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Use of thinking routines to enhance oracy among primary school students

Cecilia M. Peralta

Fairfield Methodist School (Primary),
Singapore

Abstract

When engaging in discussion and forming arguments during a debate, students need to use critical thinking to present different perspectives. Students can be shown how to structure their thinking better through the use of ***Thinking Routines*** *(Thinking routines, n.d.). In particular, students can investigate more perspectives through the use of one of these Thinking Routines, known as* ***Circle of Viewpoints****. If instead, students are thrust into various discussions over a debate motion without much instruction and are expected to collaborate and discuss the debate motion from various perspectives, the results will be shallow argumentation without many ideas, which leads to poor quality debate contributions.*

This study examines the use of ***Thinking Routines*** *to promote visible thinking to enhance the discussion of motions for debate among Primary 5 students. A structured implementation of one of the* ***Thinking Routines, Circle of Viewpoints****, to model classroom discourse during the debate component was created based on the work of Visible Thinking Project Zero, (Thinking routines, n.d.). A pre-intervention task where students discussed a debate motion without any instruction or structure was given. During the intervention phase, a teacher-modelled lesson on 'multiple perspectives' was carried out with students for a debating task based on* ***Circle of Viewpoints****. At post-intervention, the teacher then facilitated a class discussion on the debate motion and shared features of structured discussions. Qualitative data was collected in the form of the class work of a group of students during pre-intervention and post-intervention group debating sessions. A content analysis was done on the pre-intervention and post-intervention data. Findings showed that students were on task and discussion was at higher levels involving a greater number of perspectives at post-intervention. The positive effects on the quality of ideas generated were observed. This study suggests that* ***Circle of Viewpoints*** *may be the key to facilitating structured discussion of multiple perspectives by primary school students. This report also proposes a structure of implementation for teachers to provide scaffolding to the teaching and learning of multiple perspectives in debates.*

Introduction

With the focus on building critical thinking in oracy in primary schools, debating has emerged as a platform for learning critical thinking in the classroom. It is thus common practice to get students to discuss debate motions. During these discussions, students are expected to engage with their peers and subsequently produce a respectable argument regarding the motion without having received proper training or instruction on how this should be done. This is particularly challenging

when ideas from various perspectives ought to be taken into consideration when discussing the motion. In many instances, the discussion is narrow and limited to a single perspective, leading to a debate speech that is shallow, fraught with loopholes in argument and lacking in critical thinking regarding various perspectives.

This study looks at the use of the *Thinking Routines - Circle of Viewpoints* as an instructional strategy to encourage productive perspective-taking among primary school students and its possible impact in providing students with more structure for looking into the multiple perspectives of a given debate topic.

Multiple Perspectives Defined

Multiple perspectives is a broad term that encompasses multiple and possibly heterogeneous viewpoints, representations and roles that can be adopted within both a collaborative and non-collaborative context.

> *Perspective-taking is a complex social behaviour. Perspective-taking has been defined as understanding that another person's beliefs about events may be different from reality and that those beliefs will guide future behaviour (Sigman & Capps, 1997).*

Debate is also an excellent way to develop critical thinking skills. The process of researching a debate is one of examining the pros and cons of an issue, determining what the problems are and considering alternative solutions. The research and presentation of a debate is clearly a team effort, and participation in activities like debate explicitly develops the skills needed to work in teams.

Moreover, speech plays a crucial role in children's development as the requirement to explain, elaborate or defend one's position to others helps a student to learn to integrate and elaborate knowledge (Vygotsky, 1978). Classroom discussion not only brings about knowledge construction but also the socialisation of its members (Cazden, 1986).

Current studies centre on analysing perspective-taking in autistic children (Sigman & Capps, 1997). However, studies are scarce that investigate, in the primary school classroom, instructional strategies to enable students to carry out discussions in groups in order to explore a topic from multiple perspectives.

Modelling

Research has shown modelling to be an effective instructional strategy which allows students to observe the thoughts, behaviour and speech of the teacher or other experts. This form of instruction engages students in imitating particular behaviours that encourage learning; from observing others, they form an idea of how new behaviours are performed, and, on later occasions, this coded information serves as a guide for action (Bandura, 1977; 1986). Modelling is an effective strategy for young students who are predisposed to emulate those deemed as experts in the field.

Circle of Viewpoints as a Thinking Routine

Circle of Viewpoints is a thinking routine where students consider different and diverse perspectives involved in and around a topic. Understanding that people may think and feel differently about things is a key aspect of the routine.

The routine is used at the beginning of a debate motion discussion to help students brainstorm new perspectives about the topic, and imagine different characters, themes and questions con-

nected to it. While provocative topics and issues are encouraged, the routine also works when students have difficulty seeing other perspectives or when things seem black and white. The routine can be used to open discussions about dilemmas and other controversial issues.

Methodology

The study was conducted through the qualitative research method. Qualitative research is used when one seeks to employ a naturalistic approach to understanding the classroom discourse in a 'real world setting without any attempts to manipulate the phenomenon of interest' (Patton, 2002). In this study, data from students' work was analysed as part of the research. The class was selected through convenience sampling and the students were grouped heterogeneously in fours.

In the pre-intervention phase, middle progress Primary 5 students were instructed to brainstorm ideas which supported their motion (see Annex 1). Students were left to their own devices and not instructed to systematically think through the motion from any particular perspective. Thereafter, they had to produce the debate speech.

During the intervention phase, the teacher modelled 'multiple perspectives' for students during an oracy task (preparing for debates) based on *Circle of Viewpoints* (see Annex 2). The teacher explained the meaning of multiple perspectives. He elicited from students what other perspectives they thought should be considered in the debate for the motion under discussion. The teacher shared the benefits of studying the motion from the various other perspectives in order to have a richer, more substantial discussion of the debate motion.

In the post-intervention phase, students were provided with a new debate motion to discuss. In groups of four, students were instructed to brainstorm various viewpoints about the motion. Sufficient time was given to students for the initial brainstorm for them to stretch and explore diverse ideas. Students were provided with the following prompts to assist them in thinking of different viewpoints:

- How does it appear from different points in space and different points in time?
- Who (and what) is affected by it?
- Who is involved?
- Who might care?

After the brainstorm, each student was requested to select one of these viewpoints. He/she was then given time to prepare to speak about the topic from that perspective and to embody the viewpoint using the script skeleton (see Annex 3) to structure what he or she was going to say.

Students were instructed to prepare their 'characters' based on the various perspectives they had worked on. Groups took turns to act out their various perspectives. Taking turns, students were asked to speak briefly about their chosen viewpoint using the script skeleton. They were invited to stand up and use gestures and movement if necessary for their speech. Students were also instructed to raise different questions, if any, in order to elaborate their viewpoints. As students presented their viewpoints in the circle, their ideas were recorded so that a list of the group's perspectives was created (see Annex 4).

Deviation from the Protocol

The last question in the routine asks students to think of a question they might have from their chosen viewpoint. This step was not covered and so no questions were collected.

Data Sources

In the pre-intervention round, students simply made a list of reasons to support their side of the motion. In the post-intervention round of discussion, the use of *Circle of Viewpoints* was taken up fairly quickly. The teacher tried to capitalise on the immediacy of the experience as each student went through the script and presented a perspective. The array of responses was broad and distinct, as each student strived to produce a unique viewpoint. Even where some students chose the same character, they were encouraged to perform differently.

For ease of analysis, the three sets of student work used in the study will be named as follows:

i) Pre-intervention: Work of group before they watched the teacher-modelled instruction (see Annex 5).
ii) Intervention: Modelling of *Circle of Viewpoints* by a teacher.
iii) Post-intervention 1-3: Work of group doing their first discussion after watching the teacher-modelled instruction (see Annexes 6 to 8).

The researcher reviewed the pre-intervention set of work as well as the post-intervention sets of work (1-3). The documents for pre-intervention and post-intervention are found in Annexes 1 and 4, respectively. The students' work was analysed using simple content analysis to determine the extent to which students' behaviour and discussion patterns had modified with the introduction of the intervention, *Circle of Viewpoints.*

Ideas generated from the students' pre-intervention and post-intervention discussions are shown in Annexes 5, 6, 7 and 8.

Results

An analysis of student work during the pre-intervention round showed a listing of ideas that generally fell under one or two perspectives. Ideas tended to be haphazardly listed.

In the post-intervention round, it was noticed that students connected 'viewpoints' to the idea of having a physical perspective. Some students interpreted this literally at first by naming and describing what their characters *saw*. The teacher helped students get started with concrete examples and then later transited them to consider the *thoughts and feelings* of characters, rather than simply describing a scene or object.

The analysis of the students during the pre-intervention and post-intervention rounds showed that there were visible changes in the students' behaviour. In particular, differences in the students' role definition, seating arrangements and quality of discussion were observed.

i) Role Definition
In the pre-intervention round, students did not discuss the notion of perspectives, and hence did not need to define a role for each group member. Students were seen to 'attack' the motion in an individualistic manner.

In the post-intervention round, however, students decided on the various perspectives each was to take up. Cooperative behaviour was observed and each group member was well-engaged in generating ideas for his/her perspective.

ii) Seating Arrangement
Before the students were introduced to *Circle of Viewpoints*, they sat in their own seats (two by two). After the teacher-modelled instruction, the groups sat in circles to facilitate discussion. By

sitting in a circle, students were able to hear one another better. They were also able to watch one another present his/her perspective with greater ease.

iii) Quality of Discussion

Generally, in the pre-intervention round, students gave their ideas without consideration for various perspectives. Ideas from students within the group tended to overlap. The discussion had neither organisation nor depth.

From Annexes 5 to 8, one can compare the ideas in the students' pre-intervention and post-intervention work. In the post-intervention work, the quality of ideas improved as more perspectives were taken into consideration. There was also an increase in the quantity of ideas generated. The post-intervention work by students also displayed an organisation into the various perspectives from which the topic was discussed.

Discussion

The findings of this study were promising. In a span of five lessons, there were improvements made by the students in terms of the number of perspectives they generated to discuss the motion.

In all, from an analysis of the post-intervention work by students, one could see that *Circle of Viewpoints* had provided the structure and scaffolding for students to frame and direct the group discussion. There was a concrete structure to support the discussion from multiple perspectives on the debate motion because using *Circle of Viewpoints* provided students a protocol for putting their ideas across with relevant supporting details from the various perspectives. This is in contrast to the pre-intervention work where only one or two perspectives to the topic were presented.

Unintended Benefits

The modelled teaching by the teacher also led to the group sitting closer together to facilitate more effective discussion. In addition, they tried to define roles when doing their group work which led to more positive, orderly and organised behaviour. Students also delved more deeply and systematically into the discussion, trying to follow the teacher-modelled protocol. This resulted in an increased quality and quantity of generated ideas, which impacted their debate speech writing.

Significance

To the best of the researcher's knowledge, there are few, if any, studies that have examined how teachers help primary school students prepare for debates in Singapore. This study then provides new insights into classroom debates in a Singaporean context focusing on primary school students. It could thus provide teachers with a case study on how primary school students could be taught effectively to think about a topic through multiple perspectives.

Circle of Viewpoints proved to be an effective thinking tool and instructional strategy to scaffold primary school students to present their ideas from more than one perspective. In support of the 21st century suite of skills presented in frameworks such as enGauge (Lemke, 2002), the use of *Circle of Viewpoints* is invaluable to teachers who seek to improve the critical thinking and communication skills of students during debates.

Conclusion

Although in recent years, there has been increased emphasis on the importance of collaboration

and communication, the efforts have largely been concentrated at the secondary and higher education levels. Few studies have addressed the need and instructional strategies for primary school students to engage in productive discussion during debates. Primary school teachers and students alike are left to their own devices and struggle to stay afloat in this new wave of collaborative learning.

In this study, an instructional model to scaffold thinking processes was used to help primary school students learn how to present their ideas on a topic from multiple perspectives. The instructional strategy, *Circle of Viewpoints,* provides a lifeline for teachers to teach their students how to engage in productive discussion. Findings suggest that the method used enabled students to discuss productively with more instances of thinking through multiple perspectives. This led to an increase in the quantity and quality of ideas generated.

Future longitudinal research could be conducted to ascertain the reliability and validity as well as the effects of the findings over time. Further, research could also be done at various primary school levels to investigate the generalizability or scalability of the study.

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Annexes

Annex 1: Document for Pre-Intervention

ACTIVITY 2: REASONS TO SUPPORT OUR ARGUMENT

THE MOTION:	
MY TEAM'S ARGUMENT:	
10 REASONS THAT SUPPORT OUR ARGUMENT	

Annex 2: Intervention – Teacher-modelled Lesson on the Use of Circle of Viewpoints

Good morning, children. Today, we are going to learn about a new way of thinking about our debates topic.

It will use a tool called – the Circle of Viewpoints.

When we use this tool, we think about the topic from the point of view of another person.

Let us brainstorm a list of different perspectives and then use this script skeleton to explore each one:

I am thinking of ... (the topic)... from the point of view of ... (the viewpoint you've chosen).

I think ... (describe the topic from your viewpoint. Be an actor - take on the character of your viewpoint.)

A question I have from this viewpoint is ... (ask a question from this viewpoint).

Wrap up: What new ideas do you have about the topic that you didn't have before? What new questions do you have?

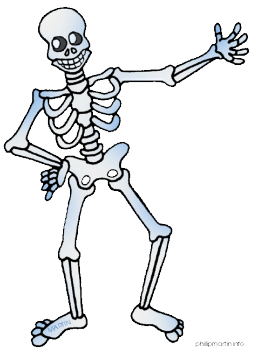
Do you understand?

After identifying a motion:

1) Ask students to brainstorm various viewpoints about this motion. (This was done in groups.)

2) Make the initial brainstorm long enough for students to really stretch and explore diverse ideas. If students need help thinking of different viewpoints, try using the following prompts:
   - How does it look from different points in space and different points in time?
   - Who (and what) is affected by it?
   - Who is involved?
   - Who might care?

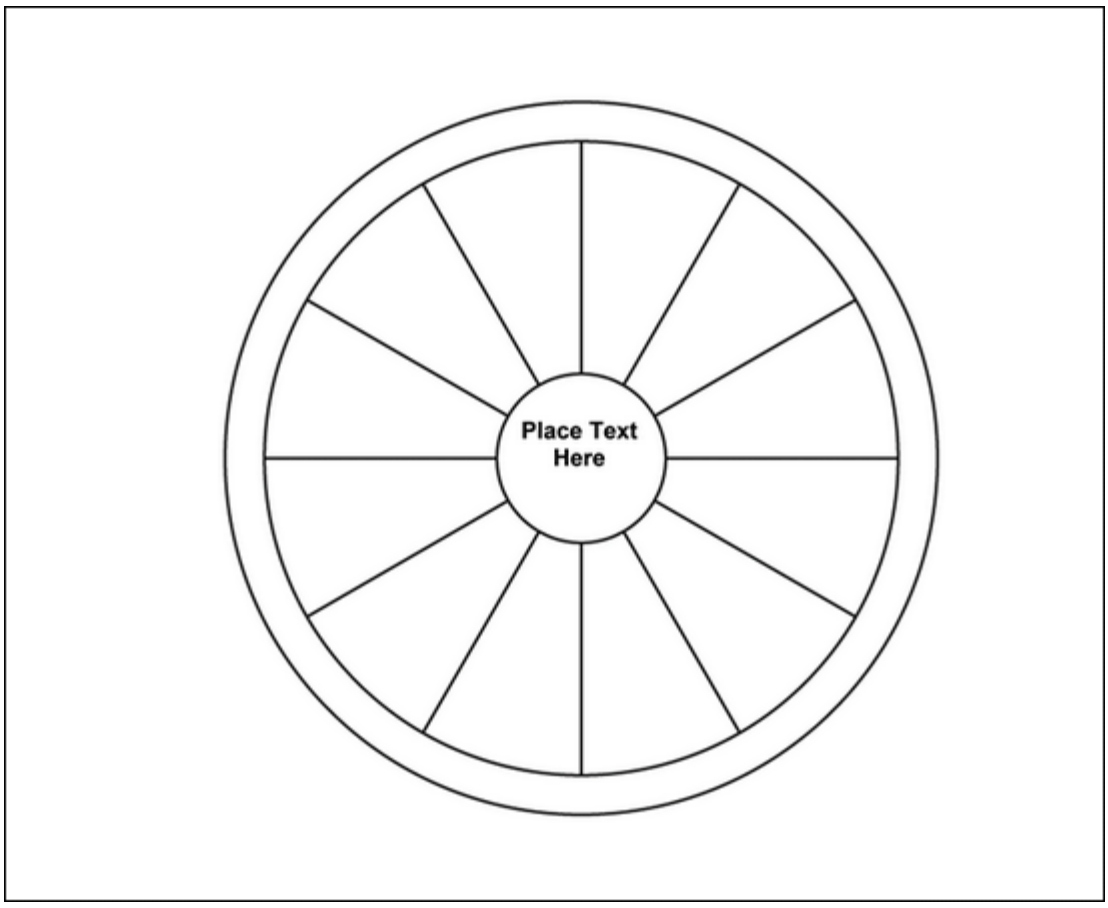
Annex 3: Script Skeleton



1) **I am thinking of ...** (the topic)**... from the point of view of ...** (the viewpoint you've chosen)
2) **I think ...** (describe the topic from your viewpoint. Be an actor - take on the character of your viewpoint.)
3) **A question I have from this viewpoint is ...** (ask a question from this viewpoint)

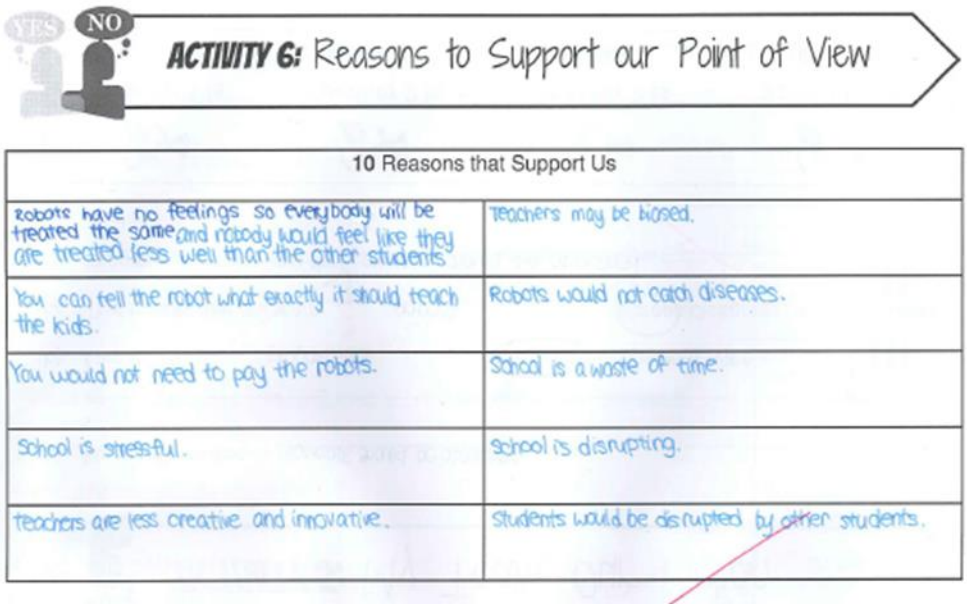
Wrap up: What new ideas do you have about the topic that you didn't have before? What new questions do you have?

Annex 4: Post-Intervention Document 1



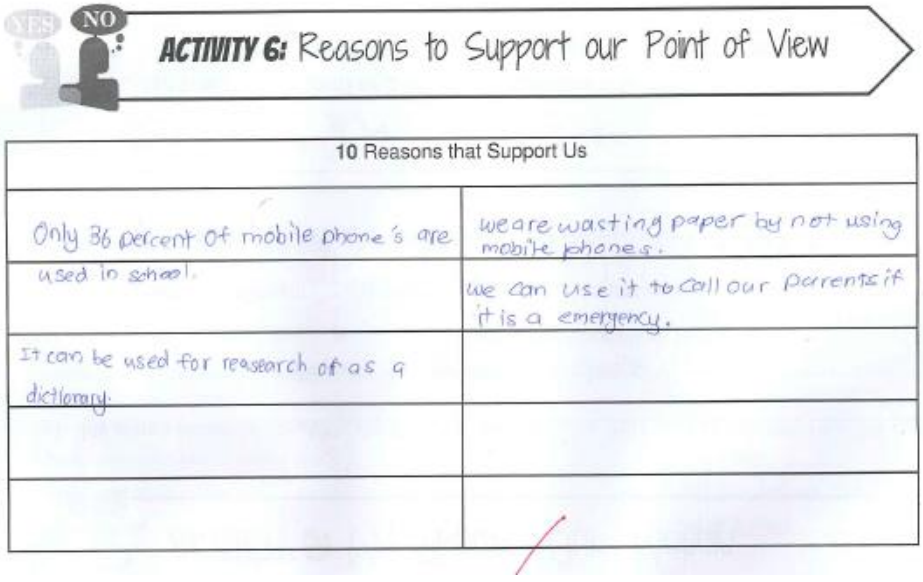
By using this 'wheel' diagram, the students were encouraged to look at the different perspectives (using the segments of the circle) regarding a debate motion (at the centre of the wheel). Examples of student work appear in Annexes 6 to 8.

Annex 5: Pre-Intervention Students' Work



ACTIVITY 6: Reasons to Support our Point of View

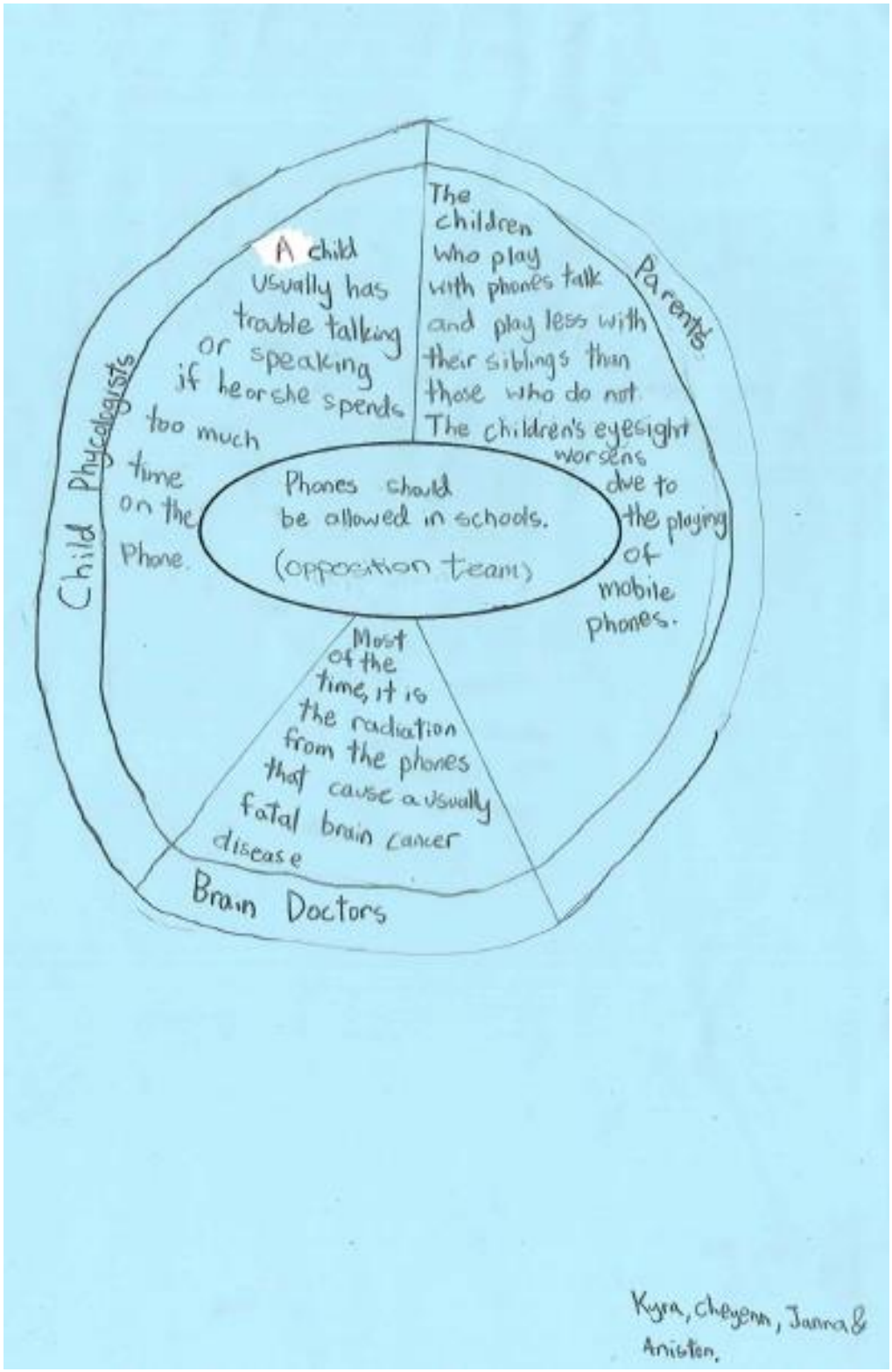
10 Reasons that Support Us	
robots have no feelings so everybody will be treated the same and nobody would feel like they are treated less well than the other students.	Teachers may be biased.
You can tell the robot what exactly it should teach the kids.	Robots would not catch diseases.
You would not need to pay the robots.	School is a waste of time.
School is stressful.	School is disrupting.
Teachers are less creative and innovative.	Students would be disrupted by other students.



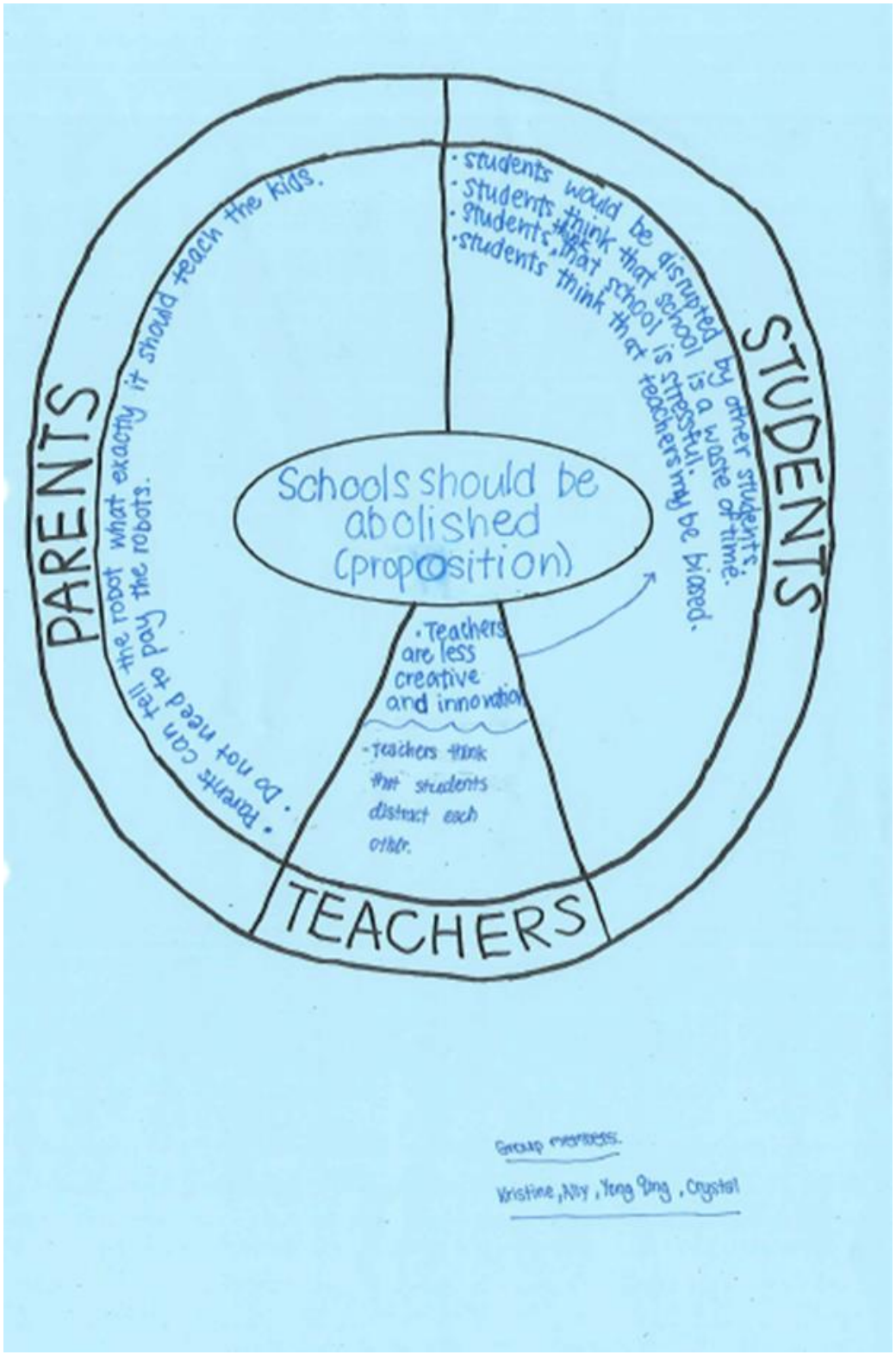
ACTIVITY 6: Reasons to Support our Point of View

10 Reasons that Support Us	
Only 36 percent of mobile phone's are used in school.	we are wasting paper by not using mobile phones.
	We can use it to call our parents if it is a emergency.
It can be used for research or as a dictionary.	

Annex 6: Post-Intervention Students' Work 1



Annex 7: Post-Intervention Students' Work 2



Annex 8: Post-Intervention Students' Work 3