The Use of Discussion as a Pedagogical Tool in the University Context

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"But an[other] important quality of human behavior often overlooked in the study of learning and problem-solving, is that amongst all living things we are uniquely equipped to pool our mental resources and solve problems - to create knowledge - through joint mental effort (Mercer, N. (1995/2000). The guided construction of knowledge: Talk amongst teachers and learners. Clevendon, England: Multilingual Matters, p. 1)."

Who talks most in our classrooms - we or our students, or is the participant structure shared? If students are encouraged to verbally participate, do all of them do so or is it the same old few? What function does talk fulfill in our classrooms with respect to learning? Do we simply view it as a pleasant diversion from the main agenda of instruction, and offering some variety to our lectures, or do we see discussion as integral to it?

These are questions I have long been concerned with in terms of my own classroom practice in both undergraduate and graduate

courses. In the last four years, I have found some answers to the above questions through my role as co-investigator in a major analysis of research conducted on the use of small group discussions (Wilkinson, Murphy and Soter, 2003). In the first year of our study, we identified nine approaches to small group discussions related to texts in classroom contexts. Our review of 280 research papers related to this subject revealed that, overall, small group discussions do indeed provide "greater opportunity for student participation and engagement than whole class discussions" regardless of the configurations employed (p. 11). We also found that such discussions need to be "structured and focused" but not to the point where they inhibit "generative learning" (p. 11). Finally, we found that when the discussion context invites students' "spontaneous, emotive connections to the textual experience" (p. 11), as well as the retrieval of information, they are generally better positioned to "interrogate or query the text in search of underlying arguments, assumptions, worldviews or beliefs" (p. 11), that is, to adopt a critical-analytic stance toward the text.

As a result of our work, and my own utilization of small group discussions (on which I will focus in this paper), I have come to believe that critical in the successful (or otherwise) inclusion of small group discussions in our classrooms, is our own belief system regarding the role, purpose and function of discussion as a learning tool. I have often used both whole class and small group discussion formats in my classrooms but have preferred the small group discussion format, because I believe that the small group format allows for greater participation of individuals in discussions. I was not entirely sure of the pedagogical benefits, however, and how to identify and incorporate them into my assessment of student performance. Furthermore, small group discussions require a degree of trust by the instructor that students are indeed discussing the topics either selected or assigned to them. They also require participants to trust each other since they often must rely upon each other to have

done prerequisite work in order for the small group discussions to function effectively. Either in small group discussions or even in whole-class discussions, it is also not always possible to ascertain if every student is equally mentally engaged. I also know that students who are not present on a particular day when small group discussion is the primary instructional move, will miss out on the learning that is intended to happen in the context of that discussion. I have not, as yet, found a way to address this problem in a time-effective and useful manner.

However, I have overcome some of these limitations in several ways: first, I make the talk part of the learning process by having it lead to a public product—that is, a brief presentation that has the instructional goal of ensuring everyone else in the class understands the main concept that was discussed. At other times, I require each individual in the group to engage in post-discussion activity where they record (a) their perception of what was discussed, (b) their understanding of the content of the discussion, and (c) how the discussion worked as a tool for learning. A third strategy is to build the discussion in as one of the activities that are part of a cooperative project and include a reflection component in students' individual write-ups or in final individual papers that I require students to produce when working on cooperative projects.

Whole group discussions occur, for the most part, spontaneously during the course of a lecture where I stop to raise a question or where students take up the invitation to ask their own questions or add commentary to what is delivered in the lecture. In these instances, the benefits for all individuals is always questionable. Depending on the topic, or depending on the students' experience with the professor's behavior during open class discussions, students either take the discussions seriously (evident in many contributing) or not (evident in students switching off when others are engaged in the discussion).

As noted in my introduction, small group discussions have been touted as capable of improving motivation through active participation. Enthusiastic proponents (e.g., Faust et al, 2005; Raphael, 2000) claim that students are more "engaged" and seem to "enjoy" lessons more than where they are required to listen to an instructor lecture. Certainly, I've seen different body language emerge in the two contexts. In small group discussions where all are expected to participate, students usually sit in upright manner, lean forward, write notes as the talk proceeds, have textbooks open and ready for reference, and appear much more animated. In lectures, while students write notes, there is more slouching in the seats, faces are typically noncommittal, and at times, some are even asleep or semi-awake, even though the lecture may be quite engaging. The difference in physical behaviors underscores the nature of the setting: small group discussions essentially "demand" active participation and generation as well as reception of knowledge; while a lecture may be inspiring, most student activity is typically restricted to recording knowledge in note form, and even if thinking may be going on in some students, the momentum of the lecture format does not allow for immediate deeper exploration of content.

I am not proposing an either-or resolution to student participation. Lectures have their particular functions, particularly in the college setting. Whole class and small group discussions have their particular functions. I have had concerns that small group discussions disadvantage some students who are not naturally inclined to talk in classroom settings. My own experience and observations suggest that thinking, notoriously difficult to capture, is obviously going on in some students as they listen and write notes during lectures. What I am suggesting, however, is that we can consider small group discussions as one of a variety of strategies we might draw on for instructional purposes because, if effectively conducted, they can engage students in active participation, and, as a consequence, generate talk that can be used as evidence of thinking critically. If we choose to do so, some guidelines that I have found helpful

and which have been supported by own our (Soter, Wilkinson, and Murphy, 2005; Soter and Rudge, 2005) research are offered below.

Guidelines for productive small group discussion. What are the conditions that enable us to use small group discussions as a pedagogical tool? We (Soter, Wilkinson, and Reninger, 2005) have learned that at least the following provide the minimal conditions for effective small group discussions (see Figure 1).

Figure 1

SOME GENERAL GROUND RULES
FOR EFFECTIVE DISCUSSIONS

- Choose a specific learning purpose for discussions, whether small group or whole class.
- Make sure you have a deep, thorough knowledge of the text and topic before going into discussion.
- Teacher and students need to collaboratively construct "ground rules" for conducting the discussion.
- Provide time to pre-read the text. Allow students to jot down questions on their copy of the text to be discussed and/ or highlight aspects of the text that they query.
- Initiate discussion by asking a question of central importance to understanding the text, one that has no known answer, and about which students' opinions may differ.
- Make sure the students know that they should refer back to the text—that is, to use the text as a significant source of their information and support for their contributions.
- Productive discussions need to be focused and structured, but not so much as to prohibit generative learning. They might best be termed "guided conversations."
- Be prepared over time to release at least some responsibility for control of the discussion from teacher to students.
- Allow for shared interpretation.
- Participants (teacher and student) ask a majority of open-

ended questions (we use Nystrand's (2003) term "authentic questions" to define open-ended questions).
• Build in some reflection time after the discussion—reflections may be written or may be orally delivered.

Student Behavioral Rules for Effective Discussions
• There is no need to raise hands in order to speak.
• We talk one at a time.
• We share ideas and listen to each other.
• We respect each other's opinions.
• We give reasons to explain our ideas.
• We question (argue about) ideas not people.
• We consider.
• If we disagree, we ask "why?"
• We encourage everyone to talk/involve everybody.
• We try to agree in the end (though we can agree to disagree).

Figure 1: Ground Rules for Effective Discussion

Based on our findings of the characteristics and the discourse of nine identifiable small group discussion approaches (Wilkinson, Soter, & Murphy, 2003), we developed a model of discussion that contains contextual features that we believe yield the most productive discussions, features that we are finding are supported by our application of the model in a related field-based study. These features can be described as those which generate rich conversational discourse.

Rich Conversational Discourse

• Discourse that solicits high-level thinking seems to occur when students have the opportunity to discuss text or content in small groups and when a number of other conditions favor more extended student contributions to discussion.

• The typical discourse pattern in classrooms where students control the flow of information or share the flow of information with the instructor and share the turn-taking with the instructor and each other is marked in the following ways:

- Students and/or instructor share the lead in the discussion
- Students and/or instructor share control of the topic and its direction
- Students and/or instructor share control in turn-taking
- Students and/or instructor share interpretive control
- The stance is usually moderately efferent, moderately expressive (students bring their personal connections and experience to the text) and highly critical analytic—that is, when student query the text.

Questions That Promote High-Level Thinking

Most questions (other than "what" or "when" or "where" type questions) will generate extended discourse from students so long as there is an open participant structure in the classroom that students recognize. Such questions are best described as "authentic" questions (Nystrand, et al, 1997) or questions that are understood by all participants to have an authentic purpose. These occur when the following behaviors are present:
• When the instructor gives them space for a longer response
• When several students may be permitted the floor to build on one students' response
• When the instructor doesn't typically come back with phrases like "good," "right," "perfect," "exactly"—that is, evaluative terms that signal a "right answer" which, then cuts off other students from adding to, or elaborating or providing alternatives.
• When the question and response sequence resembles the flow, there is a give and take of genuine conversation rather than a drill-like sequence.

We have learned that what matters is not so much the form of the question, as what students have learned about how discussion is conducted in their particular classroom: that is, whether the instructor is genuinely interested in students sharing the floor, is genuinely interested in hearing what students have to say, and whether the instructor wants confirmation of already-known information rather than having students go beyond it.

Thus, for example, a "how" or "why" question may look like an opened-ended question, but it can also be interpreted by students as a question that has only one particular answer. We know if it's the latter because of the discourse that emerges—i.e., brief responses from students back to the instructor which are then affirmed or rejected. Such responses are likely produced because in such a classroom, students know from experience that their responses are not going to function as a platform for deeper engagement, genuine exploration of a concept, or challenge status quo beliefs and/or information—a challenge that would, in a discourse-rich classroom, be welcomed. Alternatively, if students understand from their experience with this particular instructor that the "how" or "why" question is open-ended and invitational in intent, they will address not only the instructor but the whole class, or group, they will respond at greater length, and their response will often be met with a dialogic response from the instructor or some other members of the class. How students interpret questions as closed or open-ended depends on the culture that has been created in the classroom by the instructor.

The Culture Of The Classroom
and The Social Nature Of Classroom Talk

All classrooms are, essentially cultures - mini-cultures if you wish, but cultures nevertheless. We could describe such cultures through using a schema such as that developed by Hymes (1972) to describe communicative events in which there are purposes, a physical context, participants with definable and visible roles, content of the events (subject or topic), form in which the event proceeds, communicative style that dominates the event, rules (often implicit) of participation and norms (also typically implicit) of interpretation. We know from studies of classroom discourse patterns (Cazden, 2001; Nystrand et al. 1997; Barnes, 1978) that traditional classrooms are most often exemplified in the I-R-E pattern of communication (i.e, Initiation (mostly teacher), Response (mostly student), Evaluation (mostly teacher). The discourse in traditional classroom participation structure is typically conducted between a teacher and an individual student who is typically called on to respond by the teacher recognizing that a student is signaling a wish to contribute a response to a question, or by the teacher simply identifying a student, whether or not

the student indicates willingness to respond. Other students who intervene may typically be ignored or told to wait. The goal of such talk is primarily to make visible whether students understand the concepts being discussed. The fact that many students remain silent during such interaction, is typically not the concern of the teacher. These classrooms are described as teacher-dominated, or transmission model classrooms.

We also know that classrooms in which an open participant structure is the norm (Nystrand et al. 2003; Mercer, 1995/2000; Cazden, 2001), are those in which students take a greater role in their learning, where responsibility for learning is shared between teachers and students, and, consequently, where the talk involves all or most students, and where discourse patterns reveal extended tracts of individual students' talk, shared control over topic and flow of the discourse, shared interpretive authority, and through the extended talk of students, evidence of higher levels of reasoning that is often not visible in the transmission-oriented classroom.

The Social Nature Of Classroom Talk and Learning Outcomes

Various theorists (e.g., Rommetveit, 1992; Bakhtin, 1981) have asserted that the essential nature of human discourse is not monologic but dialogic. Building on this central concept, others (e.g., Barnes, 1978; Nystrand, 1997; Cazden, 2001) have argued that meanings are essentially socially constructed, and that we can assume "reliably shared understandings among groups of people," although these may shift as "people ask and answer questions" (Nystrand et al. 1997, p. x). Mercer (1995/2000) argues further, that "the history of ideas shows that discovery, learning, and creative problem-solving are rarely, if ever, truly individual affairs" (p. l). While learning and problem-solving are traditionally claimed to be largely individual processes that go on inside individual heads, Mercer argues that these notions are outcomes of the ways in which such processes have, in fact, been studied—that is, as outcomes of research methodologies. Socio-cultural, socio-cognitive theorists (e.g., Vytgotsky, 1978) argue instead, that we use language to "collectively, jointly, make sense of experience" that is shared (p.4). That is, language has both a "psychological (thinking) and social-cultural (communicating) function" that enables us to not only receive knowledge (through language) but also

construct new understandings through sharing (through language) that knowledge in some social context (Mercer, 1995, p. 4). In our own work (Soter, Wilkinson & Murphy, 2005), we have found that an ideal size for a productive small group discussion seems to be no fewer than 4 students and no more than 6 students. In the context of the ideal small group, we have a social format that potentially enables all members of the group to be responsible for as well as participate in knowledge construction and understanding.

As noted earlier, in whole class settings, one typically sees a small number of individuals dominating the discourse. In the small group format, particularly where peers comprise the small group, the participant structure shifts to allow for (a) all members to participate, (b) a flow of communication from peer to peer, (c) and, thus, discourse patterns that reflect conversational discourse rather than traditional instructional discourse patterns. We have learned that when the participant structure is such that students are given the floor and take responsibility for their understanding and knowledge construction, discourse reflects a process that resembles exploratory talk (Mercer & Wegeriff, 2002; Mercer 1995/2000). This is not to argue that some individuals learn equally effectively or well by remaining silent and not verbally contributing to the discussion—some indeed might. We have yet to really know what thinking is actually going on in this or any other learning context. However, we do know (Soter & Rudge, 2005) that the reasoning processes generated through effective small group discussions, when adopted for instructional purposes with clear instructional goals and outcomes, are evident through improved understanding and that this is visible in a measurable way (Chinn & Anderson, 2001; Mercer & Wegeriff, 2002, Nystrand et al, 2003).

It is also possible to identify what we have termed discourse indicators to ascertain whether students are indeed engaged in reasoning at more advanced levels, or if they are engaged in non-productive discourse (Soter & Rudge, 2005). Among these relatively stable discourse features or indicators are authentic questions (i.e, questions which are open-ended in intention), uptake (i.e , follow-up to a students' response by incorporating parts of it in the next question or statement), reasoning words (e.g., if, so, because, etc.), elaborated explanations (extended statements that include a claim, one or more reasons, and/or elaborations of the claim), and exploratory

talk (i.e., a sequence of student turns among several students during which students contribute to a concept, build on it, amend it, elaborate on it, and come to some consensual understanding of it). Authentic questions and uptake were found by Nystrand et al. (1997) to generate what Nystrand subsequently termed "dialogic episodes" (p. 26) that incorporated higher level reasoning (e.g., generalizations, analysis, synthesis, speculation) in measurable ways. Our initial analyses of our own data suggest that elaborated explanations (Webb, 1981) and exploratory talk (Wegerif & Mercer, 1997) are most likely to be more prevalent where student talk is more extended and where the focus of talk in the instructional context is the "shared construction of knowledge" (Mercer, 2004, 1995/2000).

Conclusion

Open-ended student feedback in my courses typically contains positive reference to the opportunities students have had to discuss concepts and information drawn from assigned readings—and frustration if they do not have such opportunities. The use of small group discussions has not received much research attention at all in the university context, although small-group discussions as well as whole-class discussions are obviously the core of instruction in courses such as honors and graduate seminars, and in disciplines where interpretation is a significant component of instruction.

My students are not always entirely enthusiastic when the main form of instruction is the small-group context usually for the following reasons: anxiety that their group won't discuss what they're supposed to "know;" one or more members of their group is missing, so a group may shrink from 4 or 5 participants to 3; and they don't see themselves or each other as "experts"—they like to hear the instructor talk, leaving them free to think. These are valid and understandable reasons. More pertinent, however, is that they don't see the pedagogical value of talk as a means of knowledge construction, and that points the finger back to me, the instructor. It simply isn't adequate, if we hope to use talk as a meaningful pedagogical tool, to break students into groups, assign topics or have them come in with a topic, give them 20-30 minutes to discuss and report back, and let them at it. We concur with research that emphasizes the need to establish ground rules (e.g., Lipman, 1975; Mercer, 1995/2000; Anderson, Chinn, Chang,Waggoner, Yi, 1997) for productive discussions to occur,

and to have clear goals (shared with the students) for the incorporation of small group discussion. In our research, these goals have focused on high-level comprehension of text and a critical-analytic stance relative to text (Wilkinson, Murphy, & Soter, 2003).

Universities are instructional contexts that, theoretically at least, not only invite critical thinking, but expect it. I leave you with the following questions—ones which I continue to ask in my own classrooms: How visible is critical thinking in our classrooms? How sure can we be, that our students are no less focused on the regurgitation of information transmitted from a variety of sources than pre-college students have been? And, equally important, to what extent are we willing to encourage genuine textual and informational challenge and critique—including the materials we and fellow scholars write—in the service of advancing the thinking abilities of our students?

Note: I would be happy to respond in greater detail to anyone interested in the pedagogical value and use of small group discussions in the university setting. I can be reached via email at Soter.1@osu.edu or by phone at (614) 292-8049.

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