



University of Reading

Project Report

Can collaborative art and design projects, in secondary education,
promote affective development and effective peer feedback?

Word Count: 11,271

Table of Contents

Project Report Title Page	EDMPIPb
Table of Contents	1
Introduction	2
1.1. Aims of the Investigation	2
1.2. Rationale of the Investigation	2
1.3. Previous, Extended and Additional Literature	2
1.4. Changes to Project and Circumstances	4
1.4.1. Failed School	4
1.4.2. New School	6
2. Methodology	7
2.1. Design of the Project	7
2.2. Participants	14
2.3. Data Collection Tools	14
2.4. Understanding the Data	16
2.5. Ethical Considerations	17
3. Results and Findings	18
3.1. General Overview of Results	18
3.1.1. Red Team	19
3.1.2. Yellow Team	24
3.1.3. Blue Team	29
3.1.4. Green Team	33
3.1.5. Purple Team	42
3.1.6. Peer Feedback and Self-Assessment	45
3.1.7. Students' Work	48
3.2. Corroboration of Literature	58
3.3. Anomalies and Points of Interest	58
4. Conclusion	59
4.1. Conclusion of the Investigation	59
4.2. Limitations of the Project	59
4.3. Insights and Hindsight	60
4.4. Implications for Future Practice	61
5. Reference List	62

1. Introduction

1.1. Aims of the Investigation

My investigation aims to gain a better understanding of the negative and positive implications of collaboration within the art and design classroom. Including locating key considerations that emerge when students are placed in uncomfortable situations. Situations they would not usually find themselves in whilst participating in independent work under direct instructions. I have used the words 'collaboration' and 'teamwork' interchangeably throughout this report to account for the reading age of my students.

1.2. Rationale of the Investigation

This investigation evolved from my interest in group analysis and education, believing that schools can work in a more holistic manner where affective development through socialisation is prioritised. Not to take away from education, but to function in a way that encourages oracy, cooperation and introflection (thinking about our thinking processes). I accept there is a level of unrealistic idealism attached to my thinking, but the reason I am investigating my question is because I want to know if it is possible, and if so, how can it be achieved? I am aware that this is a rather large subject that will take *many* years of education, on my part, to write anything meaningful on, however this small investigation allowed me to combine some of the more obvious elements to see what could happen.

1.3. Previous, Extended and Additional Literature

My literature review saw me heavily engage with Mercer's (2013) article because it linked together with Barwick & Weegmann's (2017) book on group analysis. Mercer's (2013) article discussed dynamics and phenomena that occur within groups such as groupthink, interthink, common knowledge and the intermental development zone that evolved from Vygotsky's Zone of Proximal Development. He also compared phenomena across disciplines and referred to mirror-neurons, where we imitate what others around us are doing. He also wrote about the Assembly Bonus Effect, linking everything back to cooperative groups within the school classroom. Ironically and frustratingly, calling out for disciplines to talk to one another as a catalyst for evolution within the education sector - believing a quantum leap of understanding would occur if they did. Barwick & Weegmann's (2017) work exposed me to different

subject-specific terminology within group dynamics, such as the condenser phenomena, group-mind, scapegoating, mirroring, malignant mirroring, part and whole-transference, projection, projection-identification, and a whole host of dynamics and phenomena that occur within groups. To me there are some clear crossovers in which the same 'thing' is being described using different terminology purely because of the environment and discipline it is being observed in. Mercer's (2013) 'interthink' and Barwick and Weegmann (2017) 'group-mind' which was derived from Foulkes' (1964) 'group matrix' have similarities that are hard to ignore. All discussing the linking-up of the mind in a group setting through language creating a powerful tool, each member being a part of a Gestalt. Possessing a social mind that a number of positive and/or negative group phenomena can occur. My big task has been gathering all this information and unpicking as much of it as possible to ensure that I am educated, *well enough*, that I can help students to unravel whatever is happening in their groups when they are collaborating or giving or receiving feedback in the art and design classroom. I have taken this very seriously because I am aware of the negative consequences well-meaning, yet ill-informed professionals can have on young and impressionable people. I think the main take away here is that do not know everything, yet I was placed in a position of power, so I was cautious with how I handled situations.

During collaboration between students, when pupil-pupil talk is taking place, there is a higher chance that students are participating in 'symmetrical talk', since both students are in the same position, they are the same age, in the same class functioning under the same rules. Symmetrical talk has the potential to be equal, as long as there are few or no power dynamics between the students involved. If this is the case a higher probability arises of cultivating Explorative Talk. Teacher-pupil talk is asymmetrical because of the power and control that the teacher holds over the student. These clear discrepancies relinquish any chance for symmetrical talk to take place, leaving 'pupil-pupil talk' as the only opportunity for Explorative Talk. Mercer and Dawes (2008/2013).

Black et al (2004) make intrinsic links in their article that peer assessment directly correlates, or evolves into, self-assessment - so providing students with briefs and task lists can help to develop their schema rapidly. Therefore, peer assessment is a

key element that is needed during the collaboration process to ensure both effective peer feedback and affective development is nurtured. Getting students in the habit of self-reflection, not just in their work but in other aspects of their lives, allows them to apply introspective skills to self-analysis leading to affective development.

Black et al (2004) recommend supplying explicit collaboration guidelines before feedback sessions to expose students to collaborative norms. Stating that this will remove them from viewing feedback as offensive and allows them to be more objective when they give and receive peer feedback. They also recommend providing scoring rubrics as a strategy to ensure there are clear objectives, helping them to assess. Adding that we can ask students to apply the traffic light system to their work to show where their understanding or quality is. Green meaning a good understanding, yellow having a partial understanding and red having little understanding. This is a quick way to get them to assess work and allows the teacher to reshuffle students into different groupings, red with red - supported by a teacher, and yellow with yellow to get them to problem-solve together. This strategy also allows the teacher to get quick whole-class feedback from their students by asking them to raise their hands if they have a green, yellow, or red card. This is a simple way of making students evaluate their own work and forces them to check in with themselves asking: "Do I understand this? How much do I understand? Can I do better? If so, how?"

1.4. Changes to Project and Circumstances

1.4.1 Failed School

Several weeks prior to Easter holiday, during the second part of the second academic term, my placement school and Lead Subject Mentor (LSM) unexpectedly released me as their trainee art teacher. This impacted my plans greatly because it deemed my work, up until that point, null and void. I had delivered 5 lessons of the previous Scheme of Work (SoW), where I taught and prepared my mixed gendered year 8 students how to make clay monsters. However, for my SoW, as per my proposal (AP6.1.), my plan required a 10-week period. I planned to focus 5 weeks on preparation, practicing the skills needed for successful collaboration, and 5 weeks on data collection. I wanted to get the students familiar to a new classroom culture, that had clear guidelines for discussion to create a sense of safety prior to jumping into

lots of collaboration and peer feedback. I had got them accustomed to participating in peer feedback during their clay monster lessons, by making feedback a part of the starter and/or plenary. The topic I chose to deliver was on 'The Ocean' and I had planned for them to work collaboratively creating individual and group collagraphs. The last lesson I delivered to them, on the 28th February, was the first lesson of my SoW. I had become familiar enough with my students that I was able to design a new layout and seating plan for the class (AP6.9.1.). This lesson was the baseline lesson in which I placed them into their new groups, showed them a video on the plastic pollution in the oceans and asked them to fill in a sheet, as a team, answering the questions (AP6.9.2.) and then asked them to make group mind maps (AP6.9.3.) before creating a title page in their sketchbooks. I had created cue cards and discussion words to help inform conversation, and other resources that encouraged Explorative Talk and effective feedback.

Their revised seating plan contained 4 equal groups of 6 students and 1 group of 5 students. I spent a great deal of time ensuring the groups were fairly populated with an even distribution of females, Pupil Premium (PP), Special Education Needs and Disabilities (SEND) and gifted students to each table. I used the students' median Cognitive Abilities Tests (CAT) scores, which are standardised intelligence tests for students entering into secondary education here in the UK, to ensure that each group had the same amount of cognitive power available to them. My reasoning for this was to give each group the same chance for success and to allow me to locate differences quickly. Mercer (2013) also brought my attention to The Assembly Bonus Effect, and I wanted to apply this to my groups, however it was difficult because my placement school did not have any data on the Emotional Quotient (EQ) traits of their students. I was able to apply my personal experience with each child which included their behaviour and ability to work well with others. Making these judgements on students' conscientiousness and ability to be empathetic and possess higher emotional intelligence was a difficult task to execute but I did my best. As an art teacher in secondary education this meant placing students into groups and asking them to work collaboratively, explicitly teaching them how to foster Explorative Talk using ground rules. Providing clear guidelines for symmetrical talk, resources for scaffolding, and giving students time for reflection on their output and personal

involvement, allowing for talk with their peers and encouraging peer feedback and critiques.

1.4.2. New School

My original 10-week plan at the failed school was reduced to 5 weeks at the new school, without the advantage of knowing my students, the school, and their systems. My well-thought-out plan, which was already ambitious, was deemed impossible by myself and by my university mentor.

After changing schools, I decided to change my action plan (AP6.2.) to a 5-week data collection plan. I was not able to get to know my students and I was under pressure to apply my plan immediately after the Easter Holiday. During which I was given access to their data which included their Progress 8 scores, Attitude to Learning (AtL) and their Reading Age (RA) data (AP6.4.3.). Progress 8 scores are a way of determining a student's academic progress from key stage 2, and defines what the student is expected to achieve by the end of key stage 4, for their General Certificates of Secondary Education (GCSE's), the qualifications that students leave secondary school with here in the UK. The higher the Progress 8 score the larger the margin is between a student who started off at the same stage. This could be seen as an acceleration rate in learning, which is a method we use here in the UK to measure students' success by predicting future grades using data from past trends.

Again, there was no data on EQ to work with, so I applied my previous seating plan philosophy to my new group and designed a new seating plan (AP6.4.5.) for them to come back to from their Easter break. Firstly, I looked at their Progress 8 scores to seat lower ability students next to higher ability students. I wanted to make sure that students were well bracketed. Secondly, I looked at students AtL's and realised that the entire class's AtL's (excluding one student's) had an AtL of 'Good' which deemed the data useless because of the lack of dynamism, so I quickly dismissed the AtL data and looked at students' RA's to help me bridge any missing data gaps and ensure that each group had an equal opportunity for success. Again, I wanted each group to have the same amount of cognitive power as possible so that the group would always outperform its best member, but to apply the right circumstances for the Assembly Bonus Effect to take place I would need information that I did not have.

My thoughts at the time included that perhaps I would be able to locate success through the data and aesthetic results, however I did ask my new mentor to give me their thoughts on student's conscientiousness and placed one of these *suspected* higher EQ students in each team. I attributed each team with a colour, and I had exactly 5 teams of 6 students.

I had my new class once every week for 75 minutes and I had intercepted them in the middle of their 'Steampunk Animals' project, just before they were about to build their designs in clay. These clay animals were what the school would assess the students on for their Rank Order Assessment (ROA). As a result, I was restricted with my choice of media because the students knew that they were about to build their animals in clay and were very much looking forward to it, and the school would need whatever I did with them to be assessed against the same criteria in order for it to be fair on the rest of the students.

ROA's are assessments that take place twice each academic year and determine the students' ranking on the school's leaderboard. This system is not widely adopted by other schools and is not compulsory. Every student can see their place on the leaderboard, and their position determines the set they are placed in. This encourages competition, not cooperation which corroborates with Mercer and Dawes (2008/2013) where competition is encouraged over cooperation. It also creates uncertainty about moving up or down a set, away from their friends. This is significant because of the strong group dynamics that develop within each set, creating strong friendships but equally powerful aversions to individuals creating sub-groups where the anti-group mentality was present, and I witnessed scapegoating on a number of occasions.

2. Methodology

2.1. Design of the Project

A plethora of writers have emphasised the importance of creating well designed and robust art and design projects to nurture collaboration, affective development and effective feedback in the art and design classroom. Approaches include designing collaborative projects that revolve around personalities, identity, self, and relationships. Whether that means creating self-portraits that are made in the style of

personalities or merging students' work together - linking them to make a larger piece of work. Considering the needs of the new school and their students, I decided to create a Mythical Beast project in which the students' designs would be made in clay. This was also an ethical choice being that the students would be assessed by the same criteria as the rest of their year group, ensuring my project did not put them at a disadvantage or advantage.

My first lesson with them was on the 28th March, which was their last lesson of the term where I had them for half a lesson - 40 minutes. A short period to introduce myself and set my project up before the Easter break. The activity I gave them was to make a Mythical Beast by folding a piece of paper into 3 parts, and drawing one part of the Mythical Beast before hiding their drawing by folding the paper, and passing it on for the next person to draw the torso, and again for the lower part – ending with each student unfolding their Mythical Beast at the end of the lesson which contained a different design for the head, torso, and legs.

The students' initial drawings (AP6.8.1.) gave me something to work with. Every student was present during the lesson, each with their very own and completed Mythical Beast. The Mythical Beast that they drew the head on was *their* Mythical Beast. These were all made whilst sat in their original seating plan (AP4.4.4.). I then collected the Mythical Beasts up to design a project with, which was cemented during Easter break when I was able to make some of the data collection tools, resources, and I re-designed their seating plan – creating teams that I attributed colours to. I completed my action plan, which was submitted late, because of the circumstances. I remained agile and responsive to the students' and school's needs but the lack of time to execute the project made me feel uncomfortable.



Figure 1. Initial Drawings (AP6.8.1.)



Figure 2. Initial Drawings (AP6.8.1.)

After the students returned from Easter break, on the 18th April, I introduced them to their new groups and told them that we would be working in one of the 5 teams for the next stage of the project, either the Red, Yellow, Blue, Green or Purple Team.

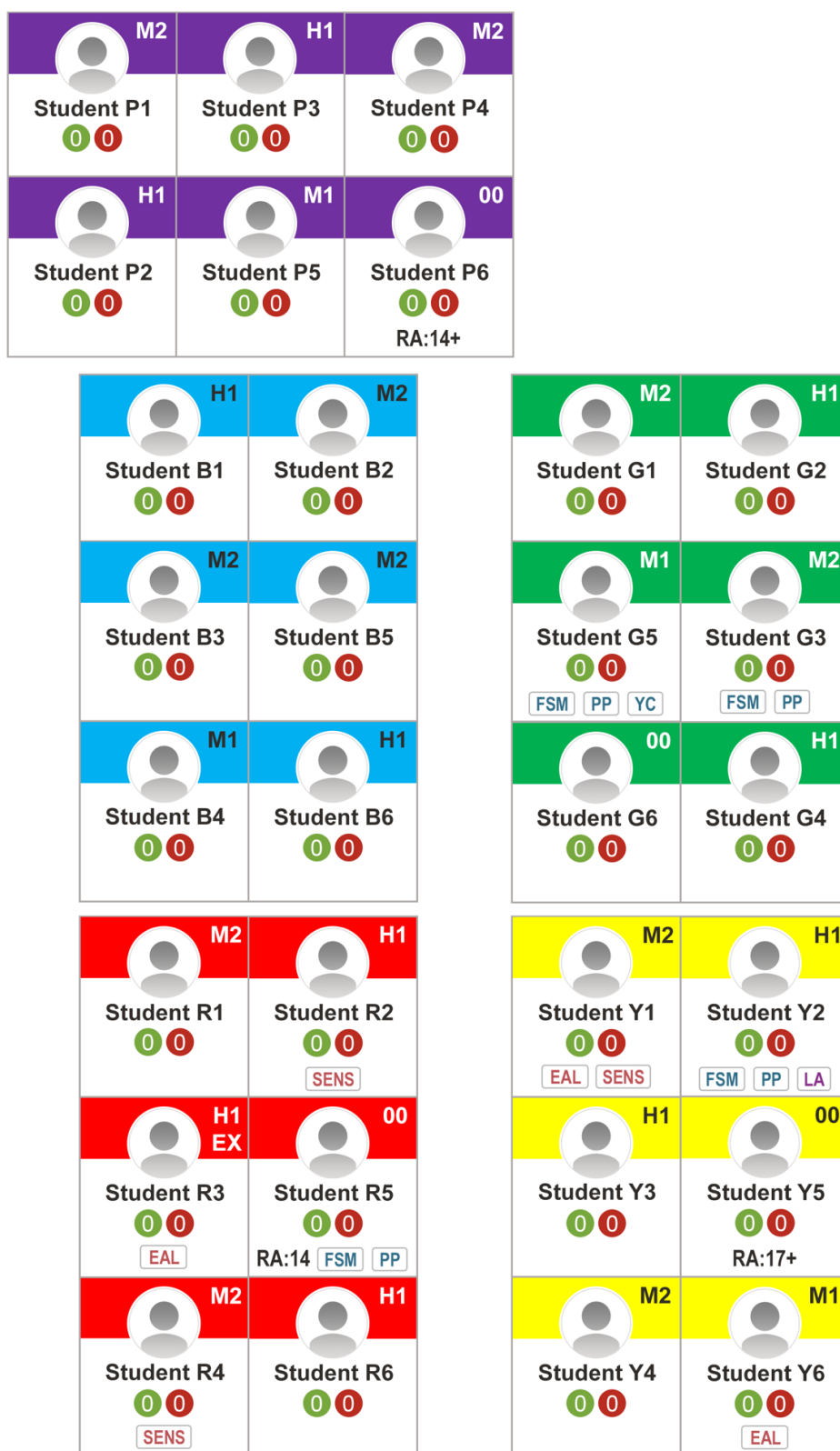


Figure 3. Revised Seating Plan and Team Colours (AP6.4.5.)

I assured them that their revised seating plan was not up for discussion, or negotiation, against some of the student's complaints. Student Y4 insisted that she could not sit in her designated seat because her eyesight was too poor to be sat so close to the board. This presented me with a problem, as I knew I had gone through all the students' needs thoroughly. I contacted the SEND team to confirm her assertions. I asked Y4 to sit in her new seat for this lesson, because it did not require access to the board, and reassured her that I would move her in the future if necessary. After some emails back and forth to the SEND team, and Y4's parents, I offered to print slides out, in a font and size of Y4's choosing, however there was no known eyesight issue registered with the school and her parents declared that they were unaware of any eyesight issue and the dispute disappeared.

An engaging starter task was on the board which included 50 lollipop sticks and 50 clothes pegs, in their team colours, on each table. The starter task on the board was designed to pique their interest and get them excited in order for them to quickly accept their fate. The extrinsic motivation elicited happier and more competitive students to sway their peer's attention to the task at hand, which was time limited - they had 5 minutes to create the tallest most stable tower possible, out of the materials on the table. With the promise of a positive stamp for each team member, individual positive points, and a big box of sharing chocolates for the winning team to distribute how they deemed fit. This was my attempt to temporarily break any dynamics and bond the teams swiftly, distracting them from the more uncomfortable elements, like sitting with people they disliked.

I then introduced them to a Cockatrice and showed them a short video. We spoke about other Mythical Beasts before I handed them their initial drawings and asked them to create two new Mythical Beasts in their new teams. I gave them time to discuss what they liked and disliked about each Mythical Beast emphasising the need to always give a reason for their opinions. Each table was introduced to their group discussion cue cards (AP6.7.2.) to support their group discussion. Their new team task was to make 2 new Mythical Beasts. They had autonomy over how they decided to make them. They could start the task over again or use existing parts from the Mythical Beasts they brought with them to their new team, or a mixture. I showed them my teacher's example (AP6.7.5.) and told them that they would

eventually be making their Mythical Beasts in clay. Each student creating one part of the Mythical Beast where they would eventually be mounted together on boards and displayed at the end of year exhibition.

After they had made some progress and all finished cutting up their Mythical Beasts and had two new designs, I asked them to think about where their Mythical Beast lives, do they have any powers and how does their body restrict or empower them? Perhaps they have superpowers. I asked them to think about how they could include these elements in their design. Again, I asked them to use the discussion cards on the table to help support their discussion. This is where I engaged students in a whole-class discussion about the group discussions that had just taken place. I asked them how did they make their decisions? What worked and what did not work? Each team had slightly different ways of making their choices, most notably the Green Team who made their own anonymous voting system, but every group used the discussion cards. This is when I asked students to put their hands up if they had used the discussion cards during their group discussion. Seventeen hands went up, and then I asked them, *“So out of the 17 people who used the discussion cards, how many of you put them back down in the middle of the table after you used it?”* Only two hands went up. This was interesting because I could see that students were hanging on to high value cards like, ‘my turn to talk’ and ‘I can say more’ isolating and dominating the group discussion.

This led on nicely to the next stage of the lesson where I asked them how they think they should use the discussion cards. I gave them a few minutes to talk about it in their groups and then stopped them for their answers. A few hands went up and they suggested that the cards get placed back in the middle of the table after being used. I then asked students why they think that would be best, to which a number of them replied that it would be fairer.

My next slide on the PowerPoint presentation was titled ‘Ground Rules for Teamwork’ and was simply populated with empty bullet points (AP6.7.7.). I then asked the class what the rules should be whilst talking in their teams because it was up to them to decide how they should function. Again, I let them talk amongst themselves for a few minutes before a tirade of answers came my way, many of

which were the same points but delivered slightly differently. I think this gave the students who felt isolated and dominated previously the chance to speak up and tell members of their team, inadvertently, ways in which the team could function more fairly. I listened to them all intently and wrote their rules and ideas down in my notebook, acting as a scribe. I noticed that the students were all putting their hands up to talk so I told them that they could talk without putting their hands up, so long as they didn't talk over each other, this allowed me to take a step back and I witnessed a few little back and forth debates occur between students as they settled on their points. All I needed to do was pose a few questions and confirm the parameters of the rules. I asked them questions as they gave their points and reasons, many of the students became very animated during this discussion and I really enjoyed supporting them in a different way. This correlates with what Black et al (2004) state. This was my attempt at removing myself as the sole source of information as posited by Black et al (2004). R2 spoke for several minutes straight. No one interrupted her and I made sure that I listened intently. This was a beautiful moment for me because it had not happened before where I was able to facilitate long and reasoned responses from a student where they are given as long as they want to respond during whole-class discussion. I waited for the class to finish before I promised them that *their* rules would be on the slide for the next lesson, and that I would print them out for each team to keep on their table (AP6.7.3.). I also made sure that I left additional bullet points empty on the slide, as visual prompts, in case students felt they wanted to add more rules later.

In the next lesson I introduced them to a Discussion Map (AP6.3.4.) and we all watched a video on how to use it (Edutopia 2012). They then got to use it during a discussion on how they could refine their Mythical Beasts. My plan was to collect the data and enter it as I went along, which I did, so I was able to monitor some elements and get instant feedback from the students, but I did not do a deep dive into the data until the end. To encourage Explorative Talk I used Lyn Dawes' (Thinking Together) cue cards along with other props and ideas which certainly helped support the conversations taking place, with child-friendly guidelines.

2.2. Participants

The participants comprised a class of 30 females between the ages of 11 and 12. They were assigned to me by my mentor and were in the top set excluding the grammar stream set, which functions differently in the school in which I am placed. I did not choose them for this investigation, they were the only group that I could see weekly. The participants had been studying art and design, in secondary education, for nearly two terms. They consisted of: 3 Special Educational Needs and Disabilities (SEND) students, 1 selective mute student that was being monitored, 3 English as an Additional Language (EAL) students, 4 Pupil Premium (PP) students, 4 Free School Meal (FSM) students, 1 Looked After (LA) student and 1 Young Carer (YC) student. As previously mentioned, the school encouraged competition and my class had been working solely on individual projects and from direct instructions up until I started working with them, introducing them to group work that included the need to speak to each other through planning and problem solving. This did concern me on how the students would react to my alien approach.

2.3. Data Collection Tools

Data collection tools (AP6.3.) were made to support and monitor all students and groups during the project. I wanted a robust set of tools and strategies to follow, as suggested by Gast (2008) to capture as much data as possible, given the short period of time I had to deliver the project, believing that the more data I gathered the more instances of interest were likely to occur that corroborated or opposed key talking points in my literature review.

The exit ticket (AP6.3.1.) was made up of four data collection points. The first element was made to measure students' confidence in their knowledge on what 'teamwork involves', using a Likert scale of 4 choices (AP6.4.1.). This data was gathered and plotted in stacked bar charts. The second data collection point asked students to demonstrate their knowledge on what 'teamwork involves' with a sentence starter to complete. This qualitative data was collected and entered into tables. The third data collection item, on the back of the exit ticket, was a two-part sentence starter that firstly measured how students felt during their teamwork with multiple choices to choose from. I assigned a numeric value to each feeling to provide quantitative data (AP6.4.2.), that informed the scatter plots. Lastly this third

data collection item had a second element which allowed for further qualitative data, which asked the students to provide a reason for their feelings. This data was also entered into tables. The data was divided into the different teams to analyse and contrast. This allowed me to infer the individual dynamics that were happening within each group and observe any changes that occurred during the timeframe.

All exit tickets were handed out with an accompaniment sheet (AP6.3.3.) to help students locate the word that best resonated with how they felt during teamwork. I left a blank box for them to fill in if they felt something else that was not present on the sheet. The vocabulary on the exit ticket was carefully considered using a readability calculator (AP6.3.2.) to include students with a low Reading Age (RA). The calculator revealed that the word 'collaboration' would have excluded 26 of my students because it required a RA of 17-years-old and above. As a result I changed the word from 'collaboration' to 'teamwork' and the readability calculator stated that my exit ticket was now accessible to 27 of my students with a RA of 11.1 years old. However, I did pre-teach the word 'collaboration' and used it synonymously in the classroom with the word 'teamwork' to promote reshuffling and the restructuring of their vocabulary schema – linking 'teamwork' with 'collaboration'.

Other data collection tools included the Discussion Map which was inspired by a video I watched by Edutopia (2012) in which students used a similar resource to support group discussions, and when viewed over time, can show the quality of talk progress and mature.

I designed a peer feedback form (AP6.3.5.) to allow students to give feedback on one another's work inline with Boon's (2018) ideas that feedback from other students is more effective than that of the teacher because it comes from a fellow peer. The forms also allowed me to combine Soep's (2005) ideas on constant feedback loops. I did this with both written and verbal feedback in every session. I designed the form to include reasoning by placing 'why?' under WWW and 'because' under EBI. This is inline with Mercer's (2013) article where he insists that students' reasoning skills are needed to develop appropriation, co-construction and transformation.

Other resources such as the group peer and self-assessment sheets (AP6.3.6. and AP6.3.7.) with success criteria and scoring rubrics (AP6.3.8.) were made in line with Boon's (2018) sentiments on providing clear briefs and criteria. I also made individual self-assessment tick lists (AP6.7.1.) to which the students responded well (Black et al, 2004) helping to support the students' learning. They showed them the basic qualities that were expected of them for their ROA's. These tick list sheets came out several times including a lunchtime session which was requested by some of the students who wished to further refine their work and held themselves accountable for the success of the project (Soep, 2005). Some of the students felt let down by team members who did not show up and/or were away on a school trip so could not improve the collective tiles, leaving some tiles refined and other parts of the Mythical Beast unrefined and basic. Several students asked if they could increase the quality of their team's work in their teammates absence, which I unfortunately had to say "no" to being that they were being assessed individually for the school ROA's. However, this does highlight the pressure some students felt over others. This corroborates with what Soep (2005) found during their stay with a group of young artists, where students feel the weight of the collaboration project.

Subject-specific terminology test sheets (AP6.3.9.) were made and used as a starter task, along with PowerPoint slides with images on them to inform their test. This was a flipped learning task (AP6.7.6) which involved them drawing clay tools in their sketchbooks and writing out the rules for using clay (AP6.8.13.)

2.4. Understanding the Data

In response to the first data collection point students were asked whether or not they agree with the statement 'I know what Teamwork Involves'. Their responses were recorded on a Likert scale with the options 'strongly disagree', 'disagree', 'agree' and 'strongly agree'. I chose a four-point Likert scale in an attempt to force students to make a decision because of the "...*ambivalence*..." they often display, especially during their teenage years, where decision making is difficult and can feel overwhelming (Champagne, 2014).

These responses were recorded weekly, and the total of each response was tallied after each lesson. These tallies are shown in the coloured rows in the Tables 1, 3, 5, 7 and 9 under AP6.5. (AP6.5.1., AP6.5.3., AP6.5.5., AP6.5.7. and AP6.5.9.). The totals were used to plot the Likert Scales on stacked bar charts to give a visual representation of the data. In lessons where students were absent, the figures are shown in red, and these are averages of the students' responses in the weeks they were in attendance. Using medians or interpolating data points when examining data based on opinions is common and accepted in this kind of data analysis. Students were asked to choose one or more emotions from the "feelings scale" or write their own feeling word from the exit ticket accompaniment sheet after each lesson. These feelings have been assigned numeric values from -3 (the most negative) to +3 (the most positive) in an attempt to ascertain how the students' positivity towards their group changed over time. See the coding for quantitative data for feelings scatter plot (AP6.4.2.). Each student's replies were averaged each week, and an "Average Mood" value created. These values are shown in the Tables 2, 4, 6, 8 and 10. You can see these tables under AP6.5. (AP6.5.1., AP6.5.3., AP6.5.5., AP6.5.7. and AP6.5.9.) where an "Average Mood" column was used to plot charts showing how the students' positivity changed as the project progressed. When students were absent or failed to choose an emotion from the scale, a value was entered which was created by averaging their responses in the weeks they were in attendance, these figures are shown in red in the tables. Again, interpolating or averaging data based on opinions is common and accepted in this kind of data analysis. Where students entered a value of their own – an emotion not shown on the visual "mood scale" - their feeling has been assigned a numeric value, shown in the same column and entered in the table with a blue x.

2.5. Ethical Considerations

The ethical considerations for this study did not concern me because of the benevolent nature of the project. I checked with my university mentor before speaking to my school mentor about my plans. My university and school mentor both agreed that my plans were ethical as long as the school and participants were anonymised, and no personal data was referred to in my study. Regarding my teaching plans and practice everything was deemed as standard practice within art and design teaching. Everyone involved approved my plans. The data that I

gathered was done so weekly and the data was anonymised at the end of my data collection period. I did this by attributing the first letter of the colour team that the participant was in with a number between 1 and 6 (AP6.4.3 and AP6.4.5.). This allowed me to analyse the group data but anonymised the individuals involved. After I realised the significance of the ROA's in this school, I re-evaluated my previous position and I retract my previous statement: *"The aesthetic outcome of the art produced will be secondary until collaboration is normalised enough that it becomes the classroom culture."* It would be highly unfair and unethical to value my own outcome above that of my students' ROA's. I was unaware of ROA's prior to moving to this school.

3. Results and Findings

3.1. General Overview of Results

The general responses to 'I know what teamwork involves', across all the groups saw very little to no change over the 5-week period of data collection. You can see the data gathered from a Likert scale with 4 choices (AP6.4.1.). I then plotted this information in the form of stacked bar charts (Charts 1, 3, 5, 7 and 9 (AP6.5.2., AP6.5.4., AP6.5.6., AP6.5.8. and AP6.5.10.)). Students mainly felt, from the beginning of the data collection period, that they knew what 'teamwork involves', by selecting the 'agree' and 'strongly agree' options. However, students revealed in the qualitative data collected, where I provided them with a sentence starter 'I think that teamwork involves...' that their understanding did change and develop over time.

The general response to, 'Working in my team made me feel...' saw an increase in the average mood over the 5-week data collection period. The first week of data collection (lesson 2) showed a wide range of feelings that fluctuated between lessons 2, 4 and 5 yet mainly converged in the final data collection week (lesson 6). This suggests that the teams not only improved in positivity throughout the project, but they also became more cohesive. However more independent work took place in lessons 4, 5 and 6, where I provided many demonstrations, gave direct instructions and provided students with the tick list sheet that was in line with their ROA criteria. The students were also happier working in clay with reference images. There were a couple of outliers that did not fit this pattern but overall, the trends can clearly be

observed in the scatter plots (Charts 2, 4, 6, 8 and 10 (AP6.5.2, AP6.5.4., AP6.5.6., AP6.5.8., and AP6.5.10.)).

The qualitative data captured in response to asking students for their reasons for how they felt during teamwork with the mid-sentence starter '... because...' saw students express a whole host of negative and positive comments about their teams and the individual members within them. I could locate several pre-existing dynamics between individuals on each team. Students felt safe enough to tell me things that had happened during their teamwork in this section and many did vent about others and express their personal opinions. See Tables 2, 4, 6, 8 and 10 for students' responses (AP6.5.1., AP6.5.3., AP6.5.5., AP6.5.7. and AP6.5.9.).

3.1.1. Red Team

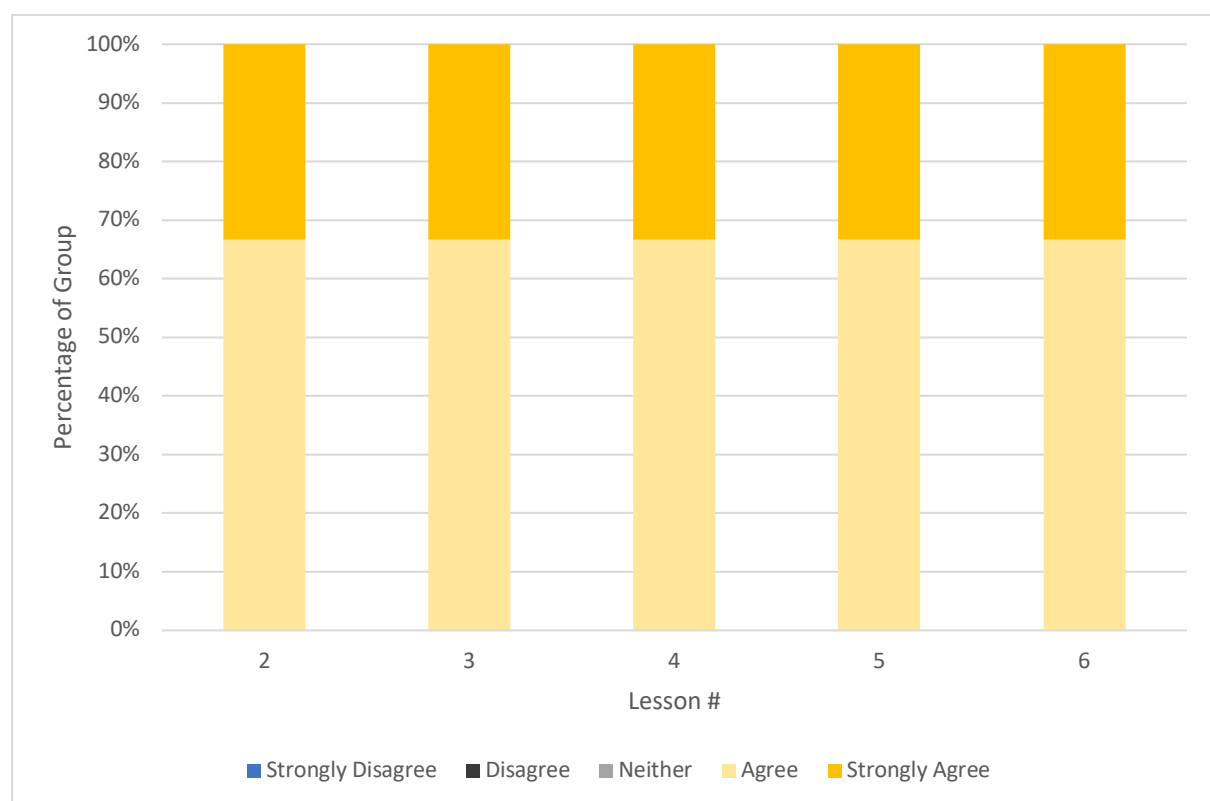


Figure 4. Chart 1. (AP6.5.2.) Likert Scale Response from the Red Team.

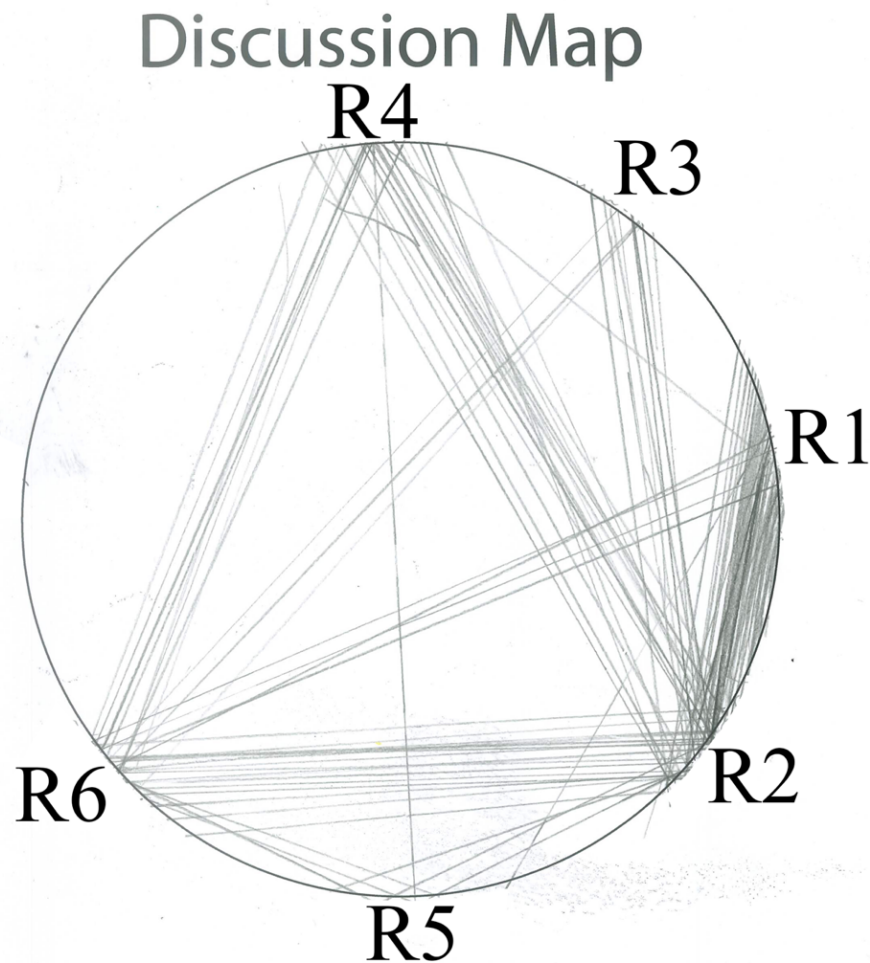
Interestingly the Red Team's responses, on the first data collection point never changed across the entire 5-week period of data collection. Students R1, R2, R3 and R5 always chose 'agree' and Students R4 and R6 always chose 'strongly agree', Please see Table 1 (AP6.5.1.) and Chart 1, above, with a one-third/two-thirds split.

Although their quantitative data did not change over the data collection period their qualitative data does suggest that a deeper understanding of what teamwork involves was captured in response to the sentence starter “I think that teamwork involves...”

Student R2 showed an increase of understanding of what teamwork involves in the qualitative data available in Table 1, where she adds additional answers each week. In lesson 2 she seems unsure with *“Isint to people opint and stuff”* to adding *“people be inclusive”* to *“teamwork”* to *“happy”* and finally *“helping others”*. Although this is not groundbreaking – it does show an accumulation of knowledge over time. I commented on how R2 spoke openly and passionately about how people should conduct themselves during the whole-class discussion on the Ground Rules for Teamwork earlier and found her to be highly conscientiousness of the people around her, specifically Student R5 who is a selective mute. Although R2 and R5 did not have a strong friendship R2 always tried to meet R5’s needs, including her in the conversations and decision-making. R5 always had a Mini White Board (MWB) and drywipe pen available to her but she communicated mainly by moving her head to agree or disagree and by using her hands to take things when given decisions. Strangely and unexpectedly, I did not find R5 to be shy in any way. She was able to communicate and did write out her exit tickets, which were very meaningful to me because it was the only time I ever really knew what she thought and how she felt and why. The most interesting response I received from R5 was in lesson 6 where she stated that *“Working in my team made me feel happy because I don’t have to be independent”*. This would indicate that she likes working in an environment that supports her or contains her. Perhaps she felt looked after by some students in the group, however I also noticed that R2 felt *“in the middle”* in lessons 2 and 3 where the most amount of pressure was applied for collaboration. R2 also responded as feeling “stressed” and “happy” during lesson 4 and then it petered out and she felt happy again when more independent work was required. This makes me wonder if R2 was holding the group’s anxiety and/or emotions – taking responsibility for them during the more difficult lessons and even taking a stand for R5, speaking for her when she would/could not.

During lesson 3, when students were asked to refine their Mythical Beasts, I saw the Red Team changing the head of one of their beasts. When I asked them what they were doing, R2 replied that they had decided to change the head “...to make it fairer for R6” who did not have any of their designs placed on either of the beasts. I then asked if this was a team decision and several of them said “yes”. I then spoke to them a little more by asking them how they made that decision and how they felt about it now? The conversation continued for a few more minutes and I listened to what they had to say and then repeated it back to them in a more refined manner to give it more form. The consensus was that they wanted a fair team, however it did seem led by R2.

Team	Red
Date	25/4/24
Topic	Mythical Beasts



Printed by tkeht at 25-Apr-2024 07:30:56

Figure 5. Red Team's Discussion Map (AP6.8.2.)

This Discussion Map between the Red Team does show the majority of students did talk to each other and R5 was included in the process and not left out. There was a lack of conversation between R1 and R2 as well as between R3 and R4, but this could have been that the person responsible for filling out the Discussion Map was distracted because the qualitative data in Table 2 indicates that the students get along well with each other.

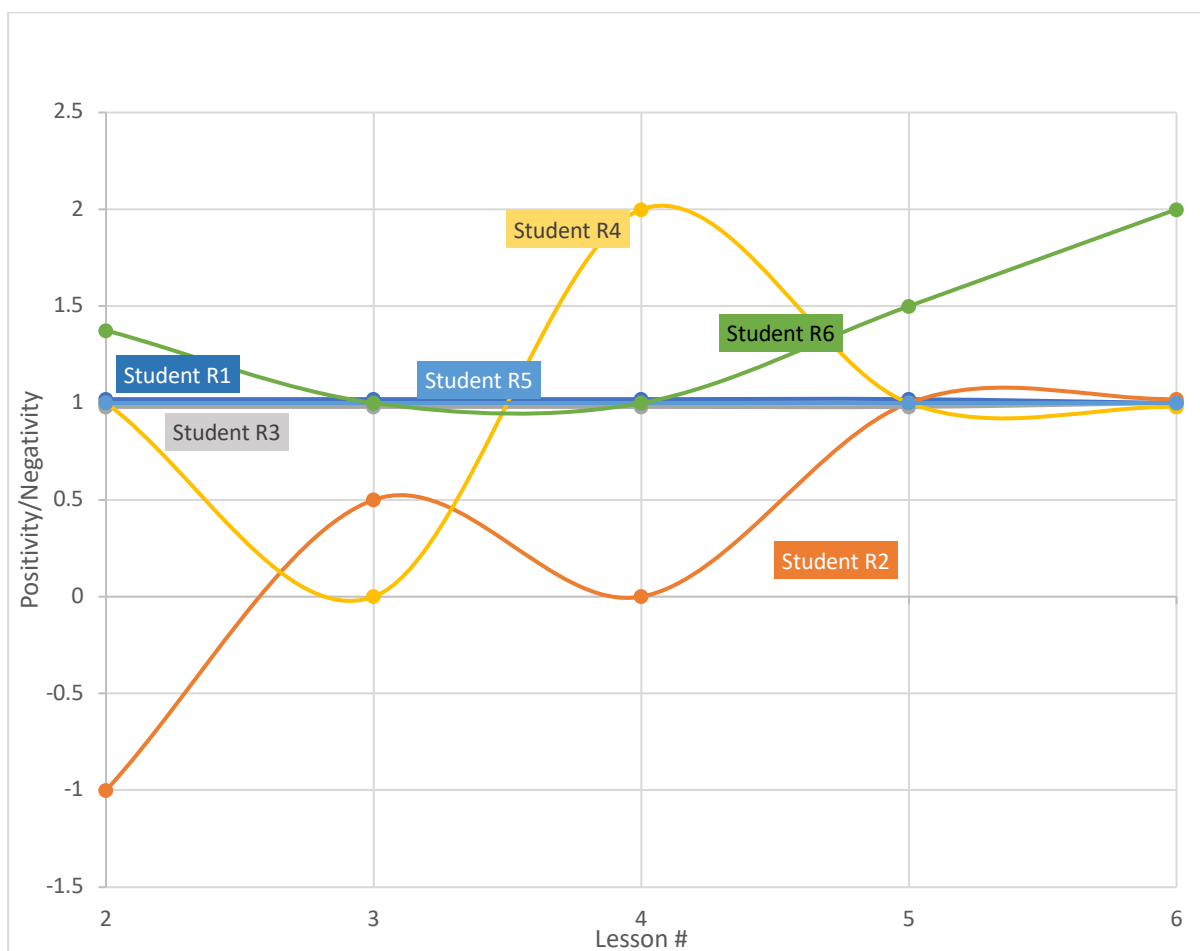


Figure 6. Chart 2. Feelings Scatter Plot from the Red Team over 5-weeks.

The Red Team saw an increase from an average mood of 0.729 in lesson 2 to 1.167 by lesson 6 as seen above. Although there were some fluctuations in between you can see on Table 2 that by the end of the data collection period the Red Team had collectively included the majority of key collaborative points. Looking at the Red Team's Mythical Beasts (AP6.8.14.). I can see that they have collectively included relief, carving, imprinting, patterns and texture, however I would argue that they have not aligned their clay tiles well to create a coherent beast and/or background. Mythical Beast 01 looks disjointed, Mythical Beast 02 looks more thought-out. When the time comes to paint them, I will emphasise the need for more consideration whilst choosing their colours, instead of looking at their clay tiles in isolation. I have addressed this issue several times but the next time it will be through the group peer and self-assessment sheets and rubrics that I suspect will have more of an impact.

3.1.2. Yellow Team

Classroom observations (AP6.6.1.) on Thursday 25th April, during the Discussion Map task saw Y6 state *"I'm shutting up now because I've been talking a lot."* I suspect that Y6 reflected on their involvement because of the clear visual indicator the Discussion Map presented. Student Y5 was holding the map to Y6's right, although interestingly Y6 did not talk to Y1 or Y2.

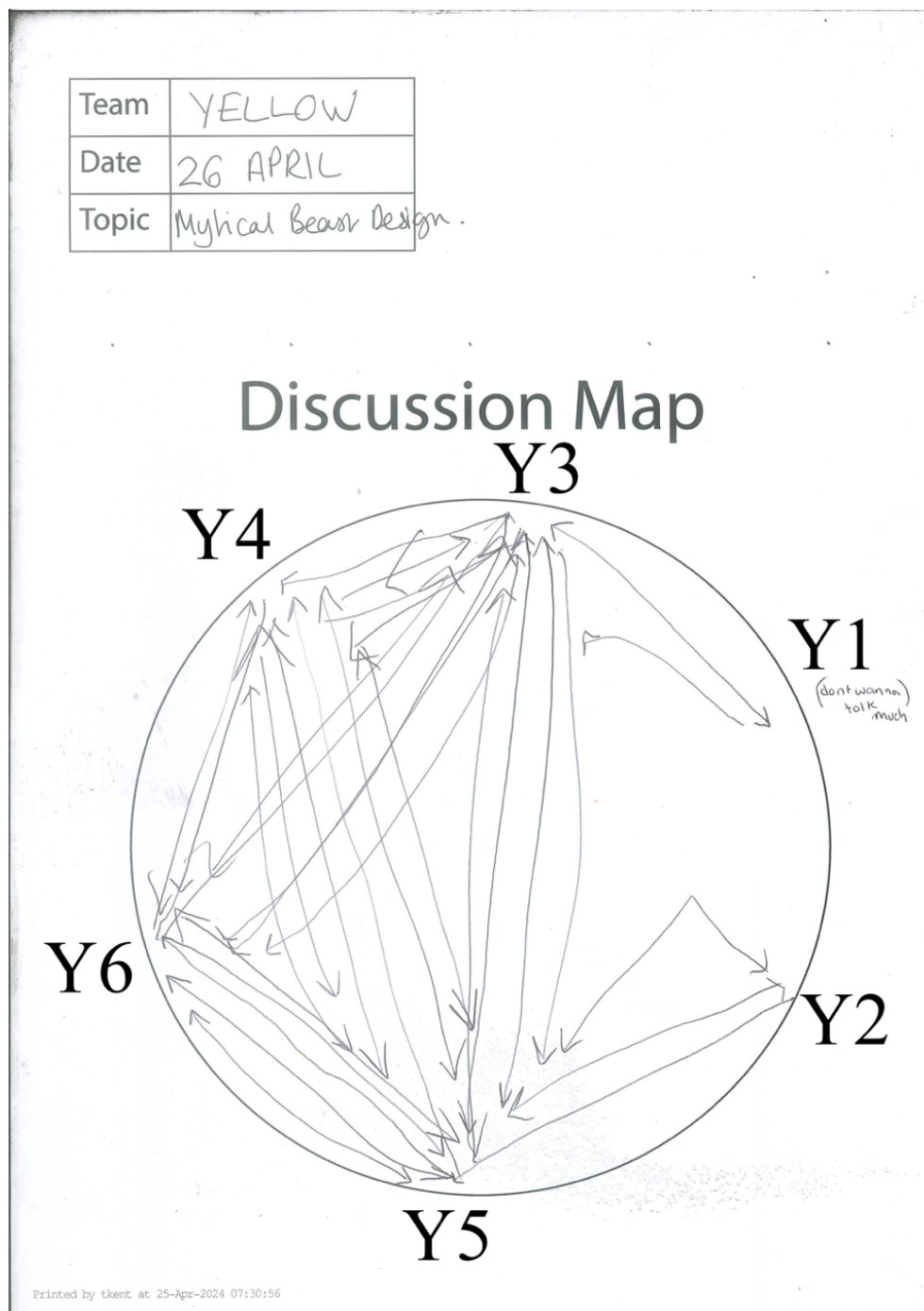


Figure 7. Yellow's Team's Discussion Map (AP6.8.2.)

I often saw Y1 left out of the Yellow Team, standing by the sidelines looking in, uncomfortable and quiet, often struggling to speak up and participate. Interestingly Y1 wrote “*don’t wanna talk much*” on the Discussion Map. Through my observations Y5 was often the most dominating student on the Yellow Team, and the Discussion Map above also shows no discussion taking place between Y5 and Y1. In fact, Y1 had only one interaction during this discussion and that was with Y3. Looking at Y1’s exit ticket for that day in Tables 3 and 4 (AP6.5.3.), or below in the images, we can see that she has written that teamwork involves... “*sharing ideas and having fun*” and that working in her team made her feel “*calm*” because “*I didn’t have to talk*”. She has acknowledged that teamwork involves sharing ideas yet has not participated. I wonder if there was an element of anxiety involved and she has taken a defensive stance, or that members of the Yellow Team were making it hard to participate. Newman (2020) refers to this alienation as a normal process when art and design students are placed in challenging situations.

EXIT TICKET

1 Name: **Y1** 25th April

2 I know what teamwork involves.

○ ————— ○ ————— ○ ————— ○ ☒

strongly disagree disagree agree strongly agree

3 I think that teamwork involves... *sharing ideas and having fun*

Figure 8. Student Y1’s Exit Tick, Front, for 25th April.

4 Working in my team made me feel... IV

	Loved	
	Confident	
	Happy	
	Calm	✓
	Worried	
	Sad	
	Angry	

because I didn't have to talk

Figure 9. Student Y1's Exit Tick, Back, for 25th April.

Yet the following two weeks saw a huge change in her feelings as she went from feeling “calm” in week 3, to feeling “confident” in weeks 4 and 5. Her reason for this was “because they let me speak”. This would indicate that perhaps Y1 was feeling left out of the classroom discussion but as the Yellow Team realised that cooperation was a key focus of the project, and as Y1 realised the need to speak up and assert herself - the dynamic within the group changed. Y1 demonstrates this in her exit ticket in week 6 where she wrote that teamwork involves... “listening to each other opinions and to not be afraid to speak up”. Perhaps this confirms that there was previously a fear in speaking up and/or not being allowed or encouraged to speak. This was addressed in the video (Edutopia 2012) that I showed where the teacher in the video addressed this very scenario, stating that those of us who find it easy to talk can help those around us who find it hard by taking a step back and helping others to come forward by asking questions.

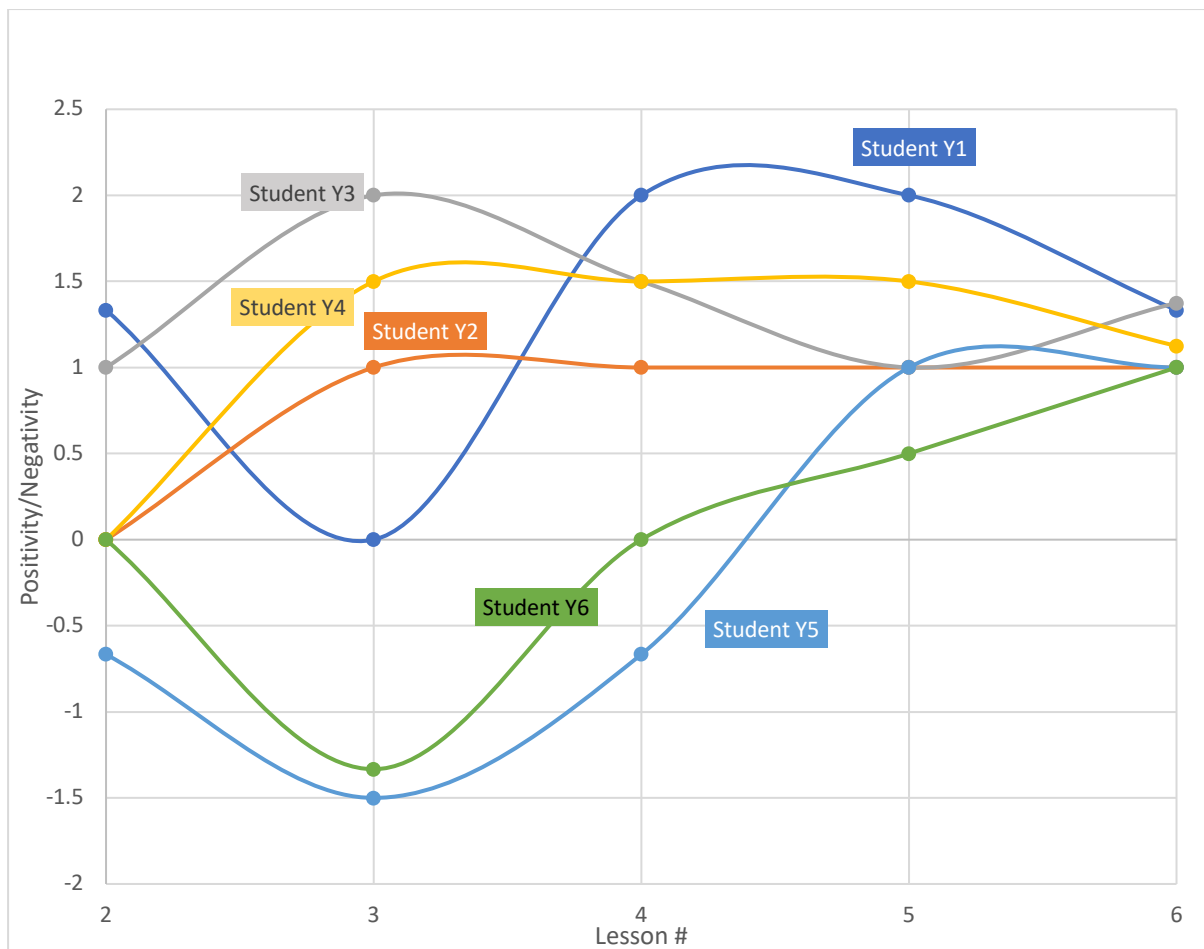


Figure 10. Chart 4. Feelings Scatter Plot from the Yellow Team over 5-weeks.

The Yellow Team's positivity fluctuated from week to week. The average mood amongst the group was 0.278 in lesson 2 which is generally positive since it is higher than 0 but is still low. This is to be expected because they were physically moved away from their friends and placed out of their comfort zones. By lesson 6, however, the average mood had increased to 1.139.

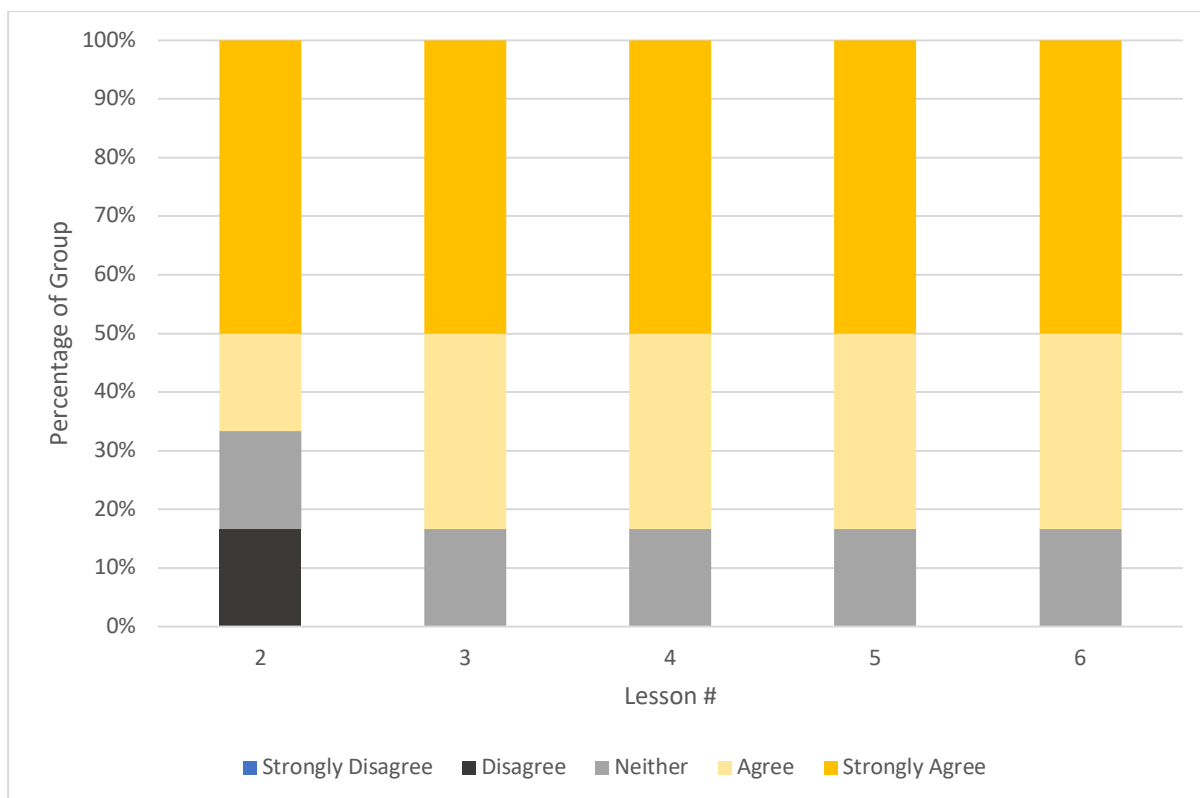


Figure 11. Chart 3. Likert Scale Response from the Yellow Team over 5-weeks.

The Yellow Team did not show much movement in confidence through the Likert scale responses. The most interesting element about this data is that Y6 did not choose one of the four choices on the Likert scale, instead choosing to tick both ‘disagree’ and ‘agree’ every week, forcing me to create a 5th option within the data – ‘neither’. This corroborates with Champagne (2014) on teenagers’ inability to make firm decisions. My personal observations over the 6-week period with the Yellow Team did see me initially concerned for Y1, but over time Y1 became happier, showed more resilience and integrated into the Yellow Team well. Y5 was my other concern because the level of dominating behaviour that she displayed over the group was palpable. However, over time she seemed to take a step back and became increasingly concerned and excited at attaining my personal attention. I wonder if this is because she felt out of her comfort zone, anxious and/or a bit unsure moving from a competitive environment to a cooperative one. Her responses to “I know what teamwork Involves” evolved from writing, “*kindness + preppyness*” in lesson 2 to “*communication and listening*” in lesson 6. A significant improvement that aligns with Newman’s (2020) thoughts on affective development through embracing discomfort.

3.1.3. Blue Team

EXIT TICKET

4 Working in my team made me feel...

	Overwhelmed	☒
	Loved	☐
	Confident	☐
	Happy	☒
	Calm	☐
	Worried	☐
	Sad	☐
	Angry	☐

because it was a bit loud and too many things were going on.

Figure 12. Student B1's Exit Tick, Back, for 18th April.

Student B1 started off in lesson 2 stating *"I was a bit over stimulated. And I don't really talk to anyone else on the table before."* Indicating that she had either no to little relationships with the people on her table. In lesson 3 she filled out her own feelings box and wrote, *"overwhelmed"* because *"it was a bit loud and too many things were going on"*. However, in lesson 4 she responded with, *"It was easy"*. In lesson 5 she stated, *"I liked it"* and finally in lesson 6 B1 wrote *"I like that we had a list of things we needed to do"*. Again, seeing an incline in mood that directly correlates with lesson content and structure, or perhaps she also felt more familiar with her peers.

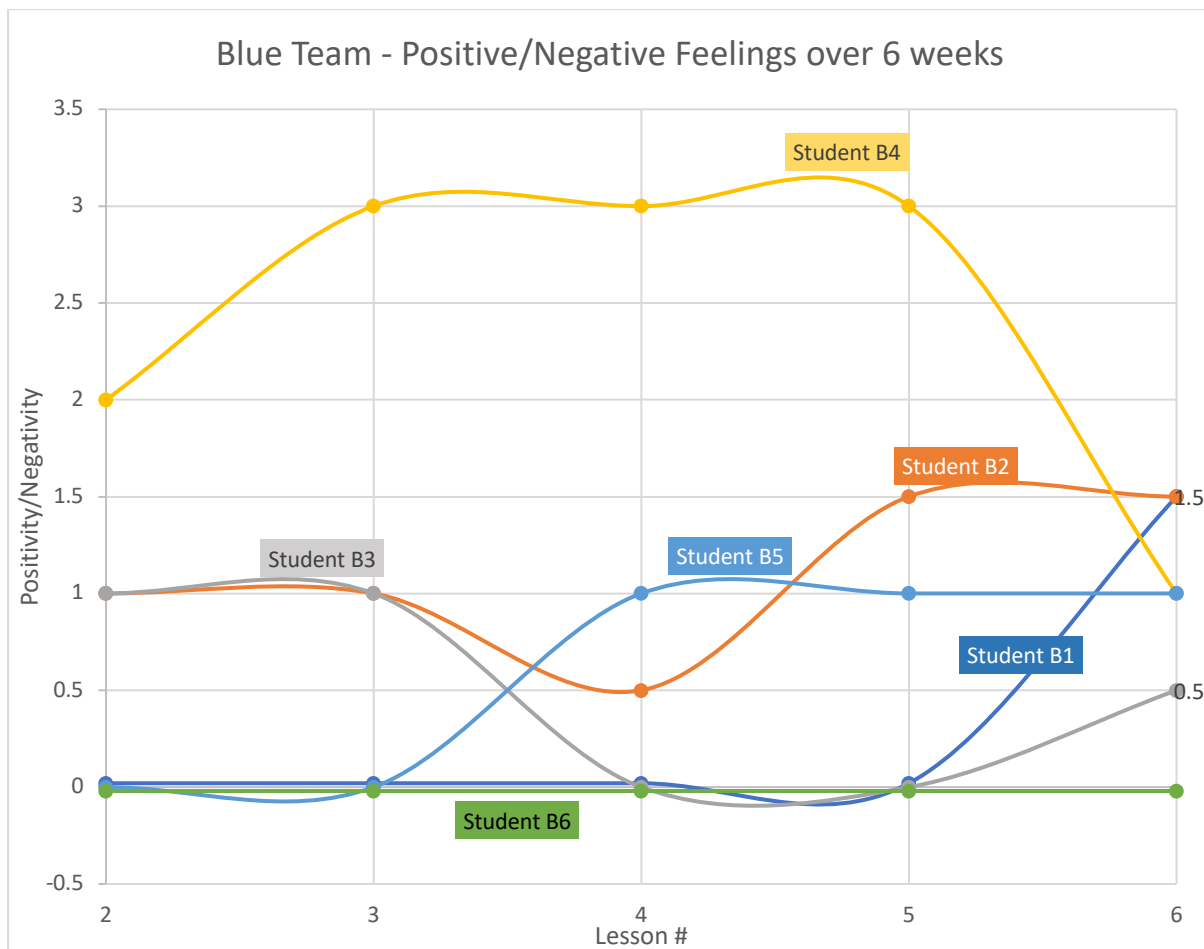


Figure 13. Table 6. Feelings Scatter Plot from the Blue Team over 5-weeks.

Student B4 was one of the students who enjoyed lessons 2 and 3, where a lot of group discussion and group work was taking place. But in lessons 4, 5 and 6 her responses in Table 6. (AP6.5.5) indicate a rather sad state of affairs. In lesson 4, B4 stated, *"I can talk"*, in lesson 5 she followed with *"we weren't in silence"* and finally in lesson 6 *"I can be myself"*. This makes me wonder about how oppressive the rest of the school functions. I am aware that art is one of two subjects in which students have the freedom to talk, and only if the teacher supports it or deems it fit and in line with the lesson's content. I gave them a lot more freedom within a very competitive and highly strict school system. This was somewhat heartbreaking for me to read.

Student B5 demonstrates that successful teamwork involves agreeing with the group consensus. B5 validates this a number of times in Tables 5 and 6 (AP6.5.5). In lesson 2 she stated *"everyone agreed straight away and is was stress free with no arguments"* This indicates that perhaps arguments were a concern for B5. She also

responded in lessons 4 and 5 when answering the sentence starter, 'I think that teamwork involves...' *"agreeing with each other"*.

Student B6 stated in lesson 2 that *"two people were persuading people to want to do one thing and one person said they like having arguments with me"* this aligns with Mercier and Sperber (2011) who stated that some people are excellent manipulators and will influence the group in their direction. This is unsurprising given the environment and school ethos which favours competition over collaboration. As the project progressed B6 observed more inclusion in the group and in lesson 4 commented *"we just helped each other and worked with each other"*. This supports Mercer's (2013) observations that negative occurrences in groups provide opportunity for growth.

In lesson 3 B3 responded *"everyone listened to my ideas and worked together well"*. B5 said *"everyone was fine with all the ideas"*. It is possible that in their efforts to avoid friction or upsetting B3, the Blue Team was diminishing the opportunities for Explorative Talk and problem-solving. This is what Mercer (2013) calls 'groupthink' where group consensus is valued over creativity.

Team	Blue
Date	25.4.24
Topic	Refine Mythical Beast Design

Discussion Map

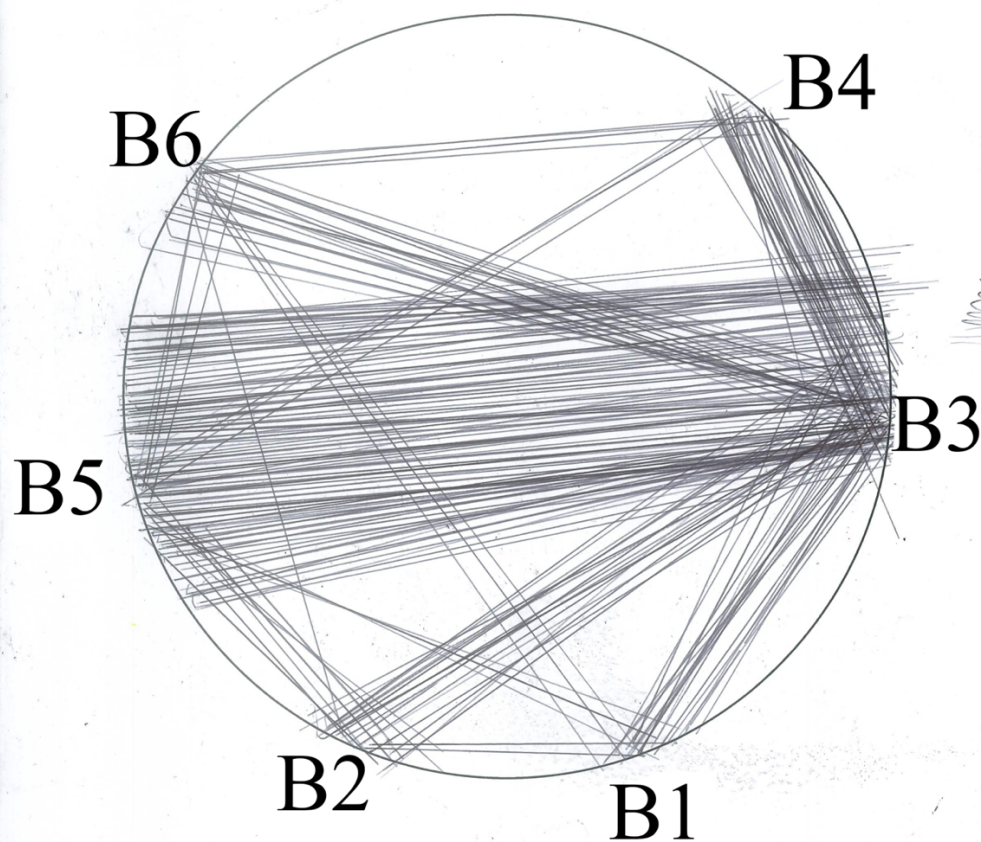


Figure 14. Blue Team's Discussion Map (AP6.8.2.)

Looking at the Discussion Map the students created whilst discussing the refinement of their beasts, it can be seen that B3 and B5 dominated the conversation, which could have excluded other members of the group.

3.1.4. Green Team

In my opinion the Green Team was the most democratic but also had the most pre-existing friction as evidenced with G2 who felt “stressed” because *“I don’t like my team (apart from G1) because of the thing that they have done to me in the past but I also don’t like how I am presshard to talk”*. During lessons 2 and 3 I observed students G1 and G2 using notepads and paper to try and implement a voting system which actually resulted in a lack of communication within the group. Students G1 and G2 appeared to nominate themselves leaders which resulted in long periods of silence instead of group discussion. My observations were that G1 and G2 were close friends, as were G5 and G6, but these two sub-groups did not appear to be friendly to one another. Being democratic seemed to be as close as they could come to actually having discussions. In lesson 3 G5 responded that they felt ‘happy’, ‘sad’ and ‘unloved’ and commented *“ok look so I just don’t feel comfortable on this table. The only people I like is G3 an G6 but I find everyone else G1 + G2 quite controlling”*. I suspect that G3 was at the peril of the group dynamics trying to survive the storm. During lesson 2 she said she felt, ‘happy’, ‘calm’ and ‘angry’ because *“I don’t know why I feel this way about my team, some people annoy me but others happy”*

The Discussion Map below clearly shows a strong connection between students G1 and G2 but even more discussion between G2 and G5 in lesson 3, which might suggest that a heated conversation was taking place or an argument about how best to organise the group. G2 commented *“I don’t want to talk to most of my team because they are mean and ignoring me (apart from G1). G5 and G6 are not participating in the group descutions so they are making me anxious greatly”*. G3 and G6 never spoke and G1 only spoke once to both G3 and G6.

Team	green team
Date	25/04/24
Topic	mythical beast

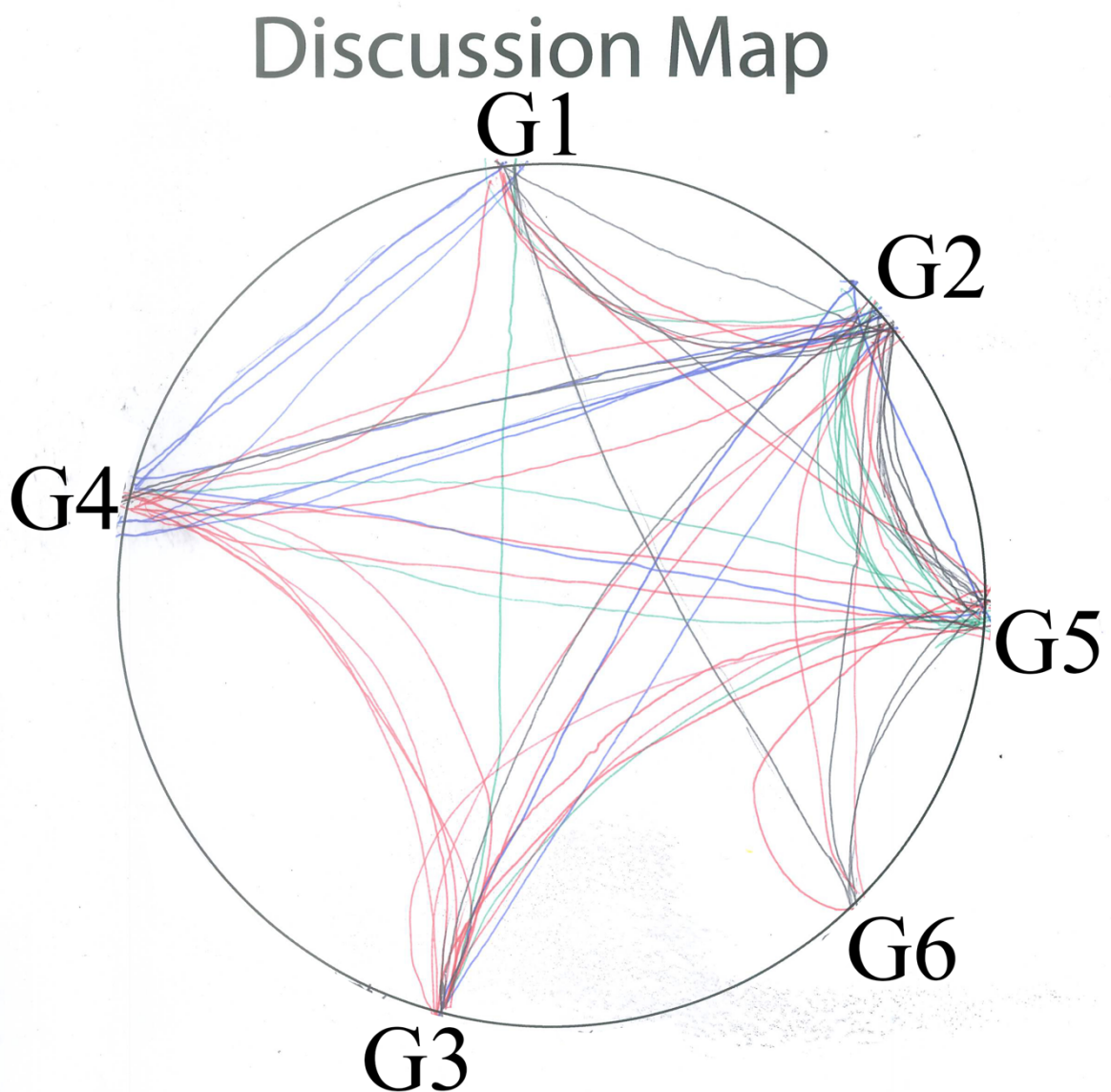


Figure 15. Green Team's Discussion Map (AP6.8.2.)

I think it is safe to say that the Green Team felt highly compressed. The group avoided uncomfortable feelings by using paper voting systems and worked in silence during lessons 2 and 3 – where group work was required. As Topping (2017) suggests, there was opportunity for affective development available to them, however the group divided into three sub-groups: G1 with G2, G3 with G4, and G5 with G6. The students' Individual Feedback Forms add credence to this. Given the choice of who to give feedback to, they each chose their sub-group partner.

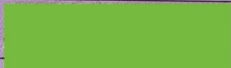
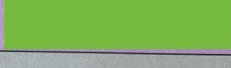
Peer Feedback Form	
Feedback for:	 G2
Feedback from:	 G1
WWW:	<i>enjoyed</i>
Why?	<i>good</i>
EBI:	<i>EB / you were here today x</i>
Because	<i>you missed out</i>

Figure 16. Individual Peer Feedback Form from G1 to G2

Peer Feedback Form		
Feedback for:	[REDACTED]	G3
Feedback from:	[REDACTED]	G4
WWW:	It looks so smooth on	
Why?	It is a solid shape.	
EBI:	there was more texture	
Because	it looks a bit basic	

Figure 17. Individual Peer Feedback Form from G4 to G3

Peer Feedback Form		
Feedback for:	[REDACTED]	G4
Feedback from:	[REDACTED]	G3
WWW:	relief	
Why?	It looks good and 3D	
EBI:	had more pattern	
Because	barely had any	

Figure 18. Individual Peer Feedback Form from G3 to G4

Peer Feedback Form		
Feedback for:	[Redacted]	G5
Feedback from:	[Redacted]	G6
WWW:	Very good relief and smooth background.	
Why?	Use of tools and creativity.	
EBI:	A bit more detail.	
Because	so then it looks more pops out with the relief.	

Figure 19. Individual Peer Feedback Form from G6 to G5

Peer Feedback Form		
Feedback for:	[Redacted]	G6
Feedback from:	[Redacted]	G5
WWW:	very detailed and good	
Why?	It was really detailed and shaped	
EBI:	Round the edges more	
Because	it makes it not look pro	

Figure 20. Individual Peer Feedback Form from G5 to G6

In lesson 2, G5 completed the sentence *“I think that teamwork involves... working together to create new things know one would think of and getting along”*. This is a mature response from G5 in which she recognises that a group of people can create a force and develop ideas that one person would not be able to come up with on their own. This corroborates with the beginnings of the Assembly Bonus Effect which posits that a group is more effective than its best member. The group did not develop this effect however, because although they did take turns in voting and made sure everyone participated, it was done through the shield of paper and silence. I suspect this was because speaking to each other was too uncomfortable for them to bear.

Student G4 responded with feelings of ‘angry’ and then ‘silly’ to the question “Working in my team made me feel...” in lesson 2 because *“I wanted everyone to go with my ideas and then we had fun”*, which suggests that the group did not go with her ideas. In the same lesson, G5 noted *“some people kinda took over and it made me feel left out a bit (thanks for putting me next to G6 :)”*, reinforcing the idea that G1 and G2 were attempting to lead the group and that G5 and G6 were friends. In lessons 4, 5 and 6 we saw a major increase the group’s overall positivity as shown in the scatter plot below.

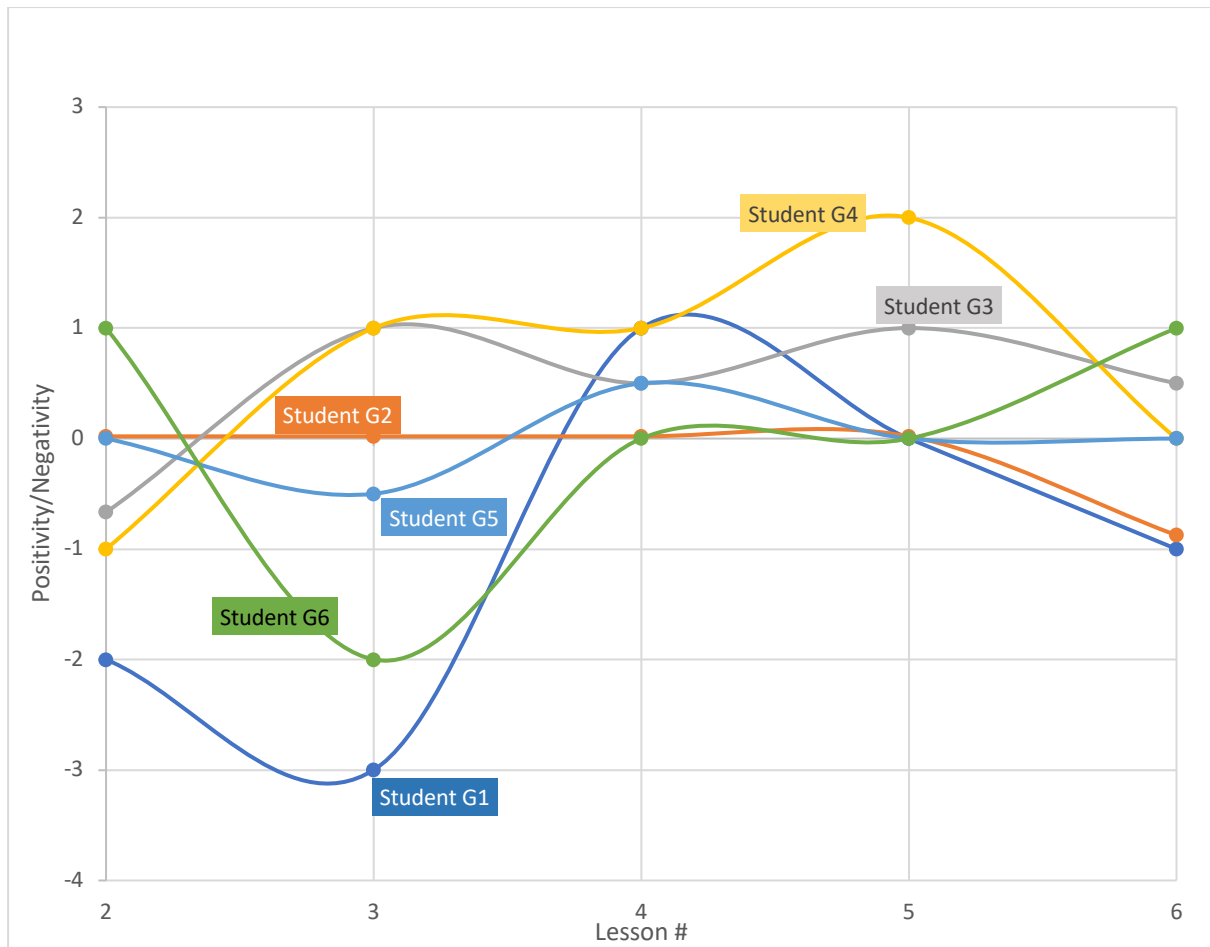


Figure 21. Chart 8. Feelings Scatter Plot from the Green Team over 5-weeks.

Rather than suggesting that the group is beginning to get along, I believe that this data actually illustrates that the individuals are happier when working in isolation or with their sub-group partner. During these lessons the students were working in clay on their own individual tiles under direct instructions with more structure. A lack of pressure to communicate with one another, question each other and justify their opinions which resulted in a lighter mood in the group and corroborates with what Newman (2020) believes which is that working independently feels safer. The lack of communication and additional independence in lessons 4, 5 and 6 may have led to the misalignments of the beast's body parts across adjacent tiles. This can be clearly seen in the images below.



Figure 22. Green Team's Mythical Beast 01 with clay work in progress (AP6.8.14.)



Figure 23. Green Team's Mythical Beast 02 with clay work in progress (AP6.8.14)

3.1.5. Purple Team

My general observations within the classroom saw the Purple Team as a very happy team. They were always up and out of their seats, gathered next to each other drawing, making up stories and laughing. Their general positivity was also the highest amongst the class, starting with an average mood of 0.917 and reaching 1.222 in lesson 6 as can be seen in the scatter plot below.

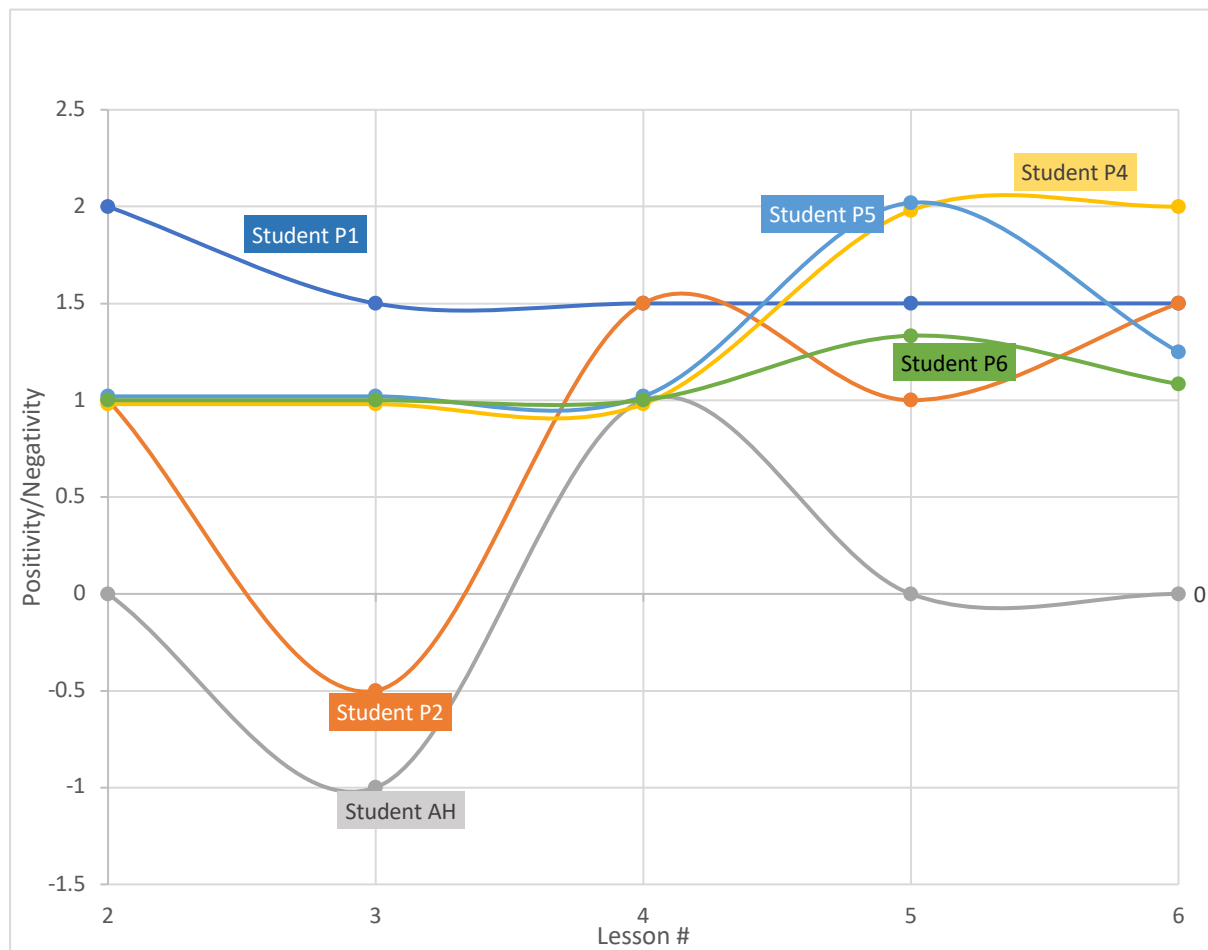


Figure 24. Chart 10. Feelings Scatter Plot from the Purple Team over 5-weeks.

The Purple Team appeared to avoid Mercer's (2013) 'groupthink' by embracing the structure provided. The team seemed to demonstrate Explorative Talk as part of their process in which all the students contributed, talked aloud, listened to each other, questioned each other and gave reasons for their opinions. Evidence of this can be seen in the progression of P5's exit tickets where in lesson 2 she stated, "*my group is really nice and they accept my reasonings and opinions*". This is reinforced in lesson 3 where she says, "*they accept me and take my opinions in*". In lesson 5, P5

continues and states *“they accept me for who I am”*. This leads me to believe that most, if not all of the students in this group felt a sense of safety. This corroborates with how the group functioned as a whole, linking and building from each other’s ideas – co-constructing which is demonstrating Mercer’s (2013) ‘interthink’. Student P4 supports this by exclaiming that *“we all got along and listened to each other”*.

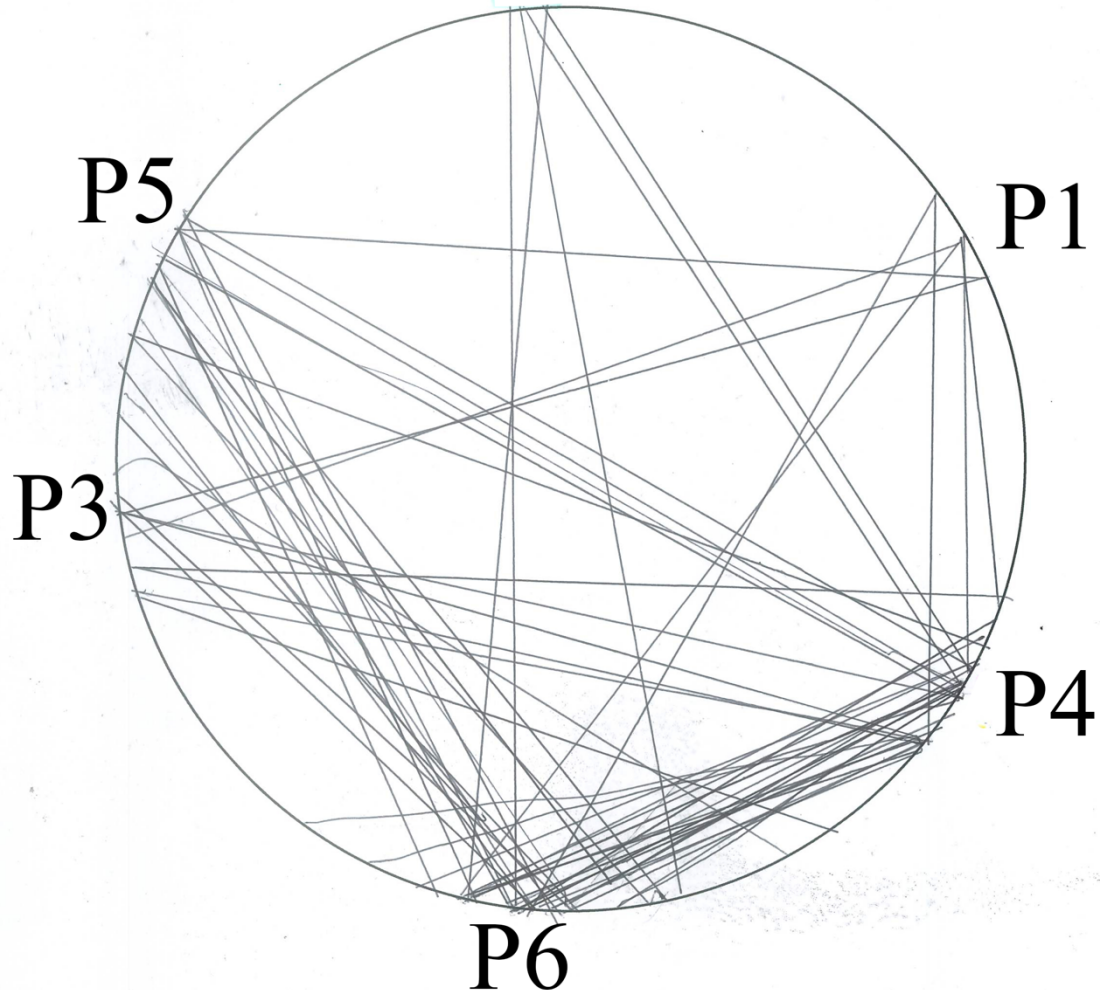
Student P2 consistently showed a mature understanding of what teamwork involves responding with *“listening and contributing to ideas and helping understand what people are thinking/their ideas”* in lesson 2, and *“listening to everyone’s ideas to help create a good environment and better work”* in lesson 6. She stated that *“sometimes your ideas don’t get listened to but at least other people get a chance to talk”*. For me, P2 exhibits traits of having a high EQ which I cannot evidence but heavily suspect through my observations and her responses on the exit tickets.

Although the Purple Team were generally happy and collaborated well together Student P3 said she felt ‘lonely’ during lesson 3 where she exclaimed that *“I didn’t talk that much”*. This was when students were asked to use the Discussion Maps to refine their Mythical Beasts before their show and tell later on in the lesson. This is not reflected in the Discussion Map itself (below), but this could be due to inaccuracies in the recording of the data, especially considering their level of excitement and hysteria.

3/2

Team	Purple
Date	25.4.24
Topic	everything x Mythical Beast Design

Discussion Map



Printed by tkent at 25-Apr-2024 07:30:56

Figure 25. Purple Team’s Discussion Map (AP6.8.2.)

3.1.6. Peer Feedback and Self-Assessment

At the beginning of lesson 6, students were given a tick sheet to locate the areas that they needed to improve upon to meet their ROA's. This was informed by Black et al (2004) who suggested that allowing students to see briefs as a list of tasks that needs to be completed helps them to achieve them more quickly. I then allowed students time to refine their work until the end of the lesson where I asked them all to complete Individual Feedback Forms. This was informed by Boon (2018) who suggested that students who are more actively involved in giving and receiving peer feedback are more likely to understand what is required of them.

I had the students create a list of Ground Rules for Teamwork (AP6.7.3.) to remind them prior to any group discussion or feedback the rules that they chose to function under. It was important the feedback was given in the correct way, where people would not offend one another, or offer thoughtless feedback as suggested by Boon (2018). I led a whole-class discussion where I emphasised the importance of giving honest feedback and reasons to back up their claims, and not to offer meaningless praise (Newman 2020).

The students' responses are shown in Table 11 below.

For	From	WWW	Why?	EBI	Because
Student G4	Student G3	Relief	It looks good and 3D	Had more pattern	Barely had any
Student B3	Student B4	Good relief	Looks like what it's meant to	Pattern	Not many
Student R2	Student R1	The texture	I like the bubbles	More layering	It is all one layer
Student P1	Student P3	Texture and smoothing	It looked very realistic	Carving	I couldn't see them
Student R1	Student R2	The shoes	Because they look realistic	Do the skale more skaley	There no relief
Student Y2	Student Y6	The relief 😊	It was good and made it more realistic	You use the tools	It would look even better 😊

				for more patterns	
Student B5	Student B6	Carving and relief	Because it was built up well and looking good	Clean up the edges of her work	It looks good and would make it look neater
Student P3	Student P1	Texture	The dots are really good	Relief	As its not built up enough
Student B6	Student B5	Good relife	Because it look very good	Caving	Because it would make it look good
Student R4	Student R6	Good relief	Clean cuts, smooth	Make detail clearer	I can't see the dying children properly.
Student R5	Student R3	Good imagination, with with the textures, and great textures the shape is really good	Because the texture that you put on the tile looks really well designed	The lines around the edge were a bit sharper as in more defined	I think it would help difference the different part abit better
Student R6	Student R4	She used good relief	Made clean cuts and neat build up	Add mor detail	Because add more detail too the background
Student Y5	Student Y2	Relief	Built up borders	Carving	She has layers but not carving
Student Y6	Student Y5	Her techniche style	Its detailed	Texture	It could be better
Student G3	Student G4	It looks so smooth	It is a solid shape	There was more texture	It looks a bit basic
Student B1	Student B2	Lightening bolts and skirt thing	Because it looks 3D	Nothing it was really good	It was really good
Student G5	Student G6	Very good relief and smooth background	Use of tools and creativity	A bit more detail	So then it pops out with the relief
Student G2	Student G1	Engraving	Good	You were here today	You missed out
Student P2	Student P4	Amazing relief and texture	Because it looked very 3D	Blend relief	To make it match

Student G6	Student G5	Very detailed and good	It was really detailed and shaped	Round the edges more	It makes it look more pro
Student B2	Student P2	The relief and use of patterns	Because it was clear on how much detail she put in	Slip and score	She forgot
Student P4	Student B1	The sensors	The texture is good	The clouds	They would be good 3D
Student R3	Student R5	The dress	It looks neat	More stuff to it	Its only a dress

Figure 26. Table 11 (AP6.5.11.) informed by students' responses from (AP6.3.5.)

Other supporting documentation designed to give further depth of understanding to my students included a scoring rubric with success criteria for group-peer-assessment and group-self-assessment. Unfortunately, I have not been able to use these yet so I cannot include the data in this report.

3.1.7. Students' Work



Figure 27. Red Team's Mythical Beast 01 with clay work in progress



Kiln

Figure 28. Red Team's Mythical Beast 02 with clay work in progress



Figure 29. Yellow Team's Mythical Beast 01 with clay work in progress



In Kiln

Figure 30. Yellow Team's Mythical Beast 02 with clay work in progress

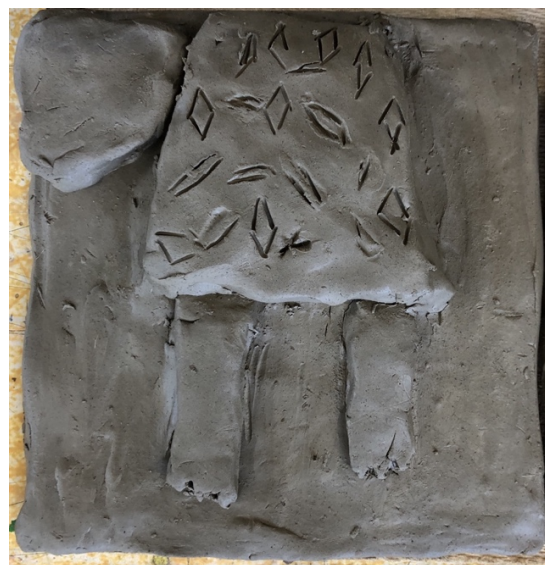


Figure 31. Blue Team's Mythical Beast 01 with clay work in progress



Figure 32. Blue Team's Mythical Beast 02 with clay work in progress



Figure 33. Green Team's Mythical Beast 01 with clay work in progress



Figure 34. Green Team's Mythical Beast 02 with clay work in progress



Kiln



Figure 35. Purple Team's Mythical Beast 01 with clay work in progress



Kiln



Figure 36. Purple Team's Mythical Beast 02 with clay work in progress

3.2. Corroboration of Literature

Student B1 stated *"I liked that we had a list of things we needed to do"* and G6 in that same lesson echoed the sentiment with *"my clay piece started to come together and I could tick off lots of things from my sheet. Also had a lot of fun sculpting with G5"*.

Students exhibit positivity towards tick list sheets and structure. Of course, this is only a few student responses, but it does confirm my suspicion, that for some of the students having a firm structure to work with, understandably, feels safer. However, this has left me wondering if this is because of the competitive environment that they are functioning in. This substantiates the views of Black et al (2004) and Boon (2018). All groups and most students showed an increase in positive feelings towards their group in lessons 3, 4 and 5 where very little group work was asked of them. They were working together but in isolation of each other, independently working on their tiles. This would indicate that Newman (2020) is correct in emphasising students' discomfort when placed in pressured environments that require collaboration.

3.3. Anomalies and Points of Interest

A personal point of interest did occur where I noticed over the entire second and third term at both school placements that students in less fortunate circumstances, with either SEND, LA and YC's seem to be more accommodating and conscientious than their peers. Student R2 fits into this category being a SEND student who I felt to be more caring for her group and the student who is a selective mute. Student G5 also fits this hypothesis being a PP, FSM and YC student. Yet she showed herself to be open in the exit tickets, showed appreciation for her friend and empathic towards her team member's needs. Student P2 showed equally empathic qualities but does not fit my hypothesis. I do have more reasons and examples of this from my previous school that I am not going to address in this report. The Green Team were a specific point of interest to me because of the clear and ongoing group dynamics that were taking place, sub-grouping and the 'anti-group' mentality (Foulkes, 1964). The Green Team was the only team to start off negative and end with an average negative score. The Purple Team was at the other end of the spectrum where they possibly entered hysteria at times where their level of enjoyment was disruptive to their productivity. I noticed during inputting my data that there were duplications of responses at times. These duplications happened in the same groups with students

sitting next to each other, which suggests that some students copied one another. At no point did I receive an exit ticket stating that the student did not know what teamwork involved. This is interesting because within the New School in which I was placed they do not work in teams often. Physical Education (PE) is the exception to this.

4. Conclusion

4.1. Conclusion of the investigation

I conclude that collaborative art and design projects, in secondary education, can promote affective development and effective peer feedback. Some of the students showed a more mature affect from the first lesson, whilst others developed it as the project went on. Student Y5 is a good example of the latter. To me this indicates that these kinds of projects can help students collaborate, empathise and help others. What is not clear from this investigation is whether this is because empathising is contagious because of the effect mirror-neurons can have on people, because of my teaching, or simply because of the situation I placed the students in where collaboration was a focus for success. With the right tools and instructions, over a period of time, a new classroom culture can emerge that allows students to give and receive effective feedback without taking offense. Having coherent rules for talking can enforce this culture. I do not believe that I successfully created this culture, however given more time I feel I could have accomplished a feeling of safety for most of the students. I do not have robust *enough* evidence to support the claim that my students gave and received effective peer feedback, however I do know that after lesson 6, when they gave and received their Individual Peer Feedback to one another, that students asked for a lunchtime lesson to work on their tiles as a result of the feedback from their peers. This suggests that the feedback was effective however I do not have images of the tiles before the feedback was given to support my claim.

4.2. Limitations of the Project

There were many limitations to this investigation. A lack of time due to the upheaval of switching schools midway through the second term, I had no LSM for half the academic year, and I had to change the year group, media and subject matter of my original proposal. My final placement did not give me a choice in the year group I

worked with, or the media that we worked in because, understandably, the students' ROA's had to be comparatively fair for summative assessment later on in the year. Having a year 7 group of females between the ages of 11 and 12, working in clay, was not what I had in mind for this project, however I tried to keep positive, especially as Mercer (2013) has proved that this age range of children can be taught to reflect on their thinking, challenge each other, problem-solve and learn to work together in a healthy way. Another unexpected hurdle arose one week prior to May half term, when an art teacher unexpectedly announced a swift change in employment, which forced the school to decrease the instances that art was taught to year 7 groups - from once a week to once every two weeks - decreasing the instances that I would have access to them. Additionally, the interview process for a new teacher had the school offer my case study group to an interviewee candidate, to teach as part of the interview process. This left me feeling rather dreary as the lesson was a crucial one that would have saw me tie up loose ends using group peer and self-assessment forms with the rubrics I had created. These data collection tools were vital to this investigation; however, I will go on to use them in the coming weeks. This assessment session would have completed my investigation nicely. Unfortunately, I have submitted an unfinished project. An ongoing project. The limitations I expected included absences and group dynamics that disrupted teaching but instead these would have been minor in comparison. Regardless of how organised I was I still found myself at the peril of several circumstances that were completely out of my control.

4.3. Insights and Hindsight

Students were certainly more negative at the beginning of the data collection period when they were seated away from friends and placed in groups and forced to work in teams. This was expected.

Students thought they knew what teamwork involved from the start of the project, however the qualitative data did change over time, with evidence that showed that their understanding did develop. Why did this happen? Is there something innate within us that makes us think we know what collaboration requires, even though we may not? Many students felt that collaboration involved agreeing with each other.

The data does suggest that students felt more positive when they were working in isolation, making their own clay tiles separately to others. Is this because teamwork is confronting and uncomfortable? Newman (2020) would agree that this is a key indicator that students are entering into an area for growth, leading to affective development.

Unfortunately, because of the circumstances, I do not feel my data spans a long enough period. Of course, I would have preferred to conduct the investigation over the original 10-week period and gathered more data, but I do think the project has revealed that collaborative art and design projects do have a place in putting students in positions they would not usually find themselves in, forcing them into a reflective position - indeed promoting affective development and effective feedback.

4.4. Implications for Future Practice

Although this investigation was very time consuming and tough to apply and capture data for, I will certainly apply these elements into my classroom practice as my standard practice. I have learnt that even in short periods of time, students can absolutely become more aware of how they function within groups, even at this young age they were reflective on how they talk to one another and reflect on their input and output. I have enjoyed this investigation and will continue to dive forwards to explore this very path in more depth in my future education and practice.

For me, this investigation has raised a number of questions around EQ and schools' lack of interest in it. My personal observations have led me to wonder about how some less fortunate students branded SEND, PP, FSM, YC or labelled in other ways appeared to me to be more sensitive, responsible, empathic and conscientious than some of their more 'fortunate' peers. This has certainly piqued my interest and I would like to explore this further. In fact, I shall endeavour to make this topic a focus of the next stage of my education.

5. References

- Barwick, N., & Weegmann, M. (2017). *Group Therapy: A group-analytic approach*. Routledge.
- Black, P., Harrison, C., Lee, C., Marshall, B., & William, D. (2004). Working Inside the Black Box: Assessment for Learning in the Classroom. *Phi Delta Kappan*, 86(1), 8–21. <https://doi.org/10.1177/003172170408600105>
- Boon, S. (2018). *Using peer assessment as an effective learning strategy in the classroom*. My College. https://my.chartered.college/impact_article/using-peer-assessment-as-an-effective-learning-strategy-in-the-classroom/
- Champagne, M. V. (2014). *The Survey Playbook*. Matthew V. Champagne.
- Edutopia (2012, December 5). *Collaborative Learning Builds Deeper Understanding*. www.youtube.com; George Lucas Educational Foundation. https://www.youtube.com/watch?v=rWEwv_qobpU&list=PLO6P9Qs-Lm6q3fqMeREiD9_dKdaPG7_2s&index=7
- Foulkes, S. H., & Anthony, E. J. (1967). *Group Psychotherapy: The Psychoanalytic Approach* (pp. 11–76). A Pelican Original. (Original work published 1957)
- Gast, G. (2008, July 19). *Effective questioning and talk in art and design* | NSEAD. www.nsead.org. <https://www.nsead.org/resources/curriculum/the-art-of-challenge/art-and-design-effective-questioning-and-talk-in/>
- Mercer, N. (2013). The Social Brain, Language, and Goal-Directed Collective Thinking: A Social Conception of Cognition and Its Implications for Understanding How We Think, Teach, and Learn. *Educational Psychologist*, 48(3), 148–168. <https://doi.org/10.1080/00461520.2013.804394>
- Mercer, N., & Dawes, L. (2013). The Value of Exploratory Talk. In N. Mercer & S. Hodgkinson (Eds.), *Exploring talk in schools : Inspired by the work of Douglas Barnes* (pp. 1-18). SAGE Publications Ltd. <https://doi.org/10.4135/9781446279526> (Original work published 2008)
- Mercier, H., & Sperber, D. (2011). Why do humans reason? Arguments for an argumentative theory. *Behavioral and Brain Sciences*, 34(2), 57–74. <https://doi.org/10.1017/s0140525x10000968>
- Newman, T. (2020). Collaboration is Uncomfortable. *International Journal of Art & Design Education*, 39(4), 788–794. <https://doi.org/10.1111/jade.12323>

- Soep, E. (2005). Critique: Where Art Meets Assessment. *Phi Delta Kappan*, 87(1), 38–63. <https://doi.org/10.1177/003172170508700109>
- Thinking Together. (2024). *Thinking Together Project*.
Thinkingtogether.educ.cam.ac.uk; Faculty of Education, University of
Cambridge. <https://thinkingtogether.educ.cam.ac.uk/resources>
- Topping, K. (2017). Peer Assessment : Learning by Judging and Discussing the
Work of Other Learners. *Interdisciplinary Education and Psychology*, 1(1).
<https://doi.org/10.31532/interdiscipeducpsychol.1.1.00>