Teacher D interview

**Researcher:** So this is the question, you asking it here, was it intentional?

**Teacher:** It was intentional because animal cell division and plant cell division

are different right, and during… what is this phase, when the centrioles

start to form spindle fibres. In animal cells, we have centrioles that

form the spindle fibres but in plant cells, we don’t have them. This was

to distinguish that there is a difference between cell division in animal

cells and that of a plant cell.

**Researcher:** Also, maybe to see if they still have a clear recollection…

**Teacher:** Yes, of which cell contains the centrosome?

**Researcher:** Ohh, So this question, I feel like this is repetition, like, you said this

before and then you asked the question now.

**Teacher:** I feel like it must be emphasized, the question was based on the

disappearing of the nucleus. I feel like when things happen they must

relate it to the why. It is sort of like relating function to structure

**Researcher:** Okay, then it will be easier for them to recall that the nucleus can’t be

here…

**Teacher:** Yes, the disappearing…

**Researcher:** Why did you ask this question?

**Teacher:** I don’t know. It wasn't actually in my notes. I think it was just for

interest sake to say what another child is thinking since I thought about

it on the spot, if someone also thought about it, where is the

mitochondrion? While this is dividing.

**Researcher:** On the following day…

**Teacher:** They did answer, they said they are there in the cell, but then they

break up, so I corrected them and said they become fragmented so that

when the cell divides one fragment goes to that and the other goes to

another cell.

**Researcher:** So there is a learner who responded here, so it’s this one. You just

revoiced what the learner said but you didn’t…

**Teacher:** Like correct them… on the spot

**Researcher:** Yea.

**Teacher:** I don’t know, I think I wanted them to find the answer for themselves.

**Researcher:** I don’t know whether you were trying to see if they were paying

listening or if they were paying attention when you asked the

question. Because you responded

**Teacher:** About the separation?

**Researcher:** Yea, then you responded

**Teacher:** At first

**Researcher:** You are the one who responded to the question, you said…

**Teacher:** Yes, I think I told them first that in this phase this is what happens, so I

was checking if they still remember and maybe they will be able to

tell me in a test or question to say the cell is dividing at this point.

**Researcher:** But with most questions, although a question you ask expecting an

answer is quite clear and there is a question that you would ask

because you want them to think or channel them to a specific

direction, and then you give them the answer while they are still

confused.

**Teacher:** Because that is what I did, right, I asked, I answered and then I asked

again, and they didn’t answer until I responded.

**Researcher:** Yea, I wanted to comment on that, to say with most questions, I felt

like, I don’t know whether you were trying to remedy the situation

because it seemed like they were intimidated by my presence. So when

ask them a question, you gave responses without waiting for them, was

that so that the lesson could continue?

**Teacher:** No, I think, actually it is a lot when you standing in front of the class

like you see a lot of things, they were losing concentration.

Especially, this was the last lesson, and it was before break so around

that time it is quite a common occurrence for them to not fully

participate.

**Researcher:** They easily lose concentration. Now the learners struggle with this

one, even in Grade 12, although in

Grade 12 it’s meiosis you start to wonder if they know the difference

between the cell and the chromosomes. And I always wonder because,

with mitosis definition, it says the parent cell divides to form 2

identical daughter cells. So when you were asking this question, most

of the learners were saying 6, and were saying 6 or 3, although I did

not hear the 3 part, did get it from them?

**Teacher:** They said it,

**Researcher:** But you have to emphasize that one?

**Teacher:** I wanted them to understand what identical means because the

definition does state that the daughter cells are identical to the parent

cell. And I wanted to through the multiplication where DNA replicates,

to say, since we duplicate this thing then we divide it into 2 then it will

remain the same number.

**Researcher:** Ohh, so that they get the idea, just by looking at the cells…

**Teacher:** Yes, if it’s 8 then that means also there will be 8 in the daughter cells.

Cause usually they ask the question, how many chromosomes will

daughter cells have?

**Researcher:** And that is the obvious determining factor if the learner can’t tell the

number of chromosomes, it means the learner doesn’t understand

mitosis.

**Teacher:** Doesn’t understand mitosis. Yes.

**Researcher:** But then, do you feel like, there is a learner who said 3 when you asked

that question, and said it is because of the division.

**Teacher:** But then I did explain, I said because we multiply first on DNA

replication that is where we get 2 strands. They start off as single and

then they duplicate through DNA replication. And then start dividing

by mitosis.

**Researcher:** But you asked that question after asking the… because you said

because of the division and the learner said yes, and then you asked

what happens to replication? Can’t remember well. Ohh identical.

**Teacher:** They know that division does take place…

**Researcher:** Yea, but I think or I feel like the identical part of it was not fully

understood by everyone at that point, what exactly is meant by

identical, you say it means the same but those two cells that are formed

what structures are identical specifically.

**Teacher:** Mhmm.

**Researcher:** Because if a learner says 3, they can say it's 3 in both cells. Because

you said the daughter cells are the same. And then the parent cell

seems a bit further now, although it is expected to be the same. So if

you say 3, 3 it means they are no longer the same as the parent cell.

**Teacher:** Mhmm. It makes sense, but I wanted to channel them and make them

understand that the chromosomes duplicate and then they divide. To

fully agree that division does take place. So I wanted them to

remember that the definition indicates that the daughter cells are

identical to the parent cell.

**Researcher:** So you feel like they can actually be able to explain to some who

doesn't do Life Sciences.

**Teacher:** Not at this point, but ultimately, yes.

**Researcher:** This is the one that links with the function of a vacuole

**Teacher:** Yes, the function of a vacuole, since we talking about vesicles

specifically, vesicles are types of vacuoles. And vacuoles are used for

storage most of the time and those vesicles are the ones that form the

plates between the two daughter cells which assists in …

**Researcher:** Forming the cell wall.

**Teacher:** Forming the cell wall… but what I wanted to say is, it goes back to our

organic compounds, carbohydrates. Plants store carbohydrates in their

vacuoles, right? And these carbohydrates that form the cell wall are

cellulose.

**Researcher:** So now, you are linking the very first topic, the carbohydrates, the

cells, and now the mitosis. But the phrasing of the question, do you

think…

**Teacher:** It was wrong.

**Researcher:** No, not necessarily wrong it was wrong but do you think you might

have phrased it differently? If yes, then how else would you have

phrased it? Do you think the way you phrased it, was understandable to

them, to exactly what is it that you were asking.

**Teacher:** What did I ask again?

**Researcher:** What forms the cell wall?

**Teacher:** Yees, what forms it, because of the functions of the components…

What is the function of a vacuole?

**Researcher:** You started by talking about the cell wall and then you went on to a

vacuole.

**Teacher:** And then the vacuole. I didn’t put it together?

**Researcher:** I think it was separated.

**Teacher:** Yea I asked it separately without linking.

**Researcher:** So this was supposed to give them an idea?

**Teacher:** Yes, it was supposed to put it together, but yea…

**Researcher:** So the questions you asked were the same in all the classes you

teach?

**Teacher:** Yes, basically, but 10B is smarter, not smarter but they, study. Because

I gave them notes first and that’s what I like they go home and study.

When we discuss in class and I explain everything just falls into place.

**Researcher:** Yea, ooh. So when you were asking these questions to them, the

the response you received from them, like uhm, the first question was

on the number of cells right?

**Teacher:** Even for them the number of chromosomes was confusing because I

used 8 chromosomes as an example for them. Others were saying 2

others saying 4 and others saying 16. And I was like how? And so I

explained DNA replication again then the division again.

**Researcher:** Okay, alright.