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11. TWENTY QUESTIONS ABOUT COGENERATIVE DIALOGUES

Abstract The chapter explores 20 central questions that relate to the development and use of cogenerative dialogue as a means of improving the quality of teaching and learning, getting to know the culture of others in a classroom, and establishing a place for the practice of critical pedagogy. I describe how cogenerative dialogue originated from an effort to use students from high school classrooms to assist their teachers to “better teach kids like me.” These initial conversations about practice were focused on identifying contradictions and creating ways to change the classroom in an endeavor to remove contradictions. We then realized that conversations such as these could provide for the development of shared responsibility for what happens in the classroom. We also noticed that students spoke eloquently in cogenerative dialogues, listened attentively to one another, and focused on successfully interacting with others. Nowadays, cogenerative dialogue is used in interpretive inquiry as a research method that gives voice to students and allows for differences to be identified and explored in an effort to improve the quality of learning in schools.

When I first came to the University of Pennsylvania (Penn) from Florida State University (FSU) there was a project just about to start. The main idea was to get two students from each class to advise new teachers after each lesson on how to “better teach kids like me.” The students would meet with the new teachers soon after the lesson and in a discussion the new teachers would listen and ask questions and the high school students would be positioned as experts. I was enthusiastic about supporting this project because Stephen Ritchie and I had used a high school student as a researcher in a study we had done while Steve was on a sabbatical leave at FSU.

After one year of having students involved as coaches for new teachers we decided it was more important to have conversations in which new teachers and students would share the turns at talk and the types of talk. This was the beginning of cogenerative dialogue (hereafter cogen). When we started to use coteaching as the primary means for learning to teach we also began to use the term cogen for the conversations about shared experiences from a lesson.

QUESTIONS AND ANSWERS

Question 1: What is cogen?

Answer 1: Cogens are reflective conversations among selected participants. One of the key purposes of cogen is to identify contradictions that might be changed with the goal of improving the quality of teaching and learning – that is, cogen is part of a process of critical pedagogy. As such all participants in cogen are encouraged to speak their minds, identify specific examples to illustrate where improvements can be made, and also identify examples of exemplary practices or counter examples of those that exemplify a need to change. It is imperative that all participants speak and are heard. Hence, it is important to encourage respectful interactions where those who speak are listened to, all participants make an effort to address points that arise, and those who are silent are invited to participate. As part of the rule structure for cogens we emphasize that the turns at talk and time for talking should be shared among participants and any speaker should not speak continuously for too long. The efforts of others to get involved should be honored. Also, points that arise in discussion should be noted and, when actions are required, the group should come to an agreement on what is to be done and accept responsibility for enacting agreed to changes in the classroom. For example, if there is agreement that the teacher will ask fewer questions during science lessons, then all participants in the cogen, including the teacher, would have a responsibility to ensure that this happens. It is not left only to the teacher to ask fewer questions – students can provide feedback on the frequency of questioning and cue the teacher appropriately.

Question 2: How is cogen usually set up?

Answer 2: When cogen is used for the purposes of critical pedagogy, that is to make classroom learning environments more equitable, the number of participants is often four to five. For example, early on a teacher might set up cogen to consist of the teacher and three students. Usually students would be selected to be as different from one another as possible. By emphasizing diversity an assumption is that social life is polysemic and is experienced differently by participants who are positioned differently in social space. Hence, different perspectives are encouraged and efforts are made for all participants in cogen to understand these differences and learn from them. Often times differences in the ways individuals in a cogen identify and explain shared experiences will be contradictory and different descriptions can become a focus for discussion and change.

Question 3: Why did you use the term cogen?

Answer 3: The meaning of co- in cogen is together. We wanted to use a term that would communicate that participants would talk about shared experiences and in the process collaborate (i.e., work together) to produce shared understandings and outcomes. We wanted to be certain that outcomes were generated from each session and we established a rule to increase the chances this would happen –someone

would ask at the end of a cogen: “What did we cogenerate today?” Wolff-Michael Roth suggested we call the activity cogen. We were using a rather cumbersome name for what was happening – praxeological sessions – meaning talk about praxis. Neither the new teachers nor the students liked this term and Michael suggested cogen, which was a term that Eldon and Levin (1991) had used in earlier research.

Question 4: Who can participate in cogen?

Answer 4: Since cogen focuses on discussions of shared experiences, the participants can be selected from any of the groups participating in a given field. For example, in classrooms we have typically included teachers, several students, one or two researchers, a school administrator, and a university based teacher educator. However, such a wide range in the roles of participants will only occur if these people, in their roles mentioned above, participated together in a lesson. That is, only insiders are invited to participate in cogen sessions.

If the focus is on improving ways in which activities are undertaken in a science department within a school then likely participants in cogen might include one to two students, several teachers, the head of the science department, and an assistant principal.

Question 5: Is it useful to have outsiders participating in cogen?

Answer 5: As long as an outsider is willing to come to the class (if the focus is on improving the quality of learning environments) and coteach I can see only advantages in having another set of eyes and ideas to inform participants on how to improve the quality of the activities. What needs to be avoided is blaming one group or another. For example, we do not want individuals to be singled out as solely responsible for the quality of learning environments. On the contrary, the suggestions for improvement should acknowledge the salience of the individual|collective dialectic and any suggestions should assume collective responsibility for enactment. As changes in roles are agreed to it is important to examine agency|structure relationships to ensure that groups of individuals can appropriate the structures they need to successfully enact changes. To be useful, outsider perspectives must take account of the dialectical link between power to act (i.e., agency) and the provision of resources. Hence successfully enacting agreed to changes in roles inevitably requires changes in rules and materials/tools.

Question 6: How do you start cogen?

Answer 6: There are many ways to get started. Initially we liked to discuss what worked well in today’s lesson and what needed to be changed. It was interesting to find out how there were many differences in what different people identified in such discussions. Later we found it easier to discuss the roles of students, rules, and ways in which resources were made available and used. The focus of these dialogues was on contradictions that arose – that is, exceptions to what usually happened. Identifying contradictions was useful because some need to be eliminated because

they are not conducive to learning. However, sometimes a contradiction occurs – something that is not typical – that can be increased to make it occur more frequently – that is, to make it customary because the participants in cogen regarded it as an affordance for learning.

When we began videotaping lessons we often asked participants to review the file and identify several vignettes for discussion during cogen. A vignette is usually an excerpt that takes between 30 seconds of class time to 3 minutes. Because we extract the relevant electronic segment we refer to it as a video-clip or video-vignette. The good thing about a vignette is that it is short and it provides a focal point for discussions about what is happening, and why it is happening. In so doing participants can identify patterns associated with what customarily happens and associated contradictions. Because we use electronic video records we can look at what happens frame-by-frame. The video we use consists of 30 frames a second. Accordingly, frame-by-frame analysis allows participants to see what is happening at a microscopic level – in detail using a time frame that reveals interactions beyond the consciousness of participants.

Another common way we use video, when there has not been time to identify salient video-clips, is to replay the video and allow any person in the cogen group to stop the tape at any point to talk about what is or was happening.

Question 7: What are the most important rules for cogen?

Answer 7: All participants are regarded as having equal power within the cogen field. What this means in effect is power to call and convene a meeting, initiate topics, and speak and say whatever is on his or her mind – as long as what is said is respectful, caring and relevant to the conversation. There also is a responsibility to share turns and amount of talk. That means all participants should be active listeners and invite others to participate if they have been silent. Finding ways to include others in dialogue is a responsibility of all participants. Talk during cogen should be focused and care should be taken not to move onto a new topic until the current topic is fully resolved; in the sense that something has been cogenerated. All participants in cogen should be aware that when consensus is reached on any issue there is responsibility for all to act in accordance with what has been agreed. Collective agreements imply collective responsibility and collective action. An agreed-to division of labor can be regarded as a rule to govern subsequent actions, practices, and rituals.

Question 8: What do you do if students do not take cogen seriously?

Answer 8: This has happened frequently. If the students concerned didn't settle down after a session or so we invited them to participate in a smaller cogen, perhaps involving one teacher and one or two students. If this didn't work out well we set it up as one-on-one – that is, one teacher with one student. Usually this worked out well because the teacher and student concerned could focus on building the culture necessary to successfully interact with one another. In a city like New York City this

usually involved a teacher who was culturally different than most of his students. Problems like this can arise because of immigration – for example, when a well-qualified teacher from Egypt obtains his teacher certification and teaches a class with mainly African American, Caribbean American and Latina/Latino youth. The problems arise because of differences in culture due to different ethnic trajectories of the teacher and students. This becomes an even greater problem when the students are from home circumstances of high poverty and the teacher is middle class.

Question 9: Can cogen be done during a class?

Answer 9: The teacher mentioned in the answer to question 11 wanted all of her students to participate in cogen and so she created small groups within the regularly scheduled class time and allowed students to run their own cogen. The frequency was once a week. As teacher she rotated between groups; thereby providing students with time to identify and resolve issues without her being present. This is a variant on the typical way in which cogen is conducted.

One of the first patterns we observed when we watched coteaching video on fast forward was that coteachers taught apart and every now and then they came together for a brief interaction. We called these huddles because they reminded us of what happens in American football – when the quarterback gets the team into a huddle to discuss what the team will do next. Huddles can occur frequently in a class and sometimes students can huddle with teachers to discuss exactly the sort of thing that is discussed in any cogen.

As a group becomes more experienced in using cogen the group size can be increased so that more perspectives are presented and understood. Groups of six to eight are common and in some instances half-class and full-class cogen is regularly scheduled for the purpose of getting most or all students on board with supporting agreed to changes in the classroom. The problem of this sort of cogen is that turns at talk can be infrequent, but the advantage can be that everyone is involved and can commit to agreed-to-changes. In these circumstances the chances of making significant improvements can be high. One idea is for participants in a small group cogen to get involved in whole class cogen to see whether or not they will agree to and support what was agreed to in the small group situation.

Recently we realized that small group tutoring sessions and one on one teaching function as cogen as long as the rules are followed. The advantage of thinking of these activities in this way is to allow them to serve not only the learning of new science subject matter, but also to allow them to serve as sites for producing new culture about teaching and learning. I think this has major implications for professional development and learning to teach. I could imagine a whole “methods” class from a teacher education program coming to a school and having new teachers tutor in small groups and one-on-one situations. This would benefit new teachers and students as each would learn science, how to teach science and about the culture of others. The new culture produced could significantly improve the teaching and learning roles of participants.

Question 10: How do you decide which students to get involved in cogen?

Answer 10: The goal of cogen is to bring diverse perspectives to the attention of participants who have had a shared experience. Accordingly we select students to participate because they are different from one another. Usually we start with students who are most challenging so that strategies can be cogenerated to improve the quality of the learning environment; not just for those students, but also for all students in a class. For example, if we first selected a low achieving female we might next select a low achieving male. Or, if we selected an African American student initially we might select an Asian American next. Also, we wanted it to be possible that any student who desired to be involved in cogen could be involved. Accordingly, students can request to be included or they can complete a request form we make available at the back of the classroom.

Question 11: Who can convene cogen?

Answer 11: Any of the participants, teacher or student, can request and convene cogen. In one of our studies a teacher canceled cogen when she got to be too busy just before a district wide science test the students had to take. She felt stressed and could not set aside any more time to do cogen with her students. After the test was administered she convened cogen and an issue raised by students was to ask why she canceled the cogen at precisely the time students needed them most – in the weeks prior to an important test. This is a good reminder that it is useful to allow anyone to have the power to convene cogen. If she was too busy to be involved it might have been possible for students to meet without her.

Question 12: How do participants get ready for cogen?

Answer 12: In successive cogens there usually will be one or more class sessions in which there have been attempts to enact agreed to changes to the roles of participants, rules for the class, and ways in which materials and tools to support learning are made available to learners. Hence, all participants in cogen can prepare by reviewing what happened in the lessons since the last cogen and, in so doing, identify patterns and associated contradictions. If they do this they will have specifics to talk about when they come to the cogen. If there is a video of the lesson then participants can identify one or more video-vignettes to capture events that are potentially useful discussion points. To sum up, the preparation is for participants to come ready to contribute.

Question 13: What do you expect to be accomplished from cogen?

Answer 13: The outcomes from cogen will be an appreciation and understanding of the perspectives of others. As well, I expect that participants will identify sources of disadvantage and create plans to extinguish them. Usually this requires different roles for teachers and students, changes to the class rules, and changes in the nature, distribution and access to materials and tools to support learning. It is imperative that participants reach consensus on agreed to changes and develop willingness to share responsibility for enacting agreed-to changes in the classroom or school fields.

Question 14: Is cogen always part of coteaching?

Answer 14: Initially cogen was always related to coteaching in our work – a way to get perspectives from students on how to improve classroom environments. After a few years of research we realized that cogen was a field in which teachers and students could learn how to effectively communicate across ethnic, gender and class borders. Then we realized that they would be useful irrespective of the number of teachers. What we have since learned is that even when there is only one official teacher, the students who get involved in cogen will assume peer-teaching roles in the classroom. Hence, cogen can catalyze coteaching between the official adult teacher and peer teachers from the students in the class. I regard this as a highly desirable outcome of cogen.

Question 15: What do you mean by the claim that cogen is a seedbed for cultural production?

Answer 15: We knew from our work on coteaching that when people worked together in a field they became like the other. So, over time they learned about one another's culture, began to anticipate it, and interacted with the other's culture in appropriate ways. Similarly, when individuals interact with one another in small groups, such as cogen, they can become like the other, but perhaps more importantly, they become familiar with the culture of others in the group and learn how to use it successfully to advance the group's progress towards meeting its goals. If we look at what is happening theoretically, action is enacted as culture – as a triple dialectic represented as production|reproduction|transformation. As a participant enacts culture, practices and schema associated with that individual's praxis are available as structures to support the agency of all participants. To take advantage of what others do, it is important that participants know what to expect and then can make sense of what is done so that successful interactions can occur. When successful interactions occur positive emotions, such as satisfaction, happiness, and enjoyment can be produced and spread from an individual to a collective of all participants in cogen.

We have found that when the rules of cogen are followed, that is when talk is evenly distributed and all participants respect one another and listen attentively – then mutual focus is established among all participants, patterns of synchrony can be seen as participants make sense of what others are saying (i.e., head nods, eye contact, short utterances of agreement such as uh huh, etc), and feelings associated with positive emotions can lead to an increase in solidarity. Hence, in cogen many desirable forms of culture can be produced, reproduced, and transformed – but just as seeds can grow when they are nurtured in a protective environment of a seedbed, so too can culture grow within a nurturing cogen.

Question 16: How does cogen afford cultural alignment in a classroom?

Answer 16: Ideally what you want is for appropriate culture to be enacted fluently throughout a classroom. That is, there needs to be widespread synchrony among participants and mutual focus. If this is to happen then students need to anticipate one another's practices, and enact their own culture in ways that are timely and appropriate.

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As I mentioned earlier, cogen is a seedbed for cultural production. Each person can learn to anticipate what is going to happen next in cogen and how to interact to produce successful outcomes. When successful interactions produce synchronous interactions among participants, common mood can emerge throughout a group. For example, feelings like satisfaction, happiness and excitement can be quickly disseminated throughout participants in cogen. When there is common mood among participants, especially if it is positive, then solidarity can develop – once again increasing possibilities that participants will identify with the collective and produce culture that is in synchrony with other's enactments – or as the question implies – alignments occur between cultural enactments of participants.

In our research we have found that alignments can occur in the following ways: successive speakers will match the fundamental frequencies and the amplitude of utterances at the end and beginning of turns at talk. Also, successive speakers will match the rhythm and emotional mood of speech utterances. Finally, there is evidence to suggest that during interactions gestures and body movements will be synchronized. Hence, high-energy actions from one participant will be mirrored in subsequent actions of others.

Question 17: How is cogen symmetrical in providing opportunities for learning to interact successfully across social borders?

Answer 17: It is not just students who may not know how to interact with others in a classroom. For example, when I started to teach in inner city high schools in Philadelphia I did not really understand the culture of urban youth in the United States. To begin with, I was Australian, white, male, and middle class. My students (as part of my research on the teaching and learning of science in urban high schools) were African American, black, male and female, and poor. For many months my communications with them were usually unsuccessful. I could not get some students even to acknowledge I existed. When I spoke to them, either they ignored me or they were disrespectful. It was essential that I learn to interact successfully with my students and it made sense for me to interact with them one at a time until I had some success. Also, my students had to learn how to interact with me. It was necessary for me to show my respect for them and for them to show their respect for me. Also I had to learn about smiles, eye contact, body movements and gestures – as well as about their interests, fashions and music. As they got to know me and I got to know them, I gradually became more successful as a teacher.

It is a pity that this all happened before we had done our research on cogen because cogen is an ideal activity to produce the culture teachers and students need to create and sustain productive learning environments. If we think about the goals of cogen in terms of producing, reproducing and transforming culture it is advantageous to see cogen as a field to support the learning of teachers and students. If cultures are to be enacted fluently then all participants have to be able to adapt their praxis to the praxis of others. The culture produced in cogen, by teachers and students, becomes part of a repertoire that can be enacted in classrooms as structures that increase learning possibilities.

Question 18: Why are desirable changes in solidarity and identity likely outcomes from cogen?

Answer 18: When people come together in cogen, or in any group situation a powerful need they have is to have a sense of belonging. Having such a sense can make it more likely that they will see the utility of transactions with others. If a person successfully transacts with others in a group the success will likely produce positive emotions – increasing the likelihood that solidarity (i.e., a sense of belonging) will emerge as an outcome. On the other hand, if transactions do not produce success, negative emotions such as frustration and anger can be associated with feelings of alienation (i.e., not belonging) with the group.

As cogen proceeds all participants can monitor whether they are being treated with respect and can enact their roles in the ways they expect. If others encourage their participation and do their best to increase the amount of success, then identities can be affirmed in terms of success, belonging, and acceptance of the goals of cogen. As I explained earlier, the rules of cogen have been established to increase chances that participants will develop solidarity, expand their identities to include collective roles and responsibilities, and focus on attainment of success and positive emotions.

Question 19: What are possible applications of cogen in teacher education programs?

Answer 19: An obvious application of cogen in a teacher education program is in the field experience. As Director of Teacher Education at the Penn, I requested that all new teachers set up cogen at least once a week and on an as-needed basis. For all the reasons that arise from my responses to earlier questions, I regard it as highly desirable for cogen to be an essential part of teaching and learning – no matter at what level the teaching and learning occur. What better way to create more of a sense of shared control for what happens?

As a teacher of graduate and undergraduate courses I can employ cogen to ensure that my students have a voice in the curriculum, sources of disadvantage to them are removed, and changes are enacted to enhance opportunities to learn.

Question 20: How might cogen be used for school improvement?

Answer 20: I regard school as a field that has nested fields within it – including departments, classes, and other places of cultural activity, like the lunchroom. From what we have seen in our ongoing research, cogen can be used to advantage to examine patterns of coherence and associated contradictions in any field. Once these patterns and contradictions are identified they become objects for possible change with the goal of improving the quality of social life in the field. This includes expanding the goals for activity in the field, expanding the range of activities, changing roles of participants, altering rules that apply to a field, and expanding opportunities to successfully use resources to attain goals through participation.

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The challenge for all participants in cogen is to set aside existing power structures (that apply in other fields) to allow cogen to produce forms of culture to improve science education. Of course, at the level of an entire country this may prove to be very difficult to do – and in some cultures the symbolic power of certain groups of people might necessitate a different structure for cogen. Hence, from one country to another cogen will no doubt have to be structured differently, thereby allowing for the possibility of different outcomes emerging. This is not something that should dampen our spirit of inquiry. There is vast potential in the use of cogen across the fields that comprise our lifeworlds. As we enact cogen and make adaptations, my challenge is for scholars to study what happens so that, as a global community, we learn from ongoing programs of research.

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BIOGRAPHICAL SKETCH

Kenneth Tobin is Presidential Professor of Urban Education at the Graduate Center of the City University of New York. Prior to becoming a university science educator in Australia in 1974, Tobin taught high school physics, chemistry, biology general science, and mathematics for 10 years. He began a program of research in 1973 that continues to the present day—teaching and learning of science and learning to teach science. As well as research being undertaken in the Bronx of New York City, Tobin is involved in collaborative research in Brisbane, Australia; Sao Paulo, Brazil; and Kaohsiung, Taiwan. His current research involves multilevel studies of the relationships between emotions and physiological factors associated with the wellness of teachers and students. In his career Tobin has published 24 books, 206 refereed journal articles, and 118 book chapters. With Barry Fraser and Campbell McRobbie he is co-editor of the second edition of the *International Handbook of Research in Science Education*, published in 2012 by Springer. Tobin is the founding co-editor of *Cultural Studies of Science Education*.