-achieving groups and in heterogeneous groups. The study found that high-achieving students in homogeneous groups performed well. High-achieving students in some of the heterogeneous groups performed as well as the homogeneous groups, but high-achieving students in other heterogeneous groups did not. The types of group interactions predicted the performance of the high-ability students in heterogeneous groups more than either student ability or the overall ability level of the group.

APPENDIX A

On field-based Hoenny Center research projects and their underlying values

by J. Terry Gates, President and CEO
Hoenny Center for Research and Development in Teaching

The Hoenny Center values the professional judgment and experience-based intuitions of professional teachers. As in other complex abilities of people, the judgments of practitioners are, to us, the most persuasive indicators of individual differences in behavior patterns as complex and holistic as teaching. Practitioners in any field – the arts, the crafts, the sciences, athletics, medicine, the ministry, and more – recognize people's aptitudes in the field at very early stages. Most of these fields rely for their growth in numbers (and eventual advancement of the field) on the professional judgment of practitioners who provide encouragement and who develop nascent abilities shown early in the behavior of children and youth. This judgment is trusted, especially by other practitioners.

In teaching, however, such judgment has had a rough life. There has been nearly a century of attempts to make educational outcomes predictable and the practice of teaching, to a degree, intuition-proof. As a consequence of this (and of political pressure from governments), teachers, teacher educators and in-service professional development providers have been obligated to emphasize scientific rationales for teaching practice at the expense of teachers' judgments. Unfortunately, these rationales often reduce and restrict educational planning and practice to what is called these days a "What Works" approach. This does a disservice to good professional methodologists and assessment designers who use data-gathering mechanisms properly to validate content and make reliable products. Research on various approaches and the crafting of good assessments go a long ways in making educational outcomes predictable in students, but in best-practice examples teachers use their experience to integrate these research-based approaches with broader educational and social values.

Teaching itself has changed little at its core, regardless of how various political, scientific and cultural pressures on the educational community change in terms of their source, content, intensity, or complexity. Elliot Eisner (1994, p. 369) notes that scientific research on teaching has been disappointing as a ground for teachers' practice. Without advocating that efforts to analyze teaching scientifically should be abandoned, Eisner argues for teaching as an art (ch. 7, *passim*). As other arts, suggests Eisner, teaching analysis can focus on four dimensions (p. 154-156): a) the "skill and grace" of artful teaching and learning, b) the teacher's reliance on judgment that unfolds as situational qualities change during teaching, c) the heuristic that emerges in teachers as the unpredictable nature of these situational qualities are made clearer against the foil of sound classroom routines, and d) the reliance on process rather than materials and products to achieve the ends of teaching. None of these is discernable in isolation from actual teaching. William James (1958) said something similar to teachers a century earlier. (See Note 1)

Hoenny Center research in teaching by k12 students

Overall, the Hoenny Center vision and mission fit well into human capital theory (see Sweetland, 1996, for a summary) as this is applied to educational policy. Such an orientation

suggests that research on educational interventions and results is warranted, even demanded, to support public education, especially as regards education funding. However, if the primary outlays for education are for school personnel and if the function of schooling is to increase human capital, then it should follow that there should be vastly increased research interest in the human capital that our educational effort represents. Within its focus, The Hoenny Center responds to this need. More specifically, there is a content gap between research in the pedagogical characteristics of pre- and in-service teachers of college age and beyond on the one hand, and research in the development of pedagogical abilities of the same k12 students who will some day populate the teacher work force on the other (Puchner, 2000). In time, we intend to close that gap.

The focus of the Hoenny Center is on understanding and improving the teaching of elementary and secondary school students. We do this initially through research. When called upon to teach, children and youth are no less subject to Eisner's situational influences than are their professional counterparts. Furthermore, k12 students have few options except to create the kind of imaginative teaching approach that Eisner champions, often on the spot and always without the years of preparation, guidance, feedback and practical experience of professional teachers. What k12 students create in peer teaching is artistic teaching in its most personal and embryonic forms. Kids largely improvise.

Because our data come from improvisatory teaching of k12 students rather than the schooled pedagogy of adults, we have chosen to avoid borrowing the many schemes for analyzing and evaluating pedagogy that have been developed over years of teacher research. The kind of text analysis we will use in these early stages is highly intuitive. It begins with actual text and is grounded in the assumption that the responses validly reflect respondents' internal states.

A naïve analytical strategy

To understand the improvisatory teaching of children and youth requires a more open analytical strategy than research on teaching usually entails. In this work, we are informed by traditional methods of educational ethnography, especially as explicated in Goetz and LeCompte (1984). The potential benefits of a naïve analytical strategy are great, however. As Pierre Bourdieu said about his reflexive sociology:

The true freedom that sociology offers is to give us a small chance of knowing what game we play and of minimizing the ways in which we are manipulated by the forces of the field in which we evolve, as well as by the embodied social forces that operate from within us. (Bourdieu and Wacquant, 1992, p. 198)

Seeing teaching, especially in its naïve, improvisatory forms in children and youth permits us some measure of the analytical freedom Bourdieu suggests. We want to articulate an understanding of the ways that people develop teaching abilities at their earliest stages, regardless of the ways they use these abilities when they are adults. Teachers place justified faith in their pedagogical intuitions and creativity. If we can find and honor this improvisatory core, both the 'educational imagination' about which Eisner wrote and research in teaching can regain their proper places.

As Philip Jackson (1992, p. 45) pointed out, based on research by Lee Cronbach and observations by John Dewey: "The question of whether teaching is conceived of as an art

versus a science is not arcane; it drives research and policy today." Rather than seeing the question dichotomously, we come down on the side of combining the two: Teaching is an art supported by research. We are curious about the earliest manifestations of the art in children so that the research can have a better developmental base.

The general questions of interest in field-based Hoenny Center research projects are:
a) What patterns emerge from data about how children and adolescents teach each other (teaching strategies) and from measures of their motivations and rewards regarding such teaching? b) How can each project yield more precise observations and data-gathering instruments for k12 peer teaching?

Each project contributes to a broad range of Hoenny Center attempts to see teaching by k12 students naively, attempting as much as possible to remove the "stencils" through the gaps of which the researchers' prior research and pedagogical experience lead them to view k12 students' teaching. It is too early in this work to bring standard pedagogical paradigms to bear on teaching that is so personal, untutored, and embryonic. Seeing teaching naively is an accomplishment worthy of effort, and, through our field-based research, we attempt to give examples of how we focus this effort.

Notes

Note 1. William James wrote: "I say moreover that you make a great, a very great mistake, if you think that psychology, being the science of the mind's laws, is something from which you can deduce definite programmes and schemes and methods of instruction for immediate schoolroom use. Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. An intermediary inventive mind must make the application, by using its originality." (1958, pp. 23-24)

References

- Bourdieu, Pierre, & Loïc J. D. Wacquant. (1992). *An invitation to reflexive sociology*. Chicago: University of Chicago Press.
- Eisner, Elliot. (1994). *The educational imagination*. Upper Saddle River, NJ: Prentice Hall.
- Jackson, Philip. (1992). *Handbook of research on curriculum*. New York: Macmillan.
- James, William. (1958). *Talks to teachers on psychology and to students about some of life's ideals*. New York: W. W. Norton.
- Puchner, Laurel. (2000). *Executive Summary of Research Related to Teaching by Elementary and Secondary School Students*. St. Louis, MO: Hoenny Center for Research and Development in Teaching.
- Sweetland, Scott R. (1996, Fall). Human capital theory: Foundations of a field of inquiry. *Review of Educational Research*, 66(3), 341-359.

APPENDIX B

Transcription and tabulation of responses, with comment

1. Did anyone help you? YES=80, NO=13, blank=1. Total number of respondents, 94.
 [Note: A YES respondent added "my mom when I was sick" and a NO respondent added "did it on my own."]

2. Did you help someone else? YES=86, NO=7, blank=1.
 [Note: Four YES respondents added examples of the type of help they gave --book source, color, gave book, told the directions.]

Chart 1: Tabulations, questions 1 and 2

	Yes	No	(blank)
1. Did anyone help you?	80	13	1
2. Did you help anyone else?	86	7	1

2a. Why do you help? Student responses generated the following categories:

1) Focus On Learner, 2) Reciprocity, 3) Belief/Preference, 4) Combination.

As students answered the reason/s "why," they may have implied a variety of underlying motivations that would blur the lines between categories. However, an attempt was made to place statements in separate categories based on the words that students chose to write. Interviewing students would clarify differences between categories and uncover deeper meaning. When a response included aspects of two categories, it was listed under *Combined Categories*.

It was interesting to note that, in spite of the teacher's directions asking students to work together, none of the students said they helped others because their teacher instructed or encouraged them to do so.

2a.1: Focus On Learner: *Forty-five (45) responses focus on OTHER students and THEIR learning needs, academic achievement, learning tasks, or classroom behavior (the last item in the list). Respondents don't specifically mention their own role in the process.*

- They needed help (11)
- 'Cause they just don't understand / they didn't get it (4)
- They couldn't find the information they needed (3)
- Looked like they were struggling (3)
- So they can learn / understand (3)
- Because they don't know how to do something / find stuff (2)
- Help them get a good grade / so they don't get bad grades (2)
- They were confused
- Looking frustrated
- Couldn't get the answer
- They're lost in what to do
- They might have trouble
- So they are not behind or stuck on the question forever
- So they wouldn't spend the whole hour looking up an answer

They didn't know how to do the work
She would have gotten it wrong and gotten an F
So they can be on the right track
So they can get the right answer
So they can get done faster
Give them a hint
To allow them to find answers
To help them figure out and understand what they're doing
To help them not have homework
It made them stop talking

2a.2: Reciprocity: In fourteen (14) responses to the question "Why do you help?" students specifically mentioned both the respondent her/himself as a helper of peers, as well as the student being helped. Respondents spoke in terms of relationships: mutual benefit, fairness, empathy, or altruism. In this *Reciprocity* category, respondents mentioned their needs or benefits in connection with the needs of those students whom they helped. (As you saw in the *Focus On Learner* category above, respondents mentioned the student they were helping, but didn't mention their own needs or interests as helpers.)

The final three statements in this category express empathy toward other students and imply reciprocity, yet don't indicate that the students expect benefits in return.

Because they need it and so do I (4)
They helped me (3)
'Cause they would help me in return
What you don't know somebody else might
So they could benefit because I wasn't even using the book
Because if I needed help I would like someone to help me
Certain people have trouble with certain things and I know I get caught on a question every now and then
I know how it feels to be left out because you don't understand nothing
I know what it feels like to be clueless

2a.3: Personal Belief/Preference: Thirty-five (35) responses speak in general terms of helpfulness, being nice, or doing what's right regarding manners, feelings, or actions. Statements in this category mention one side, or the other, of a helping relationship. Most are abstract statements of belief with the exception of a few, e.g., the last two that express a personal, vague motivation.

Nice thing to do / I'm nice (13)
They asked / asked nicely (7)
Some are my friends / they're my friends (3)
Right thing to do (2)
It's nice to give a helping hand (2)
It's helpful (2)
Everyone needs help
It's a good deed
Polite

What goes around comes around
I felt like it
I want to

2a.4: Combined Categories: Three (3) responses were coded under two of the above categories.

So they feel comfortable doing what is asked by the teacher (2a.1 and 2a.2)
It wouldn't be nice if you know the answer and someone's struggling (2a.2 and 2a.3)
Felt that it was good to help them understand it (2a.1 and 2a.3)

2b. How did you help? *Ninety-eight (98) action verbs dominated the responses that referred to different tasks, facts and strategies.* Only the verbs are listed because of the type of assistance offered—mostly with study materials. Although students used words that might imply that they were giving a range of help from surface to deeper levels (“pointed,” “showed,” “taught,” “explained”), most helping activities were at the most basic levels of using the classroom resources. From the many brief responses, it wasn't possible to tell whether a student was actually trying to teach another student something, or just helping the other student do the job and get finished. The few exceptions were: “showed them how I did it,” “helped them figure out the answer,” “explained how,” “gave hints, clues.”

Told (26)
Helped find a page number (20)
Showed (14)
Gave (8)
Helped (7)
Explained (7) but didn't tell them the answer
Shared (3)
Let (2)
Looked (2)
Found (2)
Pointed
Read
Taught
Answered
I was being nice
Might have cheated
The maps station

2c. How did you know that person needed help?

They asked (65) You volunteered (16) Both (2)
Extra comments:
They looked puzzled / struggling / stressed (4)
Asked everyone in the group
They asked where to find the answer

One time they asked
He told the teacher he needed help then I helped him
We traded page numbers
I would have volunteered, but I didn't know they needed help.
I let them ask me because I didn't want to be annoying

2d. *How successful were you in helping that student?* Responses to this question generated two categories: 1) *General Evaluation* and 2) *Focus On Learner*. The first category includes comments that indicate the helper's overall evaluation of her/his own success as helper. Respondents basically said how they did in general terms. The second category has statements that explain specific reasons for success in terms of the learner. Here, respondents measure their own success as a helper by the success of the students whom they helped.

2d.1: *General Evaluation* (55)

Very / I hope very... (28)
Good (5)
Pretty successful (3)
Pretty good (2)
Very good (2)
I was successful / just successful (2)
110%
100%
Totally successful
Amazingly successful
I was successful in my mission, captain.
Great
Fine
I tried my best
I was kind
OK
Sometimes successful and sometimes not
Not sure
Not very

2d.2: *Focus On Learner* (39)

They found what they needed (5)
They found the answer (4)
They understood (3)
Good enough / a lot so that they were able to finish their thing (2)
They found the answers and said thank you (2)
I helped them get the answer (2)
I got them the answer
They got the answer
They got the answer I got, so I hope it was right
We both got done without giving the answers

He got the right answer
 So-so, after she asked me, she checked with the teacher
 They figured it out
 They got to the page and drew the map
 Not sure. They just wanted to copy, but I wouldn't let them. So they went to
 someone else.
 He got a B+
 They got a good grade
 I told what the page number was
 Pretty successful, he flipped to it and started drawing
 It depends on who they were. Some people wanted to have a conversation rather
 than get help
 It worked
 They then folded their map correctly
 They got it once I helped
 It worked out well
 He/she found the definition and wrote it down
 That person found the answer by herself 'cause I gave her a hint
 I showed her where to find the answer and she found the answer on her own

3. How do you ask for help? from other students - from a teacher – both. Some respondents merely circled one of the options: *from other students* (7), *from a teacher* (6), or *both* (20). These circled responses were not included in the categorization below. Two categories were noted in the extended responses: 1) *General Actions and General Quotes* and 2) *Specific Focus/Strategy and Specific Quotes*.

3.1: General Actions and General Quotes (56)

Raise my hand (13)
 You just ask (12)
 "Will you / could you help me?" (7)
 Asked kindly / nicely (7)
 "Can you help me?" "please?" (3)
 I don't get this (2)
 Ask bluntly
 Raise hand
 Whisper to a friend
 Turn to get their attention
 I would walk up to them and ask
 When no one in my group can help, I ask the teacher
 I didn't. I was sick and he told me what we were doing.
 I was in band a couple days and I just asked what we were supposed to do so I
 wouldn't do it wrong
 Can you help me real quick? I'm having a problem.
 "I need help."
 I go up, make eye contact, and ask them to help using "can you help me?"
 "Hey, is it OK if you can help me, please?"

3.2: Specific Focus/Strategy and Specific Quotes (14)

I ask where to find answers / and what books to use (7)

I'm having trouble with... (2)

I ask if they got number 3 and, if they did, I ask how they got it (2)

I go "Will you help me find this?" (2)

I think of specifically what I need help with and use that in the question: "How do I..." " Will you help me with..."

4. What kind of person do you like to work with? List more than one characteristic.

Overall, respondents gave 279 descriptors of the kind of person with whom they would like to work, many more than twice the responses elicited by any other question. (Question #5 had 121 responses, the next most numerous.) The wide range of responses resulted in these categories—1) *Personality*, 2) *Intelligence*, 3) *Achievement/Task*, 4) *Likeability*, and 5) *Interaction*. An additional four responses were not definite enough to fit any of the five categories and are listed under "Other."

4.1: Personality (128) Although responses in this category include personal qualities that may be beneficial when students are learning together, respondents listed the general traits only and did not mention their part in a collaborative working relationship.

Nice (31)

Kind / Considerate / Understanding / Cares about others (12)

Friendly / Friend (11)

Quiet (but still talks like [girl's name] and [girl's name]) (7)

Funny (7)

Fun (6)

[Girl's name] (5)

One that doesn't talk much (5)

Reliable / Dependable / Responsible (4)

Respectful / Polite (3)

Not bossy (3)

Boy/[Boy's name] (2)

Patient (2)

Honest (2)

Thankful / appreciative (2)

People that listen (2)

Calm / Easy going (2)

Someone I know (2)

Someone I don't really know (2)

Someone your age, class, gender

Someone like me

Someone I trust

Talkative

Flexible

Generous

Good attitude
In a good mood
Happy
Outgoing
Serious
Cool
Not rude
Not disturbing
Not shy
Not grumpy
No cheating person
Didn't yell

4.2: *Interaction* (56)

Because of the wording of question #4 above, all responses may imply interaction. However, the responses placed in this *Interaction* category focus on process rather than personality and give a stronger indication of the respondent's awareness of a self-other relationship, or an active exchange between two people.

The descriptions of behavior ranged from responding and helping in general, to the fairness of sharing work, to academic and social benefits. Most of the descriptions are from the point of view of respondents who wished to receive the benefits of a helpful interaction. Responses that talk about "sharing" and "work" were kept in this category, although the following *Achievement/ Task* category contains other responses that focus only on "work".

Helpful / Helps out / Willing to help / Someone who'll help me, if I need help /
I don't care who it is, just as long as they work with me and help me (20)

Sharing / Does their share of the work / Someone I can help and they can help me/
Someone who will share the work and have equal amounts of work and someone
who doesn't just sit there and give me all the work (7)

Hints, but not giving the answer / Gives clues / A person who makes me find stuff on
my own / Gives good information / Know they didn't give me false information
(6)

Easy to get along with / Works well socially / Good to work with (4)

Someone who'll help look for answers with you / find the answer (3)

Someone who doesn't expect me to do work for them / Don't leave it to you (3)

Someone who talks to me a little (2)

Someone who knows if you are struggling / Be able to tell what you have trouble with
(2)

Helps me understand / People that explain things well (2)

People who like to work with me (2)

People that would ask for help

Someone who will put time into what we're doing

Someone who is open to what I have to say, if I have constructive criticism

Someone I don't really know so I can meet new people

Not someone who says, "I'm too busy, ask someone else."

4.3: *Achievement/Task Focus* (46)

Responses in the *Achievement/Task* category emphasized student abilities that would especially apply to class achievement and the work involved in classroom tasks, rather than more general personal, social, or intellectual traits. In addition, this category of responses did not refer to the possibility of using those abilities for the benefit of other students, as in the *Interaction* category above.

Organized (23)

Who gets the work done (5)

Hardworking (4)

Will get right to work (2)

Who actually wants to get to work

Who does the work

Someone who likes to do work

Someone who's making good progress

Has good time management

Prepared

Stays on task

Cares about their grades

People who like to get their work done and do not rush to get it done

Who doesn't mess around

Don't sit around and do nothing

Lets me work

4.4: *Intelligence* (46)

The category *Intelligence* consists of responses that distinguish various levels of expertise independent of social, interactive, or task-oriented characteristics of peers. Students' descriptions focused on the ability of another student and excluded a focus on the process of working together. Some reasons for fewer responses in this category may have been: a) Respondents may not have the range of vocabulary necessary to distinguish intellectual abilities from other qualities. b) Respondents may think that they themselves have the intellectual ability to learn on their own, but that they learn most easily with classmates who have compatible personalities and positive social qualities. c) Their intuition may tell them that what is often called intellectual ability extends beyond verbal and mathematical skills, and is more closely associated with their peers' personal qualities (see 4.1). Some respondents may assume that their preferred working partners have sufficient intellectual ability to help them learn. (One student does not think "smart ones" are helpful.)

Smart / Intelligent / More intelligent / Bright / Someone who gets things easily /

Know what they are doing (38)

Creative (3)

Who knows directions and how to do things (2)

One who doesn't just look for the answer / one who reads first (2)

Not smart ones because they don't help

4.5: *Other* (4)

There was not enough information for these to be categorized.
It doesn't matter (2) / Don't care / No one

5. Why do you like to work with those types of people? Responses to this question may be organized in the following categories: 1) *Academic Benefits*, 2) *Personal and Social Benefits*, and 3) *Personality*.

Respondents indicated personal, social and academic benefits when working together with certain classmates. In addition, some students listed personality traits again, as they did in response to question No. 4, rather than give a deeper analysis of “why” they liked working with certain kinds of students. The emphasis on academic achievement and classroom task-oriented benefits (5.1) somewhat outweighs the focus on personal and social benefits (5.2).

5.1: *Academic Benefits* (56)

In giving reasons for preferring to work with certain peers in the classroom, respondents focused on their own academic success, their helper's intellectual ability, class work efficiency, or even a relaxed learning atmosphere. Some students acknowledged or implied their collaboration with a classmate; other students preferred the benefit of independent "side-by-side" effort.

'Cause people who like to get their work done like me will get good grades and be successful / Get the assignment done with a good grade / I want to get my work done and get it done right / Get stuff done better (9)

They know what they're doing / They know the answers / They know the material
They probably listened and know where the answer is / If they don't know what they're doing they give the wrong answer (6)

Get done faster / Get more work done / work done (4)

Makes learning fun / They're fun to work with / 'Cause I like laughing and working as well / I get my work done and have a good time (4)

Easier than if I had to find it on my own / work together easily (3)

They don't cheat / Because they don't cheat (3)

They are smart and will get us a good grade / They will get us a good grade (2)

I don't like it when some people talk to me all the time while I'm working (2)

I'll work well (2)

Sometimes they just give you the answer and sometimes they give you the page and paragraph

They know how to help (not giving the answer) but helping with the page or something like that

They listen and don't talk while I'm trying to work and listens to the teacher and listens for directions 'cause I don't

They stay on track, so we get finished in time

They will help you with things that you might not understand

They inspire me to get my work done

They make me feel smart

They are more likely to contribute

They try
We can consult ideas
'Cause the work is shared equally
No one will do all the work
So I don't get stuck doing all the work
I don't want to be doing a group project and I'm the only one doing anything
Those are the kinds of things that would help me in class and could make me feel like
I can do some things myself
Make me feel comfortable about asking questions
Be more organized
I don't want to procrastinate
So I don't fail
Helps me learn
It's a challenge

5.2: Personal and Social Benefits (49)

In the previous category, statements about academic benefits implied personal or social benefits. Statements in this category describe personal and social benefits *without* referring to academic benefits. Most statements imply the interaction that occurs in a collaborative group setting, but could also refer to a situation outside of the classroom. Only four of the 49 statements indicate a preference for working independently, rather than in a group, e.g., the last example in the following list.

Easier / it's all around easier / easier to talk to (11)
Will help me / will help me if I need it (8)
They were my friends (4)
'Cause I am the same way / Because that is what kind of kid I am / They are like me (4)
Feel comfortable (2)
I can relate to them
I enjoy being around them
In case I get stuck, I always have a backup buddy
If I ask for help then I can depend on them for help
Helpful and not boring
I won't be shy to talk to them
I don't like not knowing if they agree or disagree (not shy)
Makes my day a little better
They usually make great partners and friends
They are the people I get along with
We all get along with our own kind
'Cause they're taking their time to do things for you and that's nice
If they're nice, then, like, you don't have to worry about getting yelled at if you ask for help
They won't let me down
'Cause I wouldn't get in trouble
I don't like working with huge groups
So I can't talk to people

I won't talk to them much if I don't know them
Because they will leave you alone
I feel like it

5.3: Personality (15)

Although some of the following responses may indicate a reason why and may be an implied benefit, respondents are really giving further descriptions of the kind of student they prefer to work with. Some respondents have extended their descriptions begun in Question No. 4.

They seem pretty nice (3)
They are good (2)
Responsible
Cooperative
They don't get in a lot of trouble
They don't mess around
If they are quiet they won't talk as much
They weren't crabby
They aren't mean
While talking, they can be rude
Don't like to work with someone who's mean or not helpful
Doesn't really care how we do things in the group

Appendix C

Supporting detail and coding decisions for Pattern Categorization
(Code '0' = "no" on Question 2, or insufficient information for coding decision)

Q- aire no.	2. Did you help any- one else?	2a. If yes, why did you help?	2b. How did you help?	2c. How did you know that person needed help?	2d. How successful were you...?	4. What kind of person do you like to work with?	5. Why ... those types of people?	Code (0= n/a, in- suff. info.)
1	yes	to be nice	give book pgs	they sat there	very	nice; sharing; good; friendly	they help a lot	B
2	yes	to be nice	find pg nos	they asked	I was very successful	nice; sharing; quiet	nice types of people; don't try to cheat	B
3	yes	so they wouldn't spend a whole hour looking up an answer	pg nos; where they could find it	they asked	Good. They found what they were looking for.	help w/o giving answers; help me if I need it	easier for me to get help than to find it on my own	A
4	yes	they asked	showed where something was	they asked	Good; I was kind.	Mandy; Brittney.	... nice and my friend	B
5	yes	needed help	look in dictionary	They asked everyone in the group.	very successful	boy; kind of intelligent	easier to talk to	B
6	yes	Because they were confused and they asked.	pg nos; use things like index	they asked	They eventually got the answer.	nice; wants to work with me; calm; gets things easily; I know them	it's easier	A
7	yes	they might have trouble	pg nos	they asked	They found the answer.	nice; appreciate the help	they're more cooperative	A
8	yes	they might have done it wrong or got an F	Showed them how I did it (exam- ples)	She asked	So-so, but after she asked me she checked with the teacher.	smart; not in a class like me; knows who I am	they know what they're doing; I won't be shy to talk to them	B

9	no					like to work with me and help me; don't care who	Because it makes my day a little better.	0
10	no					friendly; nice; helpful	not mean and unhelpful	0
11	yes	Because what goes around comes around.	explained question; showed where to find ans.	looking stressed; asked if she needed help; she said yes	[after help, she found the answer on her own;] "So I was successful."	understanding; flexible; good attitude	easier to work with; we can consult on ideas	A
12	yes	To help them not have homework	pg nos	they asked	they got finished	smart; friendly	easier to get along with than most people	B
13	yes	So they can be on the right track.	where map was	they asked	just successful	knows what they're doing; nice	others will give wrong answers	A
14	yes	So they can get the right answer.	find answer	I volunteered.	totally successful	kind; thankful	easier to work with	A
15	yes	Everyone needs help; they might know what you don't	pg nos	They asked where to find answer.	Very because they found the answer and said thank you.	likes to get work done; doesn't rush	if they get done, they'll get good grades and be successful	A
16	yes	friends; others just need help	I think I might have cheated, but I share also.	they asked	Yes, I helped them find what they needed.	Not smart ones because they don't help but ones who know what they're doing....	sometimes they just give answers; sometimes give pg and paragraph	B
17	yes		where to get their stuff; how to do their work			don't mess around; smart; knows what to do	Because they don't get in a lot of trouble.	0

18	yes	so they could benefit, because I wasn't using my book	gave the person my book	They asked me and I said "sure." I would have volunteered but I didn't know they needed it.	Very obviously. They got the info they needed out of the book.	kind; considerate; willing to help	Because those people don't cheat.	B
19	yes	they did not know where to find stuff	gave them page nos.	they asked	great	smart; actually works	They can be depended on.	B
20	yes	to allow them to find answers	shared resources	I volunteered.	Very. They found the info.	honest; kind; willing	Because they make great partners and friends.	A
21	yes	I'm nice	I got a book if they needed it.	I volunteered.	very	funny; fun to be with	Because they are my friends.	B
22	yes	looking frustrated	showed them the book they needed	One time they asked.	I was very successful...; helped them find what they needed	gets their work done; helps out	We can get more done that way.	A
23	no					nice; generous; considerate	Because those people probably listened and know where the answer is.	0
24	yes	Because if I needed help I would want it, so they should get help, too.	gave hints like where it was	They asked me.	They figured it out.	kind; smart	If they're nice, then you don't have to worry about getting yelled at if you ask for help.	A
25	yes	Because they need help.	help with a word	They asked me.	very good	Someone that likes to do work.	Because they will leave you alone.	A

26	yes	Because they were polite and I know what it feels like to be clueless.	pointed at the paragraph	They asked me.	It helped them find the answer.	smart; gives good information; nice	Because I can rely on the help and know they didn't give me false information.	A
27	yes	because they ask	gave a clue	they asked	very	smart; nice; fun	They will help you with any work you need.	B
28	yes	They asked nicely.	where to find answers	They asked me.	very successful	nice; sharing; cares about others	It makes it easier to work quick and well.	A
29	yes	I want to.	I helped them.	ask	very good	nice; smart	Because I do.	B
30	yes	Because they help me.	pg. no.	They asked me for help.	It was fine.	[name of peer]	They were my friends.	B
31	yes	Because I think it's the right thing to do.	helped them find resources	volunteered and asked	I got them the answer.	nice; funny; smart	Because I like laughing but working as well.	B
32	yes	They didn't get it.	Help them figure out the answer.	They asked.	They found the answer.	Nice. ... help me find the answer. ... explain things well.	They just help me more.	A
33	yes	They needed it (couldn't get answer).	Showed them where to look	I volunteered.	good (they got the answer)	reliable; nice; respectful; doesn't expect me to do all the work	So I don't get stuck doing all the work and so I am comfortable working with that person.	A
34	yes	They need it	helped find an answer	They asked for help.	They found the answer.	can help me; smart	they're my friends	A
35	yes	So they can understand what to do.	By explaining what to do.	They asked for help.	very successful	smart; creative	Because they usually know what they're doing.	A

36	yes	Because they didn't understand it.	I explained how I got my answer but didn't tell them the answer. (We compared papers.)	I volunteered.	Very; they got the answer I got so I hope it was right.	smart; listener; hard worker	Because they try and don't mess around.	A
37	yes	Because it made them stop talking.	telling page number	volunteered	They got to the page and drew the map.	No one.	Because I don't like working with huge groups.	A
38	yes	He couldn't find something.	showed him where to find answer on a piece of paper	They asked me.	I was successful.	smart; works hard	They are/ good and/ help me.	B
39	yes	Because they didn't understand at all and they needed help.	I showed them my own work sheets so they knew how to do them.	They asked.	I'm not sure. They just wanted to copy, but I wouldn't let them so they went to someone else.	Someone who helps me look for answers, not someone who says "I'm too busy, ask someone else."	Because they are taking their time to do things for you and that's nice.	A
40	yes	Because it's nice and you might want to help out.	showing them how to do the map; seeing my book	They asked me.	I helped them out [well] enough so that they were able to finish their thing.	nice; a good helper; good to work with	Because they aren't mean and they will help you with things that you might not understand.	A
41	yes	Because they just don't understand.	Giving them a clue as to where the answer is.	They asked me.	very successful	One who doesn't just look for the answers, [but tells me to] read first.	So they know the material.	A
42	yes	Because I felt like it.	I read something to someone.	He told the teacher he needed help, then I helped him.	He got a B+.	nice; funny; smart	Because I feel like it.	A

43	yes	Because if I needed help I would like someone to help me.	told what page like the map picture was on	She asked	Pretty successful; they flipped to it and started drawing.	nice; funny; help look for answers; don't talk the whole time	Because they seem pretty nice.	A
44	yes	Because they need help.	Told them how to do the work sheet.	ask	Successful enough for them to understand.	won't talk the whole time; actually wants to get to work	Because I want to do a good job on it and not fail or sit and talk the whole time.	A
45	yes	Because it's a nice thing to do.	The maps station.	They asked me.	They understood.	creative; will do their share; will get right to work	I don't want to procrastinate. I want to get my work done and get it done right.	B
46	yes	So they would help me in return, and because they're my friends.	answer is on this or that page	They asked me.	very successful	people that listen; that would ask for help; that would help others	Because that is what kind of kid I am.	A
47	yes	Because it wouldn't be nice that you know the answer and some ones are struggling.	what page to look on	They asked.	very	patient; help you to understand; able to tell you what you have trouble with; [give] hints but not giving me the answer.	Because those are the kinds of things that would help me in class and could make me feel like I can do some things myself.	A
48	yes	I know how it feels to be left out because you don't understand anything.	I taught how to fold maps.	They asked me.	They then folded their map correctly.	responsible; creative; serious	Because with those kinds of people I can get work done.	A

49	yes	They were struggling.	I showed them what book the answer may be in.	They asked for help.	The student got the right answer so I was very successful.	nice; smart; fun; friendly; works well; determined to finish work	I get my work done and have a good time.	A
50	yes	So they could get done faster.	where info was in book	I volunteered. We traded page numbers.	Very. It worked.	nice; easy-going; funny	It's easier to work with someone funny and doesn't really care how we do things in the group.	B
51	yes	...can give a hint where he or she can find answers	helped them find info on plants and animals	They asked if I can help them.	That person found the answer by themselves because I gave her a hint.	quiet; nice	Because I don't like it when some people talk all the time to me while I'm working. And ... they can be very rude.	A
52	yes	So they can learn it.	page nos	asked	very	smart; non-cheating	Because they know all the answers and help me.	B
53	yes	They couldn't find where to get the ans. from.	page nos	They asked me to help them.	They got a good grade.	quiet; smart; respectful; Someone I don't really know.	They are smart and will get us a good grade. If they are quiet, they won't talk as much. I won't talk to them much if I don't know them.	A
54	yes	So they can learn.	helped them ... understand a work sheet	They asked me.	very successful	Someone I can help and they can help me. Someone that talks but not a lot.	...I can relate to them. And they would be able to help me if I need it.	A

55	yes	Because they couldn't find their information.	look for information they needed	I volunteered.	page number	quiet; helpful; not disturbing	I can get more work done if I have no distractions. Also so I can't talk to people.	B
56	yes	Because certain people have trouble with certain things and I know I get caught on a ? every now and then.	where to find things	kind of both (asked and volunteered)	Very successful. We helped each other and both got done without giving the answers.	nice; friendly; intelligent; anyone really if I need help; open to what I have to say if I have constructive criticism	Because it's just all around easier.	A
57	no					helpful; smart; fun	They are really helpful at times and they aren't boring.	0
58	yes	to be nice	Find a definition or a place on the map.	They asked me.	Good. They got it once I helped.	kind; friendly; nice	Because they usually can help you.	A
59	yes	They help me.	Told them what to do and where to find answers.	They asked me.	Successful because they found what they needed to.	smart; people who don't sit around and do nothing	Because we'll work together easily, no one will do all the work. These people will probably be responsible.	A

60	yes	If I help them they will likely help me.	page nos; small things	I let them ask me because I didn't want to be annoying.	It depended on who they were: some people wanted to have a conversation rather than get help.	smart; bright; knows what to do; not bossy; organized	Because they are more likely to contribute!	B
61	yes	Because they need it and so do I.	where to find words and how to use them in a sentence	They asked and I volunteered.	Very successful.	quiet; will help me; knows directions and how to do things	Because they listen and don't talk while I'm trying to work, and one who listens to the teacher and listens for directions 'cause I don't.	A
62	yes	Because they needed it.	page numbers of answers	They asked.	successful			B
63	yes	Because I am nice.	I told them about the wolf.	They asked.	Pretty successful	nice; fun; funny	Because they are the people I get along with.	B
64	yes	They didn't know how to do the work.	where to look	They asked.	very	nice; smart; fun; funny	yes	A
65	yes	to be nice	?	They asked me.	I hope very successful.	It doesn't matter who it is or what they're like.	Because they're fun to work with.	B
66	yes	because they were struggling with their work	I gave them a section of pages to look through, not the exact page.	Students asked for help and sometimes I volunteered.	very successful	share the work; have equal amounts of work; doesn't just sit there and give me all the work.	Because the work is shared equally.	A
67	yes	They're my friends.	Gave an answer	They asked.	1	outgoing; smart; talkative	It makes learning fun.	B

						talkative		
68	yes	It is the right thing to do. They helped me.	told them page numbers, helped explain	They asked me.	Amazingly successful.	smart; kind; not rude	Easier to work with; makes it better to work.	A
69	yes	asked	Found it.	ask	1.1	a friend; someone like me	They are like me.	B
70	yes	because they need help	look up things	They asked you.	I helped them get the answer.	nice; smart; friendly; let's get this work done.	Because I get my work done and they will help.	A
71	yes	Because I felt that it was good to help them understand it.	where they could find something on a page in the book	When I saw that person struggling I asked them if they needed help with it.	very successful	nice; willing to help one another	Because if I ask for help then I can depend on them for help.	A
72	no					Do not care. It doesn't matter.		0
73	yes	to be nice	page; what to do	They asked.	very	nice; talks to me a little; lets me work; friends	Because then I feel comfortable.	B
74	yes	Because it's the nice thing to do.	I let someone use my book.	yes	not sure	nice; helpful; easy to get along with	Because I am the same way.	B
75	yes		I said it was on pg. ---	They asked.		quiet but still talks; knows if you are struggling; like [two peer students' names]	They know how to help, not giving the answer but helping with the page or something like that.	B

76	yes	They looked like they were struggling and asked for help.	page no. to help with the map	I could tell that they were struggling because they were looking through all of the pages and they asked.	I think I did a pretty good job because they found the answers and said thank you.	quiet; asks for help when needed; not grump; happy; will help me if I need help	They inspire me to get my work done and I enjoy to be around them. They also make me feel comfortable about asking questions.	A
77	yes	So that they feel comfortable doing what is asked by the teacher.	Explained what we were supposed to do.	They looked confused.	pretty successful	doesn't expect me to do work for them; not shy; will put time into what we're doing; hardworking	I don't like not knowing if they agree or disagree (not shy). I don't want to be doing a group project and I'm the only one doing anything.	A
78	yes	nice; good deed	I shared resources.	They asked.	very	smart; works well socially; has good time management; does their share of work	Because I think we would get done faster and be more organized.	B
79	yes	they're lost in what to do	told them the instructions	They asked me.	I was successful at my mission, captain.	I know them; is making good progress; I trust	Because I feel they won't let me down.	A
80	yes	They needed help.	page no.; where to look	I volunteered.	I tried my best.	Ones that help us; ones that help us find an answer but not giving it [to] us.	It helps me learn.	A
81	no	no				patient; gives clues	They make me feel smart.	0

82	yes	Because they needed it as I did.	what page; where to look	They asked or I volunteered.	good	easy to get along with; stays on task; cares about their grades	Because that is a person who I will work well with.	A
83	yes	helpful; nice	I asked questions.	That person asked.	I did OK.	smart; doesn't talk	Because you get more work done.	B
84	no					A person who makes me find stuff on my own.	It's a challenge.	0
85	yes	be nice; help them get a good grade	showed them what to look at	They asked me.	I was pretty successful.	doesn't talk much; gets the work done; does the work	Because I wouldn't get in trouble and can get the assignment done with a good grade.	A
86	yes	They asked nicely.	find a page no.	They asked me.	It was very successful.	friends that are nice and polite	Because they are easier to talk to.	B
87	yes	help them figure out and understand what they're doing	I explained how to do it and gave hints to where they could find it.	They asked me.	It worked out well and they understood.	kind; helpful; know what they're doing; [will] ask for help; likes to get work done	Because I find it easier to work with them and it makes it fun.	A
88	yes	So they don't get bad grades.	Giving them books that have info.	They asked, or when they looked puzzled I offered.	pretty good	honest; hard working; prepared; in a good mood	Because they don't cheat; they weren't crabby; they don't always ask for paper or pencils; and they stay on track so we get finished in time.	A
89	yes	Because they don't know how to do	how to do something or where to find	They asked.	Sometimes successful and sometimes	smart; non-talkative; helpful	Because they get stuff done faster and	A

		something.	something		not.		better.	
90	yes	So they are not behind nor stuck on the question forever.	By saying look up Divide or D instead of C for Continental.	They asked me.	He/she found the definition and wrote it down.	smart (more intelligent); someone your age, class, gender	In case I get stuck I always have a backup buddy.	A
91	no[?] (coded as yes)	Because I try to be nice.	Because I was being nice.	yes	not very	nice; smart	Because they can help me.	B
92	yes	It's nice to give a helping hand.	page no.	They asked.	very successful	kind; friendly; someone I don't know so I can meet new people	Because they are not bossy and do not yell.	B
93	yes	Because if you needed help you would want them to do the same.	Told them what to do.	They asked me.	I was good.	nice; cool; smart	Because that's me and we all get along with our own kind.	B
94	yes	He needed help.	Gave him my [questions?]	They asked me.	very successful	nice; friendly; not [lazy?] [bossy?]	We would have a [question?]	B