

Transcription of PRA activities and focus group

Session 1

Researcher 2: I think to begin- Can I begin? Um, in two sentences, what are we doing. The focus is really going to be on what you think from your experience is best practices for teaching mathematics um or literacy to learners with visual impairment. I think that's come from us seeing that there's literature that, you know, talks about different strategies, but we want to know, specifically in South Africa, in your school, in your context, what is really working well, and best for you. So, I think everything we talked about will sort of come back to that, that focal point. Um, but we thought maybe just to start off with a general question around maybe, what are the challenges that learners with visual impairment face when learning either mathematics or literacy, um that's linked to the classroom?

Participant 3: There's a lot.

(general laughter)

Researcher 1: We, we hope for that.

(general laughter)

Participant 3: But now we have to think of everything because we are so used to adjusting everything that we have to think what was the problem before we adjusted.

Participant 1: But remember now. We are all braille teachers. She has, I has experience of partially sighted learners, but it's very old. [laughs] I was there 20 years ago, and she was there for-

Participant 2: For braille or partially sighted?

Participant 1: (no, no) partially sighted.

Participant 2: two, three years.

Participant 1: Our knowledge is more braille than partially sighted.

Researcher 2: Ok, no that's great.

Participant 1: So, keep that in mind. Ok.

Researcher 1: Because that was one of the things, sorry for to interrupt you, that we wanted to ask you when you, when we get to the more. When you get to the questions in terms of the

data that they want to collect from you today. We wanted to know. The suggestion would be to indicate to us, whatever you tell us is this more related to partially sighted learners or to learners who would use braille. So if you tell us today “braille” then that's fine. We need to indicate it in such a way because we just said visual impairment, and that we realize that's very general.

Participant 3: Ja.

Participant 1: because I think in partially sighted, it is much easier. Braille is a real challenge.

Participant 2: (in overlap) I think, speaking for both Braille and partially sighted. Um, the partially sighted, grade one learners, now specifically where they come in, and they start the basics, right. They can immediately start learning how to read numbers and the letters and the normal alphabet, that they learn in Grade one. Whereas the braille learners that come in. So we've had the school we've separated our visually impaired, partially sighted learners and our braille learners. This is because the grade one braille learners run, it's almost like a separate curriculum to teach where they learn braille first, because this is the way they read and write, right. So they have to learn the braille first, before we start doing anything, because they need to know what the braille is, and what the letter looks like and what the number looks like. So, it almost runs concurrently with the CAPS curriculum for the braille children especially. So they are (pause) probably a term behind or. Ja behind.

Participant 1 and 3: Ja

Participant 2: Probably a term behind, where our partially sighted grade one kids, they start immediately, they go in and they learn, you know, they go for it. When we take the Grade ones in the braille section take a little bit longer to catch up with the curriculum. Um, so that's probably the biggest challenge we currently have with it, because they do tend to fall behind. However, at the same time, we still have to keep up with the requirements from the department to make sure that the curriculum coverage is what it's supposed to be at the end of each term. So also, depending on the children in the class. Um. For instance, I start, they only start writing on the braille machine, end of term two beginning of term three. So the first two terms are usually it's a lot of um oral work, and it's more listening and speaking so that everything they do is practically. They don't read or write like that we have a reading program that we do start with them. But I think the biggest thing would be that the blind learners are a little bit behind the curriculum. So their time is less to get things done in that year from grade two and grade three, it almost levels out because now they know the braille. The only thing

that's added on with the braille. So the, the, the partially sighted kids go on as normal. The, the adjustments -

Participant 3: (in overlap) It's just the fonts

Participant 2: It's the fonts, bigger, the adjustments there. It's like a mainstream school but it's just the font is different. And they've got TVs that's about the only thing. The Braille kids then from Grade two and Grade three it levels out a bit. The only thing that's added on there is they start learning contractions.

Researcher 1: What is contractions?

Participant 2: So it's braille shortened. So instead, if you had to type out a book, and you had to do it in braille, if you didn't contract the words, you would have 7000 pages of a book.

Participant 3: Because there's only so many words that you can fit.

Participant 2: On a line, yes. And it also, the book is thick because the braille is raised, so it does thicken the book. So there are certain words and phrases and sounds that are contracted, so it's like shorthand almost.

(other participants agree)

Participant 1: Like abbreviations.

Researcher 1: Sorry, just say again. When do they do the contractions?

Participant 2: They start in Grade two

Participant 3: (in overlap) In Grade 2.

Participant 1: (in overlap) Because they must first learn the braille.

Researcher 1: Ja, I understand that.

Participant 1: (in overlap) I want to go a little bit back. If you see a look at our grade Rs. Now I talk about the blind learners. Remember, the parents doesn't know how to stimulate the braille children. They, so that is one of the things that keep them behind. And there are a lot of great blind children that come into Grade one, no stimulation, the language is not there, the fingers are not properly (hand gesture implied). And remember, in braille, you use both hands, so both hands must be strong and that is the starting point. That is why it's so difficult

for us in Grade one. But remember, we do the whole CAPS curriculum like it is they we finish and we wrote the ANAs. We wrote it.

Researcher 1: You should get a medal.

(general laughter)

Participant 1: But I think the other thing is, because remember, in sighted, you have a specific sequence that you learn the letters. In Braille, it's different, because the whole purpose of the braille is we must adapt for how the letter looks like in Braille. It doesn't look the same in sighted. So the whole sequence is different. And the, and remember, I don't know if you know, braille?

Researcher 2: No (laughs)

Participant 1: Remember, they take the whole alphabet again, from a to j, (it was j?)

Participant 3: Ja

Participant 1: And now they put something in front, we call it the letter's..uh, number sign. And then, A is now one and B is two. And those things makes it more difficult. That's why it takes long and there's one very important thing, if you did teach a braille learner: what is the most difficult one writing or reading? What is the most difficult?

Researcher 2: I would have guessed writing.

Researcher 1: I would say reading.

Participant 1: No, reading it is because this is how much we can see at a time. And in our school not one teacher is reading it with their fingers, we read it with our eyes. It's too difficult for us to read it with our hands (laughs).

Participant 2: (in overlap) Because we can see. Our sense aren't heightened like theirs are. So we read it with our eyes. Unless they have rubbed out, then we want to feel, and you're like "oh ok, that's what happened". (laughs) And then you try to figure out.

Participant 1: It's just to let you understand what is the difference.

Researcher 1: (in overlap) Ja, we want to understand.

Participant 1: And what is the difference. Why we are teaching things like that. What did I want to say about the reading? So, the main purpose is, start with the reading because you

must start with the reading not writing because writing is pudding, reading is the very, what you call it? “donkey werk” (laughs). It takes a lot of time for the children to realise what they feel is braille and how to read it. If you overcome that, you can keep on reading but that is.. so start with reading and then you go to writing. Although it looks different, very difficult, she will explain to you, I think she must explain to you what is the stages that we, and how do we teach, because we don’t have a blackboard. So how do what is our black board to teach the... I think she will take it out and then you will see what are the steps that you will take.

Researcher 1: I just want to quickly say, [Researcher 3] and [Researcher 1], I think maybe we should, in terms of where we say visual impairment, we should clarify that we are going to focus on, I want to say, the completely blind learners who use braille. And then we leave the partially sighted because that will also make it easier for today.

Participant 2: Partially sighted is really the only different there is that the fonts are bigger and they use a TV. There aren’t any adjustments.

Participant 3; (in overlap) Other, no.

Participant 1: (in overlap) No, nothing

Participant 3: resources, that we have to do for them.

Participant 2: (in overlap) Resources. It’s literally that the screen is bigger.

Participant 3: (in overlap) So they use the same graphs as the other schools

Participant 2: We just make sure that the font is clear, that the pictures are clear and that it’s not like too light or too dark for them to see.

Participant 3: But the braille adaption are-

Participant 2: (in overlap) the braille is the-

Participant 1: (in overlap) Ja, that’s the real issue. And it’s much more difficult to do it for maths. Maths is the real challenge. Language, yes. But maths is the. you will see most of the apparatus is maths and that is very interesting and a challenge.

Researcher 1: Wonderful

Researcher 2: On that, we were wondering if it would be easier to sort of discuss the numeracy and the literacy together in a parallel way, going through the questions, or would you prefer to sort of focus on mathematics and then go to literacy?

Participant 1: (I think so), ja.

Participant 3: Ja

Researcher 2: (in overlap) to do one and then the other?

Participant 1: Yes, but also in Grades, because every grade has-

Participant 3: Is a different thing.

Participant 1: (in overlap) Is a different thing. So that's why I say, let her start and then she shows you how the braille board looks like and bla bla bla.

Researcher 1: ok, so you are the Grade one teacher?

Participant 2: Yes, and I do the braille courses at school.

Researcher 1: Ja, ok. that's our vision, well my and the director's vision for next year. We are going to learn braille. So, I am very excited. And I am seeing all these wonderful braille stuff but we cannot read anything.

Participant 1: But she explains to you the "woody". Do you understand what is woody? She names it that. The you understand much more about braille.

Researcher 2: Could I just check something? Should we go to working with the posters now to note down or should we just carry on discussion-style and take pictures? What would be the best way to document this?

Researcher 1: Um, because we have to document this to make sure that we have everything. Um so you are going to now going to talk about literacy and?

Participant 2: I wa-, firstly if you are gonna be specifically talking about the braille kids. It would be how they first do braille before we can get to the literacy and the numeracy.

Researcher 1: ok, I think for that, we can just take notes. Because, let me just say again, our focus will today is on best practices in terms of your experience. We want to understand from you how you see best practices, what are challenges? But we will get to the questions. What do you see as challenges in terms of best practices. What resources is necessary? And then we want specifically... do you as a literacy teacher for example how do you see best practices for learners who requires assistance with braille, the blind learners. But if you want to just explain to us the process, I think that is background information that we do need. We will appreciate it. And then we can do the posters.

Participant 2: ok

Participant 1: You will guide us.

Researcher 1: We just want as much information as possible but we don't want you to sit here until eight o'clock tonight (laughs).

Participant 1: We can (laughs)

Participant 2: Oh, we can go on.

(General laughter)

Participant 1: Because it's our passion.

Researcher 1: So you will do the literacy now in terms of how the, the-

Participant 2: This is how they start off in Grade 1 before they start doing the literacy and numeracy. Like I said it runs concurrently. So now we will do the mathematics and numeracy orally. They still do the caps curriculum and this they do together with it because they need to learn.

Researcher 1: So this is background for now for mathematics and literacy.

Participant 2: (in overlap) This is background, yes.

Participant 1: Yes, you will see now as she carries on why we say that.

Participant 2: so we have, ok. I am not here to present I just want to talk.

Researcher 2: Can I take photos?

Participant 2: Yes, you are more than welcome!

Researcher 2: I am just recording on here so I was wondering if I could use one of your phones? (to other researchers).

Researcher 2: I will take of your hands?

Participant 2: My nails aren't done.

Researcher 2: As long as you are happy with that?

(inaudible)

Participant 2: Not at all. (laughs)

Participant 2: So, before they start to read and write, ok. They have to be introduced to the braille code as a whole. So this also includes mathematics right. They need to learn how to count, especially on this. So this is our braille cell. This is what the braille cell looks like.

Researcher 1: I am just going to sit here because I don't want to be in the picture.

Participant 2: (I didn't think I would present)

(inaudible)

Participant 2: (laughs) You can have this booklet.

Researcher 1: Thank you so much.

Participant 2: ok, so for the Braille cell what I do is I stick this onto their table with Prestick because it's easy. They like to play with things and it does move around. The whole idea was braille is that it's fixed. So even though if you have it like this and you turn it around, it's the same thing, right? But for them, it plays on their mind. Okay, so we stick it down. This is on their table like this. Now we have to learn how the braille cell works, ok. So when you, when we we start, they first pack it, normally we start packing in a pattern, they do this in grade R as well, they start with this in Grade R, It's just a basic right. So they would just normally we would go take the thing and take the hand we just place it normally into the holes just so they can get a feel for what it feels like and know where everything is. And then we start by counting. So the braille cell obviously consists of six dots. So then we teach them: there is dot one, and dot two, then three, then four, then five, and then six at the bottom. And now we start learning directionality, right, because now we need to know we have on this side, we've got one, two, three. On the other side, we've got four to six, ok, then what I do is they, I just familiarise or let them familiarize themselves, and then we start playing a game. So show me dot five show, we dot six show, one, show the one and two, you know, so we do a bit of a number thing you know going there. So and obviously trying to make it fun, because this does get tedious. So once they have this done, and they know where each dots is on the braille cell they now know what a braille cell looks like. From there on, we break it down smaller now. This is this is literally just the start. Oh, and then we this is homemade for parents who obviously can't afford, can't buy. So this is a normal egg box that looks like the braille cell. So I just paint mine for fun, when I give it to the parents, I hand these out to the parents so that when they come in Grade one, and they need to go home and practice with

their child, they can use this and they don't have to go and buy expensive braille equipment because it is expensive, unfortunately. So we have -

Participant 1: Just put it this way.

Participant 2: You're more than welcome to. (pause) We have a braillet board, a peg board we call them peg boards. So we've got a steel one and a wooden one. Now the wooden one is for the learners whose fine motor, the touch, hasn't been developed enough for them to feel the smaller holes here. So we have the big ones here. It's also the children who still struggle between fine and gross motor. So the pigs are bigger. The pegs are bigger for the wooden one, it's just easier to grab on to. But the idea stays the same. So now we've moved over from the braille cell here. And then over here, it also allows directionality, we go from left to right, top to bottom. And then this is where they just, you know, place it into one, two and three, four, five or six, and then they'll take a whole row and then they'll go to the next one. Just to familiarize themselves with it. This one is obviously it's got a bit more braille cells in a row. So um, and the pegs are a lot smaller. So these are little steel pegs that they are, ja, they're very tiny. So this obviously now requires me to teach lefts rights. So they have to hold it like this. And then it's the same concept as on the steel agh, as on the wooden one, where they insert it like this. Ok, so this is this is our initial where we stopped. Ok, from here on, we start learning the alphabet.

Researcher 1: So do you actually, sorry, start first with a bit of numeracy background -

Participant 2: We don't, we don't call it that.

Researcher 1: (in overlap) Ja, I know but I mean - that is the basics.

Participant 2: We don't call it that. It just covers our basics. That is the basics. That is what it comes down to. So then from here on, what we do is now we start learning the alphabet. We start with the alphabet first before we do numbers because the numbers are difficult. Well it becomes difficult when you have the added number sign in. So we started with the basics. And in Grade one, we switched up the alphabet because our, the braille alphabet runs concurrently with the books they start reading so you can't give them a letter that I haven't done yet. Or that they don't know. You can't let them read it before they've practiced it. So from here on if we had to start with say the "a" for Apple, we call it the children alphabet, we don't say ABCDE so we call it the "a" for Apple. What I would do with them is it's a very it's a one-on-one thing, you cannot have your ten children in class and go: the "a" for apple is a

dot one and go ok, there you go, show me. So while you're busy with them, you give them strings to to, you know, to string or they build puzzles, or they busy with clay anything to strengthen the hands while you're physically busy with the child in front of you. So then from here on, what we do is, if we have to start with the A or the "a" I would tell them firstly, because for apple, they say "a" for apple, then we say "a" for apple is a dot one, then they go "a" for Apple is a dot one. From there one we then dot one. I showed him an example on here first, and from there on they pack it themselves. This is also explained for reading directionality, right? We start from here to there and top to bottom, we never go backwards. So we incorporate it. This is how we practice all our letters, all the numbers, the plus, the minus, the "is equal to", any new braille concept in grade one uncontracted Braille that they learn, we do want to here, right. Grade 2 and Grade three don't use this, unless there is a learner that comes into Grade two or three that didn't have braille training beforehand in Grade one. And then it's adapted for the teacher, she uses her curriculum, and then this. But this is more for the Grade ones. Ok. So from here on this is literally we learned everything on here first. Ok.

Researcher 2: Can I get a picture of that?

Participant 2: Do you want me to maybe put something more in there for you? Let's do some, let's maybe do these, there's A and B, C, and let's do D.

Researcher 1: If I may ask, how many children do you usually have per class, in a braille class?

Participant 2: We try between seven and ten. We can't have the classes too. There's no time to get...

Participant 1: We prefer to have a class assistant but that's not always the case.

Participant 2: Yes, we are fortunate if that happens.

Participant 3: But also the ratio for a blind learner is one to five so the requirement is that there is actually five.

Researcher 1: Ja, I remember when I used to work there at [school's name] it was four point something and I can imagine it must be a lot more for a blind learner.

Participant 1: (in overlap) Ja, we are five. That's how they work out the ratio.

Researcher 2: What is it called?

Participant 2: it's called a braillet board but we call it a peg board because you use pegs. It is just easier for everybody.

Researcher 1: (in overlap) You can't say peg board. You must say braillet board.

(general laughter)

Participant 2: Ok ja, concurrently with all of this now, we do a readiness, we call its readiness book where they, not learn how to read braille, but where they learn how to do the handling and care, where they learn directionality, finding their place on a page. There are certain ways that we do that because if you lose your space in a reading book you can easily just quickly go back and scan, but they can't do that. They now have to start from the top and read all the way down and that takes time. So this book basically just teaches them it prepares them for reading. I'm going to call it like that. This is not a reading book it's just a book with simple patterns that they follow so their fingers can get used to the braille on a paper as well because it's different from a steel and a plastic peg then it is to the braille on a paper, it's a completely different sensation. So from here on again, it's just a few steps that teaches them how to hold the book, how to find our space, what do our fingers do, how do our hands stay together, it's basic, what is it, voor- pre-reading, pre-reading. Ja.

Participant 1: Let the fingers learn the differences between (show them quickly), some of the lines are three dots and some of them one, where's the spaces etc. it's very interesting book here.

Participant 2: (in overlap) It's basically just to see that if the child does go over where it's not the same, like here where the braille changes. (pause) To see if they recognise the change in the braille because now it's, in the beginning it's a consistent line. So from here for instance it's consistent line, so it runs concurrently like that. Then it starts changing. The small changes come in. See there it's a line and then something different. So it's just to see if they can pick up. It's going to be difficult to take a photo.

Researcher 2: No, I loved all the fingers.

Researcher 1: No, no, ja. You can take a picture like this.

Participant 2: You can immediately see in their finger movements and how the finger goes, where they picked up on the change. They will stop, it's almost like thinking, and then they will go on.

Researcher 3: Registers.

Participant 2: It registers, ja. So you can see where they picked up on the changes. So we don't read in this book. This is our hand movement book. So this is the pre-reading book that we use to prepare them for reading so that by the time that they get a book it's not (pause)

Researcher 1: And would you say this is also to prepare them for numeracy?

Participant 2: Yes, it does in part but I mean if we do have the worksheets that eventually they get printed out, term three, depending on the class. This all depends on the class. I started reading with my kids, this year, term one because they were able to. Sometimes, you can tell within the first two weeks the kind of class that you are going to have. Whether you will start later with them or whether you can push them to start earlier. So it really depends on the child. But yes, it does prepare them for numeracy as well. They have to eventually at the end of Grade one. They have to be able to read their own assessment. So mathematics and language, they must read there on their things by the end of the year in Grade one. (pause) Ok, that's the reading book. Uh, ag, I will give you this book that you can go, uh go through it.

Researcher 2: Thanks.

Participant 2: We have examples of how to strengthen the fingers and how to you know, if a child tells you that they are struggling to read. It might not be that the braille is unclear but that the fingers aren't developed. The touch is not developed and what you do and how to develop that. Luckily for us, we have occupational therapists that assist us. So if I identify, she can give extra you know remedial on that. Now for the writing. So once we're done with the reading, we have where is "Woody"? Oh ok. So this guy, "Woody", "Woody".

(general laughter)

Participant 2: "Woody" allows for the transition between packing the letter and writing it on the braille machine. Because when you see it like this, it's different than having to write because, here, it's like this, but the writing is like this. So it changes. So this guy, so if they, if we had to learn how to say they had to do... let's do the N. (pause) ok, so if you had to – I hope it doesn't (inaudible).

Researcher 2: I'll take each step. There you go.

Participant 2: So if we have the N like this, ok, so now they have packed the N on here. They have their braille machines in front of them. We've now obviously done finger exercises on the braille machine also in here. There are 17 exercises for finger strengthening. That you have to do before you can start with the normal writing, posture, shoulders strength all of that because it does get tiring. The braille machine is not easy to press. So once they now learnt all of that, we now have to learn how to write but now the braille machine this is (laughs), like this, and the braille machine is horizontal. We go from vertical to horizontal.

Participant 1: (in overlap) Vertically- to horizontal. Ja, ja.

Participant 2: So here, they've now packed the "n" so what I would do is, I think I'm just gonna , can I. ja. If this is. Sorry, I'm just going to use your laptop like that. So if the child sits on that side, we're always on this side. Braille upside down.

Researcher 1: (laughs) wow.

Participant 2: So we're on this side, the learner has now packed the letter, this is an "n" right. Braille machine over here. Keys for the braille machine over here. We should have brought the braille machine.

Participant 1: Ja.

Researcher 1: We have one, but unfortunately it's locked and we don't have the keys, sorry.

Participant 2: We will just pretend that you are the child and you are sitting in front of me. Now you've packed the "n" for me, ok. Now you have your keys over here. So, this is key one, dot two, dot three, like this, then you have four, five and six like this. Ok, these are the keys that you now have to press. But now, this is what it's like on here. So it turns like this. So it becomes difficult for Grade one, it's a lot of things to take in at one time. Because now you've just learnt the braille right. Now you know what the "a" looks like, the "b" the "c" the "d". Now we turn it. We flip it open. Ok. So this guy [woody] helps with this. Here you have dot one, dot one, ok. There's dot two, dot two over there, dot three, dot three over there. Then on the other side dot four, that one, dot five, that one, dot six, the one at the bottom. There's a whole story I've got a whole. I've got a whole - the braille machine is a house with a road and a car. It's a long, it's a story but it keeps them entertained. This guy, if this is your braille machine, this is woody. Woody comes knocking. So he knocks and obviously makes (knocks on table), like a knocking sound. Then we open up for woody, ok. So now he sits like this.

There, you've got your fingers there like that. So this is how they teach. From here, they literally go over here and they put their fingers down like this.

Participant 1: (Show them the keys)

Participant 2: Also, specific fingers, specific keys. So exercises like this -

Researcher 1: Oh no, I meant to write. I forgot.

(General laughter)

Participant 2: Individual fingers, left from right. Very important, directionality things like that. So we do finger exercises like this. Very specifically. Only this finger can touch key one. Only this finger key two, only this one – I must do it the wrong way around – key three, then on your right hand this is key four, key five and key six. You can't cross your fingers because if you had to write something that entails say a one and a three here, now you have to stretch your fingers and they've got tiny fingers you have to stretch like this and then you've got say two here. So, a finger a key. We don't swap out.

Researcher 1: So the complete alphabet consists of six, either from one to six.

Participant 2: Made up of something in a braille cell.

Participant 3: (in overlap) Different combinations.

Participant 2: Different combinations.

Researcher 1: (in overlap) And they should remember it?

Participant 3: (in overlap) And they do.

Participant 1: (in overlap) They do.

Participant 2: (in overlap) Numbers, letters, mathematics all the way- they do, they do, they do.

Participant 3: They're amazing.

Participant 2: They're really. You'll see from the Grade two to the Grade ones, the writing is a bit slow, but from Grade two they just go. Then it's fluid writing.

Researcher 1: And it's only those six? Only one to six?

Participant 2: Only one to six. Only one to six. A lot of different combinations. These two press your space bar. This is your space. And the rest, pinkies we don't use because they are weak. Basically, but that is what we do firstly. Before anything else.

Researcher 1: So in terms of, if before we get to questions... so for best practices to be effective there need to be preparations.

Participant 1: Yes.

Participant 2: Well, your teacher would need to know braille. The teacher needs to know braille. The teacher would need to know the steps from the beginning to the end of teaching them braille. You can't come in there and maybe start with the writing. You can't do the writing because it changes. The writing pattern changes completely.

Participant 3: So you write it like that but then when you read it it gets (inaudible)

Participant 2: Yes, when you write, type it like this but on the paper it comes out like this again. It's a whole, agh, you have to change - it's a mindset that you have to, ja.

Participant 3: It's like learning a different language.

Participant 2: (in overlap) You have to teachers - And that's why at school especially we're very strict on our training for the braille teachers, agh, for the teachers. Strict on our braille training. All our teachers, for Grade R to to the Grade 12 teachers have to have the Grade one, not Grade one, but we call it Grade one braille which is the uncontracted braille. Everybody writes that exam and then from, um, Grade four to matric and then, us braille teachers. We do the Grade two contracted braille. Then it's the whole contracted alphabet. So we do the-

Participant 1: In both languages

Participant 2: Both languages.

Participant 3: Because it's different.

Participant 2: Because it's different, Afrikaans is, agh, is different from English.

Researcher 1: So, so, you would say, if I can say, point number one, in terms of best practices would be as a teacher you need to be competent, trained knowledge in terms of braille.

Participant 2: (in overlap) And that's the-

Participant 1: (in overlap) You have to know your CAPS curriculum extremely well because before you doesn't understand exactly what they want and exactly where you want to end your children, you can't teach braille because then you must know. Ok, this where I must end, now I must start-

Participant 3: (in overlap) So you work backwards.

Participant 1: And even make sure what are you – what are you going to assess and then you start with teaching because the road to get there is the same but the pace is much slower and then you must cut everything to the bone to make sure you end where you end. You have to end with your assessment. That is your knowledge of the CAPS curriculum must be - because you must really know what is the real essential of the CAPS curriculum. You can't do all the fancy stuff. Trimmings.

Participant 3: (?)

Participant 1: (?) No, because there's not time for that. I must keep to the core of it and I must understand what they want and then you can adapt it and carry on but the pace of the partially sighted, they can do much more than we can do but we end at the same place. And I promise you we're better than them (laughs).

(General laughter)

Participant 2: I think for us, for me personally, the biggest thing would be they, um, "they", go on about inclusion which is great, right. We are all for inclusion. The thing is though, you can't have a general, which the which is this, that's great, you can't have a general teaching degree and you learn the basics. We still need teachers in specialised schools. We've got deaf children, we've got blind children, we've got all of this. So our teachers come in and we are grateful for them but there is still so much training that needs to be done for the teacher herself before you can even start. You can't just walk into a school, a special school, and start. It's a shock and that's why a lot of our teachers don't last because it's a completely different thing.

Researcher 1: It is.

Participant 3: Some people just don't come pitch the next day.

Participant 1: Ja, give it a few hours.

Participant 2: (in overlap) Ja, they literally just don't come back. It's such a shock. And I think if you're prepared for it in university where at least you have touched on, you know a little bit of everything. I know you can't do, like, you know, ten different courses for each disability that there is. but I mean if you can touch on everything a little bit it gives them an idea of what's out there, what's out there. Because I started, I don't know anything else. This is what I know. I didn't start in a normal school. So, I think-

Participant 1: I think the practical (um, what do you call it when you "proof" in English?)

Participant 3: When you do practicals, ja.

Participant 1: Students come to us. She was one of them. If they come then they see what is really supposed to be done. Then they understand and then they stay or they go. Then the real hearts will stay.

Participant 3: Because in my fourth year, I applied to go do practicals there. Me and two friends so we went there for our fourth, agh, our third term practicals. And then after that, I was like, ok this is where I want to be. So just the exposure. It's not on the list. [the school] wasn't on the list.

Researcher 1: That's one thing that I have a problem with. I told our director that we should talk to the office because I cannot understand why are our students not exposed to specialised schools. I mean, there's where the different comes in. if they have exposure, then obviously they can learn more and be better trained.

(collective agreement)

Participant 3: And also it's, for some people like we have teachers at our school that teaches the special needs but it's not where they are meant to be.

Researcher 1: I understand.

Participant 3: So when you do your practicals it's not you're not deadest that you have to do this for the rest of your life. So, because now you have someone that doesn't really want to do this and they don't like the adaptations and this is not for them. Where if you exposed it to them like in their practicals in year two, three and four. Then they would know, oh I didn't like that very much. Like for example I don't like Grade Rs and I was very thankful that I had to go to a Grade R class because then I could see that this was not for me. So I think it's the same things for having specialised schools. Maybe I would rather want to teach at the deaf

school, I didn't like the braille that much but I like the sign language. So, something like that. If you get exposure to it then you can decide better on where you should be. Because right now it's very difficult having teachers there that their heart is not-

participant 1: Their heart's not there.

Participant 3: They are not special needs teachers. And it's difficult. So if we have more exposure, then we can almost like a sifting process (laughs). Then you can have the ones that they feel that they can actually do this, they can be there.

Researcher 1: Exactly, and that will also if I can, if there is better teacher training in terms of exposing them first, it will prepare them better and that will also have an effect on best practices.

Participant 2: Just to quickly show you this, mathematics.

Participant 3: She's the mathematics.

Participant 2: Oh you're maths, sorry. So this is our braille number line. Because we obviously can't have it on the table. So this is what it looks like, but obviously when we start with this they've now learnt that this is the number sign. If you had to take that away, that would be just an "a".

Researcher 2: Oh, I see. It's that almost backwards "L"

Participant 2: Yes, backwards "L". So if you have to turn this it would be a "v". a "v" for van (laughs).

Participant 3: For very

Participant 2: "v" for very. (laughs) Excuse me Grade one.

Participant 3: It's the contractions very.

Participant 2: So obviously this always indicates that they know that when they feel that they now are busy with numbers. So this is what our number sign, this is Grade's ones, we don't go

Researcher 2: Is there any particular reason for the stickers there?

Participant 2: No, no. I think. No, you know what I think it was. Menier. No, no, I think it was to mark the sets that go together. But that doesn't always stay like that.

Researcher 3: Because it's blind learners so everything is on the floor always.

Participant 2: It falls on the floor once we start working.

Researcher 1: (in overlap) oooh, so it makes sense to mark them.

Participant 2: So that I know the sets, but it doesn't, this is very old. This is very old. Some of our things are very old but they still work effectively. So that is the start. The pre-primary.

Participant 1: (inaudible) There are a lot of very difficult because

Participant 3: But that's more for literacy maybe.

Researcher 1: Can you maybe do that when you get to the challenges, because that will be... ja. Ok.

(inaudible)

Participant 2: And then here is the order. The order in which the sounds are taught for English and Afrikaans.

Researcher 1: Can we have a copy of this? Thank you so much. Ok, so I think. If we can just, do you prefer to do both equally in terms of questions or do you first want to do numeracy and then literacy?

Participant 3: I think it's easier if we split it. I think that would be... ja. Then we can say, ok literacy this is what we do.

Researcher 1: Ok, and with which one do you prefer literacy or numeracy?

Participant 1: With what now?

Participant 3: (To begin with?)

Researcher 1: ja.

Participant 3: We can start with literacy. Because numeracy is the most. The adaptations are way more.

Session 2

Participant 1: ok, I'm not gonna talk method. I'm going to show you more apparatus and method because, oh ok. We start with you know from the beginning counting is very

important. No one has discussed this with you, why have we used this because the problem is this: if you, in your CAPS document, put the numbers from small to big or big to small. Ok. And we can't draw lines to, ok, I have already forty-three, I have forty-seven. You can't do that. And it's very difficult for a Grade two child to start with it especially if we go up to a hundred. So the easiest way is ok, now. Number one. It must be up to two hundred, Grade two. The board will be too big and we will cover the whole page, ag, the whole table. So, I did this.

Researcher 2: Oh, and you just turn them.

Participant 1: So, at the back you start with a hundred and one. And we did it with a different colour. (inaudible) Ok and now it's easy. In the beginning of term one, we keep it like this and then, in term two, we go until one hundred and fifty, so they turn over and it's good, um, fine motor skills also. They turn it around and we stop at a hundred and fifty and then go to a hundred and eighty for term three, and then, hundred-two hundred.

Researcher 2: It's like an advent calendar for numbers.

(general laughter)

Participant 1: Ja. Ok and now, it's much easier because now, they have to know exactly where's the number. Take out fifteen and forty-four and bla bla bla. Ok. Now I mix them like that and I tell them "Ok, pack them from small to big". Then the method is, you pack from small to big and then, it's so easy for them. Ok. Read the first number. Write it on your machine. Pack him back in its place. Next number, write him down. Put him on his place. And that is how they do it in the beginning. I think in Grade three, they can do it without it hey?

Participant 3: Because we go up to a thousand so they have to.

Participant 1: Ja, ok. But if you don't use this method they will, this is difficult. They struggle to do that. Ok, and then you can do anything, like patterns, you can do with this. They can understand patterns much easier if they – and to find the number, what comes before and what comes after.

Participant 3: (in overlap) Place value.

Participant 1: Place value, everything. So this is a very handy tool.

Participant 2: Multiples

Participant 2: Counting

Participant 1: multiples, counting

Participant 2: we count

Researcher 1: how do they remember all these circles?! I mean, I can figure out, it's a nine and whatever, but this in between.

Participant 1: What is in between do you mean?

Researcher 1: (requires translation)

(General laughter)

Researcher 2: What did you call this?

Participant 2: We just call it a hundred board

(comments between teachers – requires translation)

Participant 1: Now I just want to show you, you can also listen because there's also numeracy, ag literacy. Ok. Now, what is the biggest problem in Grade one? Oh, in Grade two and Grade one. Ok. Now I'm going to show you. The – all the numbers are only the top four. Not the rest. Ja. (requires translation) Now, look at how difficult it is for, ok for letters also, but for numbers. Ok you put the number (sign with). That is five and this is (nine/one).

Participant 2: So then, it's like "b" "d" confusion.

Participant 1; (inaudible)

Researcher 2: hmm, yeah. Reversals.

Researcher 1: Can you just quickly put in-

Participant 1: (requires translation) You put the numbers like. I am lying there.

Researcher 1: (in overlap) Ok. I have to make notes. The first one is number five.

Participant 1: (in overlap) ok, wait, wait. Before you do that. There's letter er number sign five. This together is a five. Ok that must be in the five. Ok, so this is five. Ok and this is nine. Can you see?

Researcher 2: Ok, so that's a big challenge for them?

Participant 1: Ja, but that's only the first problem (laughs). You will see the rest. The rest is even worse. Now (requires translation) This is four, this is a D. ok? It's the same as the letters ok. (four, six.) There's six. Ok, that's not four. That is 8.

Researcher 1: It's incredible.

Participant 1: And this is zero.

Researcher 2: I'm already visually thinking that that is one of the others (laughs).

Researcher 1: I was thinking the exact same thing!

Participant 1: (inaudible) And that is only between one and ten. So, number one and two and three is easy. Four, five, six, eight, nine and zero are challenges.

Researcher 2: And would you say- how do you overcome that challenge?

Participant 1: (You can help me)

Participant 2: Oh, what the, the confusion?

Participant 1: Ja

Participant 3: Practice, practice, practice.

Participant 1: (in overlap) Practice.

Participant 2: (in overlap) Well, I start off by not telling them that there are letters that are reversible.

Participant 1: Ja, ja

Participant 2: (in overlap) so it's an automatic, you don't tell them that the E and the I are the same or that the R and the W are reversible.

Participant 1: (in overlap) Ja, you don't.

Researcher 1: Ok, just stop there because that is something very important. Just please repeat what you said.

Participant 2: So I don't from starters tell them that there are letters that are reversible, or that are mirrors, so to speak... that mirror each other.

Participant 3: Ja. The thing where we can actually start doing that is in Grade three when I teach them contractions. Then they will tell me, 'Ooh, this is like the other way around "n" or

this is the other way around “d”, then, then, because then they have the foundation. So then they, they know this is a swap around of what it is.

Participant 1: Ok, the other thing that I will say is, you start slowly, you make sure they really, really know, you really know. We’ll start with four. “This is a four” and you keep on four, four, four, four until you know they really know it, ok. (I don’t know)

Participant 2: The thing with that is, it’s the same as with the sighted children with the “b” “d” confusion. Usually it gets better with practice, or it’s something that unfortunately it’s something that the child is just never going to.

Participant 1: And it’s a funny thing, they know it and then suddenly in Grade two, ah, they’ve confused the four and the six or whatever, or eight and zero.

Participant 2: Because the focus on that is not so much what the braille looks like anymore, now it’s a letter. Now I don’t go dot one dot five is an “e”. She just goes it’s an “e”. So now they have to go back and think, oh it’s a dot one and five.

Participant 1: (in overlap) I think practice at the end.

Researcher 1: And if I may ask, if you say practice. Do you practice it in different ways?

Participant 1: Ja, ja and they and they apply it in different things.

Researcher 1: Can you maybe give us examples?

Participant 1: You write a sum and you do it over and over and over. One or another time it sinks in. In sums, in patterns, in number patterns, bla bla bla. It’s just when you use it in all your CAPS, they will at the end, realise what it is and feel the difference. Because I have – the teacher that retires not so long ago, she tells me something very interesting, I will try now to explain. She says you must remember: a blind child feels this part first and that part last. Ok? And she talks about the door. So if you enter this door, you feel it’s the top dot. Or you’ll enter from this side and it’s the bottom dot, or the middle dot. They feel the difference. And if they feel this one, they realise, ok, if you feel the top dot first, it is four. If you feel the two dots first, you know it’s a six. I think they have that correlation.

Researcher 1: Hmm, but to get there.

Participant 1: Ja. But that is why I say, reading is much more difficult than writing. I think it’s also, if you combine the two it also makes them realise more what is the difference. But it’s

difficult, sometime we also don't know what they think in their heads. We just teach and teach until they have it. But ok. But then there's one, there's one confusion, but it's not the letter, then you have the "W". The "W" look like this. And the "R" looks like this. That is the only other confusion. (inaudible)

Researcher 2: That's more in literacy?

Participant 1: Ja, that's more in literacy. Just to show it. You must have respect for our (inaudible).

Participant 2: (in overlap) Well, the numeracy as well the numeracy because the five and the nine.

Participant 1: Ja, five and nine.

Participant 2: So, it's a bit of both. Ja.

Participant 1: And you know what, where's the big problem, I see it in Grade two, that is literacy. If you like the word "friends". It's a "i" and a "e". ok. And then suddenly, they do this: they first write the "e" and then the "i". So friends is "i" "e" but they write "e" "i". They have that confusion. I don't know, that is something they have to practice.

Participant 3: And then on that note, just for when we do contractions in literacy, we have a "e" "a" contraction, so when you get an "e" and a "a" next to each other, that is contracted. But you can only contract the "e" "a" if there's not a "a" "r" contraction. So you must first look at the word, like for example "learn". You can contract the "a" "r" and not the "e" "a". So you must write the "e" and then you can contract the "a" "r". So they must know.

Participant 2: There's rules, there's braille literacy rules.

Participant 1: And what does that mean? You must spell correctly. If they doesn't know the spelling, they will make. You can't do it.

Participant 3: And then you will get someone like [student's name], one of the kids in my class now, that only uses contractions. And he spells correctly with contractions but he doesn't spell correctly without contractions. He doesn't understand it.

Participant 2: (in overlap) But as soon as you (inaudible) spell the word out, he can't do it.

Participant 3: But with contractions he spells it perfectly. But without contractions it's horrible.

Participant 1: And that was a progressed learner. But we're getting through.

Participant 2: Resources?

Participant 1: Ok, this is a braille ruler. I just want to show you. Uh now (inaudible).

Participant 2: Resources. Hundred board.

Participant 3: Ja.

Participant 1: (Requires translation) Ok, this is a braille ruler. I just want to show you.

Researcher 1: Ja, please!

Participant 1: Ok feel. We don't use it so often, ok. But you can feel it (requires translation) The difference because we can measure. And the different luckily from the end to the beginning, the rubber is there to keep it there. Ok. And if you look carefully, you feel. The half, the comma five is short and the other one is long. ok. and if they can draw a line if it's necessary they can the half is in and it's (inaudible) like this. The longer ones are the fives. It's just to show but we don't use it much. But we do, that is how we (inaudible).

Researcher 2: And they just have to count to get to figure out what it is. There's not the braille numbers.

Participant 1: Ok and that, and while I'm talking about that, I just want to explain to you that. (inaudible)

Researcher 2: Where we would just jump to ten, they would have to go "one, two, three, four"

Researcher 1: (in overlap) ja, ja.

Participant 1: (Requires translation) Now, how do you teach children a number line? Because we are talking about the- ok this is for Grade two. And the problem is, how to put it in a book. I'll show you now. Because, the problem is. There's a number line ok. When you see. Ok this one starts with zero, fifteen (it cannot be). ok, it's not supposed to be zero. Twenty-five, fifty, seventy-five, hundred. But the problem is, can you see, how sh- how (few) how few you can fit in a line. So number lines are really a problem. So you start all the time all the time, especially in Grade three you start with a bigger number, you don't start at zero or one. It's difficult to fit in. But what I do in Grade one. Is, I, there's my, ok. We have a tape and we make it ourselves, it's a (requires translation)?

Researcher 1: Prestick?

Participant 1: Ja, this is (requires translation).

Researcher 2: (in overlap) An embosser. Is it a-

Participant 1: An embosser. We have our own. (requires translation) (I didn't bring it.) But we have our own machine. So I made this. Now you can't make uh (what are bows in English?).

Researcher 1: (in overlap) bows

Participant 3: You count and you go like-

Researcher 2: I would have said hops, or skips.

Participant 2: Yes, hops, hop it.

Participant 1: Ja, that's why there's space there because they put their Prestick there and ok. I will try to explain it quickly. If we start with number lines, they must understand you start at zero and then you give steps forward or reversed. So, we all stand here in a row ok, now we want to go to three, it is one, from there to there, one step. Two. Three.

Participant 2: So, I do it for Grade one, I do it with our bodies. I don't do it on there.

Participant 1: Yes, I start there and then carry on.

Researcher 2: so number lines are acted out.

Participant 2: In Grade one.

Participant 1: (in overlap) ok, so it is from there, up til there, one, two, three bla bla bla (to eight). Ok. And then if you want minus. You start at zero, you stop at three and then you turn around. And then let's say, minus one. And so they will do this, they will do three, minus one is equal to two. They do it with their prestick.

Researcher 2: So these are the two numbers, say they were given-

Participant 1: Ja. You say, this sum is three minus one equals two.

Researcher 2: And then they go and figure it out.

Participant 1: But the walking helps them. I think sighted people will also use that. To walk, but you start at zero. And from zero up to one, is one step. Or one. That's how I do it.

Researcher 2: And then in Grade three, because we've got Grade one is definitely very -

Participant 3: (in overlap) Practical.

Participant 2: (in overlap) Practical.

Researcher 2: You walk it out, Grade two you're getting this. Grade three where do you extend to with the number line?

Participant 3: Everything is abstract in Grade three, because they have to go up to a thousand so I can't do it in another way. So they, their mental maths must be of that (pause) degree that they are able to do things like that in their heads already.

Researcher 2: Yes, and is that, is that a challenge, the, so the working memory side of having to do a lot of mental maths and retaining that in your working memory?

Participant 3: Like long division, they have to do most of the steps in their head because we can't write it down.

Participant 1: (in overlap) We will show that to you, now, now.

Participant 3: Or where they have to carry the one or the ten, they have to do it all in their head because there's nowhere to write it.

Participant 1: (requires translation) Ok now this is a very, this is Grade three, ok, and now the questions will be: "Give me the number of the heart" (requires translation).

Participant 3: So what I will do is, this is the start of algebra for them so I will ask them, the, "Give me the number of the heart. What number is before the heart? What is ten more than the heart? What is fifty less than the heart?" So you don't work with numbers for example if you have a "a" for apple.

Researcher 2: (in overlap) ja, it is unknown.

Participant 1: Look how clever it is. She starts with a hundred and five. They must reverse back. There's no numbers there. They must figure it out themselves. You see, there's open blocks. There is a hundred and forty-eight. What is the number of the star before the (inaudible) ten less. Or ten less, you start at the buttons. What will be the number? (requires translation) Ok the one below there, ja?

Participant 3: (No) No, we say ten less or fifteen more than.

Participant 1: (ten. one, two, three, four, five, six, seven, eight, nine, ten. Is ten in a line.) (inaudible) Excellent. (What term do you do this?)

Participant 3: Um, I start in term one.

Participant 1: Term one. That was part of your assessment.

Participant 3: Ja

Researcher 1: So, so do you make one for each child?

Participant 1: Ja

Participant 2: Ja, all of our resources, especially for mathematics, is self-made.

Participant 3: ja

Participant 1: This is also self-made.

Participant 2: Because the resources that you can buy for conventional mainstream schools, obviously aren't made for visually impaired children.

Researcher 1: (in overlap) Ja no, ja, no.

Participant 2: Our partially sighted kids, yes, we use the conventional ones. And it changes as the years go by. This year it might work for the children, next year that won't work.

Participant 3: (in overlap) Ja, and this is not one lesson. You can do it.

Researcher 1: So that's one important thing we need to make a note of that, in terms of resources. It's self-made. In other words, tailor-made for the specific learner.

Participant 2: That's what I've written here; self-made calendar, self-made clock, self-made number line because it's self-made.

Researcher 2: And does that create a challenge for you as teachers because you're wanting to implement say best practices, the best way you want to do it, and now you only got a limited amount of time to make your resources?

Participant 2: Well that takes up a lot of time.

Participant 3: Ja, your planning has to be excellent because if I know that in term one I need to do this, I need to start in week one already by showing them gradually and then adding and adding and adding and then I can assess. And that makes it very hard because something 'underneath each other sums', which I start with them. I start literally, I start one week and I give myself at least six weeks to do it because, it's, it's not possible in another way. So things

that the CAPS provide us with, with one week for, or three weeks for, I have to at least double it for my kids.

Participant 1: (in overlap) Ja. Ja.

Participant 3: To acquire a certain skill.

Researcher 2: And to build up the concepts step by step.

Participant 1: That's why you must know CAPS extremely well. Because you must know (inaudible).

Researcher 3: (in overlap) So time is a challenge?

Participant 3: Yes.

Researcher 1: Sorry, I just want to get back. So then how do you catch up with the CAPS?

Participant 3: You just do.

Participant 1: You do. And you cover everything.

Participant 2: We can't tell you how.

Participant 3: We just do. Somehow.

Participant 2: We probably do a lot of less repetition.

Participant 3: ja

Participant 2: Then normal schools would where they would have time to go back and revisit a certain topic or subject or mathematical whatever.

Participant 3: Concept.

Participant 2: Um, whereas we probably try, well no we don't try. We only have maybe time to really do it once. Twice in a remedial session.

Participant 3: (in overlap) but you have to break it down into so many-

Participant 2: But it's broken down. And that's why we communicate a lot regarding what I taught them that year. "Did you get to teaching them this part of money?" "No I didn't." Then she knows where to pick up with Grade two. Or did you get to, for in languages, "Did you get to this?" "No I didn't" or "Yes I did, this is what I did." Then she knows where to pick up. And she goes to the Grade two teacher and she asks. That's-

Participant 3: And then for example when, with literacy as well. I don't always have a strong class. So then I struggle to teach them all the contractions. But like this year. I had an excellent class so they learnt all the contractions and I even started with Grade four contractions. So that makes the workload of the Grade four teacher a little less. But if I don't have a strong class, then I tell her. "Hm, hm, I only got up to here. You have to teach the rest of the contractions."

Participant 1: And sometimes it's per learner. Some learners can't catch up.

Participant 3: Yes, so then it's very individual. So then I have to say. So (learner's name) can only do up to here, so you have to do her contractions up to here but then (other student's name) can do these contractions so you can do all of them with him.

Participant 1: So we give a love letter to our next teacher at the end of the year (laughs). (Ok, this is a) braille clock. And it must be, it must have elastic arms and then there must be Prestick otherwise

Participant 3: Prestick is your best friend.

Participant 2: Prestick is your best friend.

Participant 1: (requires translation) If I want, now let I come use this prestick. Now this is what sums play play. Let's play it was something. Now my child had sum one and sum three and sum five there was a mistake. Now, I give them their pages, their worksheets, ok now, sum one and sum three and sum bla bla bla, was not correct. So I do not need to write out the sum, I just put the prestick there.

Researcher 2: It's a way of highlighting for them, so this is the one they got wrong.

Participant 1: (in overlap) So they know, ok you did your sums. Sum one, sum three was not correct. There they are, they are marked, they do it again. Otherwise, I must handwrite everything for them on the braille.

Researcher 2: yes, because a tick or a cross doesn't-

Participant 3: But also, if they want to copy, if they have to copy, I put on the page. "Ok, start for teacher." Ok, there was a line and they must start from there. Because I don't want the first two lines. It's time-consuming. Start there. I mark it for them and ok they know, they must start from there. Even if they have to copy the sums, they use their Prestick. They know,

we teach them from Grade one. Move your prestick. You've finished that sum. You start there. Otherwise, they lose their space.

Researcher 1: That's something we need to, that's something (inaudible)

Researcher 2: (in overlap) And I love how simple it is! It's prestick. I love how simple it is.

Participant 1: And they, when we leave the prestick on their braille machine. So if they finish, then they must put it back on there because they will use it tomorrow. Ja, they's always there so they take it for the next day. Ok, now I want to show you graphs. Ok let me start with graphs. (pause) Ok, I start like this it's very primitive -

Researcher 1: Sorry, I just want to ask, this. Does each child receive one of these?

Participant 2: Well, that we can print. So that (inaudible)

Participant 1: (in overlap) That was the ANAs. This is ANAs. (laughs)

Participant 2: But we can, ja.

Participant 1: We can also print these stuff.

Participant 2: The self-made things take time but those things (inaudible)

Researcher 1: (in overlap) Ja I know. It was just out of curiosity. I wanted to know. So you, this is a question paper assessment.

Participant 1: Ja, ja that was the ANA one. That was a beautiful one but we can do it ourselves also. It takes a lot of time but you can. Ok, this is what we do with graphs. Can you see, there's only six blocks because there's not space for more. Can you see this is Ponal glue and it's not necessary for them, they pack it themselves, they uses again prestick so everything is not all over the place and in the beginning I have, let's say fruit and then I have peaches, little pictures of pairs, no, no, we don't do that it's time-consuming. They know, today, the apples are the circles, the pairs are the triangles, bla bla bla bla. Ok and then, they pack it by themselves. Then they understand the graph much easier.

(inaudible)

Participant 1: And we start from left to right. Later on, you can, some of them prefer from top to bottom, some prefer from bottom to top.

Participant 3: So after that, in Grade three, what we do is I sometimes use hundred boards. And then.

Participant 1: (I didn't know that.) I learned something new.

Participant 3: and then I tell them, this is, for example, the peaches because we have to do up to fifty. So then you pack. Ten, twenty, thirty, forty, fifty. And then we get to the bananas and there's thirty and then, so then we pack it like that. Then they can understand the bar graph is like that. So that's what we do. Because that's very little space that we have.

Participant 1: (in overlap) But that's very practical.

Researcher 2: And just, let me see that I understand. So instead of, you would usually have the numbers written up the side, you just tell them what the value of each block is.

Participant 3: Ja, but then they have to figure it out. So we'll say we have to represent hundred but we can't pack a hundred blocks so what can we do to fix it. Then we can count in tens, and then each one is tens. So then we can do it like that.

Participant 1: I also do it in Grade two where everybody is thinking that. Ok, so this is the beginning.

Researcher 1: (requires translation)

Participant 1: (requires translation)

Researcher 1: There's nothing primitive about this.

Participant 1: But that that is how they understand it the best. Then she can carry it out. Ok but that's not the end of the story. Ok. (requires translation). Because that takes too much time and in a test (requires translation). Ok now, now I want, this is assessment test. Now I want to make it short because sometimes we want the children to make the graph. Or I want a short, straight, quick, fast graph then, you call this the braille cells ok. This was graph: mum washes the dishes. She has plates, cups, spoons and pots ok. And then you start with, you always start with the braille cells first. So, and then they must-

Researcher 1: Ooh, and then this is the amount of cups or whatever.

Participant 1: so, again from left to right and they can put it, one, two, three, four, five, six. So then, we go over it and then you ask your questions. This is the easiest way to make a graph because they can quickly find the answers and it's easy to count.

Researcher 2: And is this one, two, three. It's not six, six, six.

Participant 1: You can make it whatever. But that one is: how many are the cups more than the spoons? And this, you can ask, this is Grade three. So I'm not sure how much you can use this. (but I will show you another one)

Participant 3: So these graphs are very difficult for them to understand because it's not divided and that's like one thing to them and then they get confused to go look there so then all these lines are gonna confuse them a lot. That's why we prefer to do it practically with them.

Researcher 1: Sorry, but doesn't the department understand this or who does this?

Participant 1: No, they don't understand.

Researcher 1: Because obviously, if I think about this ruler one block is equal to a certain like ten, twenties, thirty

Participant 3: And there's no way that they can understand that that is one. There is no way to tell them that it stops there.

Researcher 1: Ja, exactly.

Participant 1: So this one is a little bit better, because, now you must feel. There's a difference between this you can feel this is exactly there's a block. So if you colour in your line and your (inaudible) mustn't be the same. So if this is (inaudible), feel it, feel it. It's soft. Harder.

Researcher 1: So resources

Participant 1: Is extremely (inaudible)

Researcher 1: Is this departmental resources?

Participant 1: Ok, this was to follow the CAPS.

Researcher 1: (But), the was the question I wanted to ask is like this, sometimes resources or work confuses the learners?

Participant 1: Ja, ja. Terribly.

Participant 3: Because it's not like there's a standard for braille.

Researcher 1: Ok, just stop there.

Researcher 2: (Laughs) It's like valuable information.

Participant 1: (requires translation) I want to give you examples, it's more literacy-

Researcher 1: I just want to ask, sorry, this is from the department?

Participant 1: Uh, uh.(No, this comes from [another South African school for visually impaired learners]).

Participant 3: (requires translation)

Participant 1: But normally, I would go to this or this.

Participant 3: And if there's like an ANA, we don't get braille we have to adapt it ourselves. So then we do it anyway. So they don't provide us with braille.

Participant 1: Then we would not do it like this (but there was something else I was going to say)

Participant 3: (requires translation)

Participant 1: Ok [Researcher 3], listen to me, when we make braille worksheets, you keep it as simple as you can. Don't put things between lines if it's not necessary. Let's say, two, two columns, hey. In sighted, it looks very fancy to draw, to put it in a two blocks hey. In braille don't do it, because all those lines confuse them.

Participant 2: However, for sighted as well, you also try and keep it as simple as possible because depending on the eye condition, the foreground background. If the paper is too busy, they lose their space on it.

Participant 1: So you don't put the things in a column. But there's also one thing, a braille machine can't do this. In mathematics, I will tell them, no in language, if you have, a column here and a column there, they say connect all the, let's say, synonyms or opposites, and this one stands "big" and "small" stands here. A braille machine can't draw a line, a skew line, so that is impossible so we must adapt. Normally (it's difficult to adapt that).

Participant 3: So what we would usually do is we would give the one numbers and I would give the other one letters and then I would say, number sign one is small and tell me which one fits with that one and then you have to write "d"

Participant 1: So you see, that is the adaptations that we do. In literacy, ah numeracy you (I must quickly think what)In literacy, ah numeracy you have a lot of questions that say,

especially with counting, they give you a big number of balls. And they say, make circles (inaudible) group them in groups of five. Impossible for blind children because they can't draw line, a circle so ok then I will do practical and say, there's your fifty "toppies" or whatever, make it in groups of five. So you mustn't make it more difficult or easier. (inaudible) They can count it (requires translation).

Participant 3: So what I usually do is, I have two different textures for them. So I have counters at the top which has a specific plastic texture and then I have "toppies" like the black label beer "toppies". And then those two different textures, I will give them the counters at the top and I will give them fifteen "toppies" and I will say, divide it into five friends for me. And then they have to take the "toppie" and then with prestick and say one friend, two friend, three, four, five. And then start again, one, two, three, four and then eventually when the "toppies" are done, and everywhere is the same amount of "toppies" then I know my answer is going to be ten.

(requires translation)

Participant 3: They can't understand it. They can't discriminate between if that is the block I must count or if this is the shape that I am feeling.

Researcher 1: Exactly. Sorry, I want to take-

Participant 1: I will not use it. I won't even try it.

Researcher 1: No, I want to take pictures to show examples -

Researcher 2: Ja, of the ones that are not-

Participant 1: I mean, look here. This doesn't make sense to them. What is this? Especially when there are other lines. Too many lines.

Researcher 1: It feels the same for me.

Participant 3: Ja, because what does that mean. Where do I go to? Where does this go?

Participant 1: They can't estimate that.

Researcher 1: So how do you decide on (pause) what are the important aspects you are going to focus on?

Participant 3: That also depends on the child. Because if I know a child can go, they can discriminate better, then I will do more with them. But if their discrimination is not that great, then I will only do a few things with them. So I will decide

Participant 1: Stay to the basics.

Participant 3: Yes, so then I will decide if I need to do this or if I can do this. When we're doing data handling.

Researcher 1: So it's actually, you are actually, doing individual education plan for each learner.

Participant 3: Yip

Participant 1: Not for each,

Participant 3: Ja, but for 90% because 90% can actually do it and there's always this one or two that's not on standard.

Participant 1: Here is (requires translation). It's fine. It's alright This is something they can because it's straight forward, there's nothing funny, this one is working. (requires translation) I will show you mine.

Researcher 2: Are we going to remember which are the ones that-

Researcher 1: I feel so overwhelmed, I think about a hundred questions I want to ask but this is so. Ok, we need to take photos of this.

Participant 1: This is (extremely, extremely) important. And you can see. The braille children don't mind about. They don't mind about that.

Researcher 1: This is incredible

Participant 1: This is how I teach it. Ponal (inaudible) (requires translation) If you are, start with the, what's the, because now they can put there in the centre. Tell me how does a three part look like. Show me two thirds, show me two fourths.

Researcher 2: So this is one quarter? They know they must-

Participant 1: They know it's "coloured in" (laughs). That is our coloured in.

Researcher 1: Agh, shame.

Participant 1: But they understand. They can feel. So this is what I use in the question paper. This is where I teach and this.

Researcher 2: Ok, so you use these resources in assessments as well.

Participant 3: ja

Participant 1: Ja, I will say that one is more in my assessment. This is teaching. But this and this is the same.

Researcher 2: Yes, so this is still fine.

Participant 1: This is just easier. This is easier. (pause) (It's very primitive but) (pause) (For us it's so everyday).

Researcher 1: This is "wow" It's not everyday.

Participant 1: (requires translation) (Ok, now we must do symmetry. We've said everything about graphs. Ok, let's talk quickly about the calendar. You brought the calendar.) (Ok. Inaudible)

Researcher 2: Is this the calendar?

Participant 1: ja, this is the calendar. You see, one, two, three, four, five, six.

Researcher 2: So these are the days.

Participant 1: Yes, I will talk. That's what I want to explain. (inaudible)

Participant 3: But the Blind SA calendar looks differently than that.

Participant 1: (requires translation)

Researcher 1: Sorry, I want to ask a stupid question. What's this?

Participant 1: This is just (inaudible), patterns. Well this is just the braille cells. It's just to show them this is the first page.

Researcher 1: ooh, because I can see, this is the index and this is maybe who did it and whatever but.

Participant 1: Ok how do they do a calendar? We have always a problem, braille is big. There's not a font for braille. This is the size of braille, end of story. You can't make it bigger, you can't make it smaller. Now, the problem is. You can't fit in.

Researcher 2: Oh, the whole word.

Participant 1: The whole word. Ok so you immediately teach the child, capital letter SUN stands for Sunday. Capital letter MON for Monday etc. The moment you do that, they understand it immediately and then you (inaudible).

Participant 3: So that is in Grade two, in Grade three we use the Blind SA calendars. Where they have literally the SU then it's SUN, then we have a MO for Monday, TU for Tuesday and so on. And then we don't even have number signs because it doesn't fit. So we have an a,b,c, and then we must know because it goes up to thirty and we can't do it as big. The bookie is only this small. So then there's only a,b,c and you must know, that's a one, two a three and then they must go to where the a and the bs next to each other to find a twelve. Because the number sign doesn't fit in as well.

Researcher 1: So they only use, a, b, c, to indicate the dates?

Participant 3: When the older kids do calendars because yes.

Participant 1: Especially when they go to high school and so on.

Researcher 1: (in overlap) I understand.

Participant 1: Ja, then they don't do it so properly.

Participant 3: And it doesn't fit in like that. Because they already learned this so then we can just build on it.

Participant 1: (requires translation) Now. Ok when we start with fractions. We start with a slice of bread or a sausage or something like that and they cut it by themselves. I like it. It takes two friends, the one cut and the other one tells him where to. So they take the sausage and they (pause) and the other one must cut. And then they take the story and they make it quarters. So they understand what it really is. A quarter is the half of a half. Ok ne. and then if you cut in half, then you must compare if it's really quarters. And if you cut wrong, you eat the short one (laughs).

(general laughter)

Participant 1: Ok, now. You never, like if (requires translation), even halves but let's say quarters. (inaudible) Our learners, especially Grade two, can't if you take a square and you

cut it in four pieces, they can't put it together. Especially when it's a circle sorry. When it's a circle, (requires translation) they struggle to put it.

Researcher 1: I understand, to make it a perfect circle.

Participant 1: (in overlap) They can't put it together so we fold it, we don't cut it.

Researcher 1: I just want to take a picture.

Participant 1: (inaudible) and then I show them. You can put quarters, ag, triangles in quarters and a square in quarters. And a rectangle in quarters and that you can have a square in a different way ok.

Researcher 1: I just want to take a picture of this. No, because it's important that she can show, um, if you teach quarters different ways of best practices.

Participant 1: Because the children, they don't understand it. Because they understand this because a sandwich can be cut in different ways (requires translation). So this is how I do start with fractions and then we learn like that. Ok then the same with symmetry. You never cut it. You fold it. So in the beginning you start only this. You explain the whole story of symmetry, so the one side fits on the other side. And then they have to feel. Ok then you should do things that are not symmetrical. They have to feel that this is not symmetrical. Although it's a square. Bla bla bla bla (inaudible) this is Grade three, they must compare.

Researcher 2: for the fractions.

Participant 1: Mm, ok. (inaudible) Ok this is also a braille one.

Researcher 2: Oh, a tape measure.

Participant 1: (laughs) but we don't use it.

Researcher 2: Did you make this?

Participant 3: No. we got it.

Participant 2: Can you see this is the tens are two and the five are also bigger. And I think they can put their pencil in there but they don't what. I don't that is what it is supposed to be.

Researcher 2: Is this for measurement? For learning length.

Participant 1: Ja (inaudible) (Ja, I think this is everything). Oh ok and then symmetric ah, symmetry. (inaudible) So this one is symmetrical and this one isn't.

Researcher 2: So you would start with the folding and then build up to this?

Participant 1: Ja, ja, so that it's more ...

Researcher 1: abstract.

Participant 1: That is more abstract, ja. (inaudible) and money, we work with real money but they must know, five cents are there, ten cents are there, twenty, fifty and rands but I made it like this because stole my five rands. (laughs). Oh ok, the nice thing is this is a magnet and the money doesn't go anywhere. (inaudible)

Researcher 2: So is the purpose of the magnet so that they can count it and they all just stay here?

Participant 1: Ja, because with them the money is all over the place. (The new five rand is not magnetic.)

Researcher 2: Oh no, they didn't consider (laughs).

Participant 1: Ja (laughs) (pause) And it works perfectly. But also to pack it from small to big. And they must know, they know, this is smooth, this is rough, all the coins are rough, and this one is (pause) smooth, rough, smooth, rough. That's how they feel the difference between these two because (inaudible)

Researcher 2: That are the same size, ja.

Participant 1: (I think I am finished). I think I said everything.

Researcher 2: Wow, just scratched the surface I can just tell there's so much here.

Participant 1: Ok, but I think if you understand the, the apparatus must be adapted.

Researcher 1: Most definitely, individualised for learners.

Participant 1: And then your teaching starts. I don't know if there is something else that you can think of that I must explain. (requires translation) Oh ok! Now you show them that you can do below one another plus, below one another minus, even long division and multiplication. That's it in braille. But (inaudible) if you see it on a braille machine she will explain.

Participant 3: Ok, so what we do is, I usually. So there's certain steps for that for them to follow on their braille machine. So we start by writing number sign one full stop. Then I tell

them to make five spaces and then we end up there. Then we make a number sign. Then we look on our worksheet. What is the first number. So the first number was five, six, nine (569). Then we go down and we put the pen under the number sign then we write another number sign, then we write the second number. Then we put our pen in front of the number sign and we go three back, then we end up there so that we can make the operation. Then we go and put our pen to at the point five and then we go one down, and we draw a line until the end of the sum. And then we start with the units. And then we say, nine plus eight is the seven and the one goes in our head of the ten. Then we have six plus five is eleven plus the one in our head is twelve. Then we say five plus two is twelve plus the one in our heads. And then five plus two is seven plus one in our head is eight and then we go one back and we write another number sign. So that's how we do "underneath each other" sums. But like I said, most of the operations needs to happen in their heads.

Researcher 2: And that's a lot, I mean children just struggle with carrying over.

Researcher 1: Exactly!

Researcher 2: And I can see that this must just take a lot longer. Because I mean that's so much longer than just writing it out. You have to remember the whole ...

Researcher 1: (in overlap) Exactly.

Participant 3: That's why I say, something like that takes me up to six weeks to teach them because you start and nobody gets it (laughs) and then we go the next day and we try again, and then we try again and we try again. So I always do the first three weeks I speak them through the steps and then they start doing it on their own. So it's very intense teaching (laughs) that you have to do.

Researcher 2: And you'll only start with this in Grade three?

Participant 3: Ja, so here's the long division. So what I did is, this is one hundred and twenty four, so that's one, two, four, divide by four. So what we do is we write there and then we go down and we write an equal sign. Then we say, can four go into one? No, so then we say one divide by four, it's not happening so we don't write anything at the top. But now, we didn't use the one so now we have to use the one and we have to use the two next with it as well so that becomes twelve divided by four. Can we divide that? Yes. And then we go up and we write a three. Then they have to go down down and we write another equal sign. Did we use the whole twelve? Yes, we did. So now we can go to the next one, the four. Now we say, four

divide by four and that's one. We go up and we write the one and that whole sum is only, I'm only marking that part. But this can't happen in their head yet. After Grade five, six, seven it can start happening in their head but for now we write out .

Researcher 1: But still, to do this (pause) I mean a child that struggles will not be able to do this. This is like (pause) next level.

Participant 3: Ja, so that's why braille kids are so clever.

Researcher 1: That's what I am saying, this must be next level because, I mean, a child that struggles, never mind that it's numeracy, will not be able to do this.

Participant 3: So directionality, because sometimes they struggle with organisational skills, then they can't do this because up and down on the braille machine is too much for them and they completely lose their minds and they have no idea what to do. So directionality and adding organisational skills is something, I had a child this year, that he can't pack his books in an ordinal way he cannot, his "toppies" and counters are always all over the place. So I worked with the therapist and then we made, we got systems in place for him to make his organisational skills better because in Grade four when they have to move classes, it cannot work that way, so he has to be organised. So I had certain things, he has to pack his bookies, books in a certain way. He has to sit in a certain way, his table has to be the first one in every class because otherwise he doesn't know where he is in class. So there's certain things that you have to think about to make it easier for them. So, but that's ja. This takes a lot of organisation skills. (laughs) (pause) and especially with the minus, if they have to borrow, because then you wrote a two but then you must remember that you borrowed the previous one, so you must remember that that's a one now and then.

Researcher 1: Ja, and I mean, if you need to borrow from the thousands, you need to keep that (pause) say for example for ja.

Participant 3: (requires translation) So their brains are exceptional because they can actually learn it. (pause) So it's quite cool (laughs).

Researcher 2: How long does it take the teachers to learn to teach this?

Participant 2: You teach yourself.

Participant 1: You teach yourself.

Participant 3: ja, nobody said to me this is how it goes. I worked out. I was like, ok this doesn't work, ok, this doesn't work, ok let's try this way, ok I see this one works and then you do it for the next lesson. (pause) And then you tell the next person, "Remember it doesn't work that way try to do it this way, I've seen this works."

Participant 2: Now you have to understand that we don't want to switch classes. If you stay in Grade three you stay there.

Researcher 1: Ja, I understand that.

Participant 2: You figure it out as you go along, I self-taught the braille. I came in and I had to take over and use, and then I started with this is a good strategy, you like, good strategy of how to do this, and this doesn't work and this is how we get better improve this, so this is how, you know, to teach, you teach yourself.

Participant 3: You teach the way it works for you. I think every teacher will do it differently.

Participant 2: And like one year, it works and another year it doesn't. And then you completely have to change it. What worked for my kids this year did not work for my kids last year. It didn't.

Researcher 3: Because they are different, the learners are different.

Participant 2: because the kids are different, the kids are different.

Participant 3: Then you have to get new resources, you have to do something else.

Participant 2: When I went to the Grade two teacher, (name), I said to her I'm gonna teach my kids ordinal numbers. I said ordinal numbers we gonna do ordinal in our first, second, third, fourth. She's like, "Did you, you didn't do it the year before". And I was like, "No I didn't, I couldn't. They didn't understand ordinal numbers". Something we have to do, it's part of our curriculum for Grade one, but I couldn't because the kids didn't get it. This year, they got it within the first try. Ok, now she knows where to go on with the ordinal numbers for Grade two, so she doesn't have to start back at basics again. But ja, we follow each other like that. Try to at least.

Researcher 1: Um, are you happy with what you have?

Researcher 2: I don't think, I'm not sure how much we put down. Is it ok if we adapt it to more verbal. I feel like it was useful. (laughs)

Researcher 1: Ja, ja.

(Inaudible)

Researcher 2: I think we have discussed a lot of it, it's almost just to summarise it down to.

Participant 1: (inaudible) (What is this?)

Participant 2: This is the resources: self-made graphs, calendars, hundred board, rulers, clocks, number lines.

Participant 1: (We've seen clocks and calendars and fractions). So now if we talk about things, you know now what it is.

Researcher 2: yes, and what you mean. That helps.

Participant 2: (in overlap) Fractions, self-made.

Participant 3: Self-made.

Researcher 2: You're absolutely right, one word, we wouldn't have been able to picture all of that from.

Participant 2: (laughs) Self-made fractions.

Participant 1: (and the number line is in here).

Participant 2: Ja, ja numberlines.

Participant 1: (And the calendar, the graphs, the hundred board, the rulers, clocks. What else? Mm, mm, this was the most important). And money on magnets

Participant 2: Money magnets

Researcher 2: And I think the essence of the resources is that you need to adapt to the child.

Participant 3: ja

Researcher 1: It must be individualised for the child.

Participant 2: Ja, this is. Ja, it's basically.

Participant 1: Sometimes, you use the, let's say I use the, a what is base ten blocks, for one child and I use Experiblocks for the other one, the next one. I don't, and for the same lesson. Because this one doesn't understand the, the.

Participant 3: or their fine motor is not so good to work with the smaller blocks so they have to use the bigger ones.

Researcher 1: Ja

Researcher 1: (in overlap) So, so even if you do fractions, you use different resources for different learners.

Participant 3: hmm, mm (agrees)

Participant 1: ja, if it's necessary. Yes. And then the afternoons, if they didn't understand during the day, you even break it down more in the afternoons individually in the.

Participant 2: Ja, you can within the first two weeks, two weeks tell which learners are going to need different resources then what you've prepared for the year. Or for the term at least if you're not that far ahead (laughs). Ok, so I think that one.

Researcher 2: That's great. This one would only be if there are specific ones, we did some general ones so (inaudible).

Participant 2: For, for numeracy, I would, challenges would be financial challenges because we have to buy all of our numeracy things for mathematics or make them ourselves.

Researcher 2: As teachers?

Participant 3: Yes.

Participant 2: Which is far less for the literacy. Because we have that resources as the braille printers that we have and the braille everything for that is. So here I would say it would be finances. This is financial implications.

Participant 1: Self-made. Ja, especially like the hundred board, it's it's laser cut. (inaudible)

Participant 3: (in overlap) Even if we do buy from like Makro or wherever, then we still have to adapt it to make it braille friendly. So even if we do buy them, we still need to adapt and still need to spend time and money on adapting it. So it's not, it's never just as easy as going to Makro and buying stuff.

Researcher 2: So then, it's financial and then planning and time.

Participant 2: Time is always. Time is (pause) Advanced planning.

(general laughter)

Participant 2: Advanced planning, you cannot be a teacher if you can't plan.

Participant 3: well, you can't be a braille teacher if you can't plan.

Participant 1: I always say, you must have brains to teach braille (laughs).

Participant 2: (in overlap) I'm going to write planning in all capital letters because.

Researcher 1: (in overlap) Well completely, after I saw that. (inaudible)

Participant 1: You must have brains to teach braille, really.

Participant 2: Planning. (What are we saying. Planning isn't a challenge).

Researcher 2: It could be (laughs)

Participant 1: Ja, it is a challenge. Our planning is different.

Participant 3: But I think another challenge is breaking down, because you have to break down the concept into so many different parts to actually put it together at the end.

Participant 2: Break down of all concepts.

Researcher 1: I think planning the challenge, I'm asking, in terms of that it's not straight forward because it's so individualised. You need to think about the individual learners.

Participant 2: (There you go. That's what I wanted to say.) Individual planning. This the word.

Participant 1: (Ja, it isn't normal planning)

Researcher 1: Individual learner, individual resources, and um I mean that can be very exhausting.

Participant 3: Ja.

Researcher 2: And with time, it feels like there's multiple things. Part of it is the time taken for each concept. And then also, I don't know, do you give them extra time in assessments?

Participant 2: Yes, they do. They get time and a half.

Researcher 2: Although, that's maybe not a teaching challenge.

Participant 2: No, ja. No that's not a challenge.

Researcher 1: Isn't maybe one that, sorry, learners on different levels?

Participant 1: Oh, ja.

Participant 2: Ja, but that would probably fall into the individual planning. Because you need to have like four different lessons for ten children.

Participant 1: (in overlap) Because, I like it. To have, like number patterns, five different pages, for one or two learners, they will finish only the first two and that's, it's getting more difficult. Some learners will go up to number five. And that is where the individual planning. (What will you write?)

Participant 2: (I will say) intellectual abilities. ok. Leading to, uh, various (what did I say now?) various.

Participant 3: Levels? Learning levels? Various ...

Participant 2: Teaching uuuh.

Participant 1: (Different. I understand what you want to say but).

Participant 2: I will say that, so, in my class for instance, at the beginning of the last year

Participant 1: (laughs) The most difficult.

Participant 2: I had five learning levels, huh, ja, learning levels. So I had, I had a SID learner

Participant 1: Who screams the whole day.

Participant 2: I had two MID learners, I had two average learners, I had three a bit better than average and I had two genius children. So I had like five different, now, not one of them was on the same reading book. Not one of them were on the same anything, letter of the alphabet. This one was on "A" and this one could do "a" to "z" and this one never got past a and this one never got to braille. So you constantly have to keep track of where you are so the ja. That's for math, for numeracy especially, the intellectual abilities.

Participant 3: But I mean like, the long division and the "underneath each other sums", if you get lost somewhere else, organisational skills can also maybe be something.

Participant 1; Ja, for sure.

Participant 3: Because you have to know where you are in the world to be able to do those things.

Participant 1: Especially with, uh, fractions, not fractions, division. (requires translation) A braille child cannot organise themselves. One for you, one for you, one for you, one for one, one for two, one for three, one for four. One for one, ah, then then it's lost.

Participant 3: That's why we use Prestick. Because, sometimes they think they're dividing the "toppies" and then they're not dividing

Participant 2: (in overlap) And then they're not.

Participant 1: Or they have a few "toppies" left and they keep on dividing it. And finding your book in your braille bag. Oh, that is also difficult.

Participant 2: I wonder if teaching skills wouldn't be another one. Because, for if I'm thinking of numeracy now. Because when we do in Grade one, we teach if we had to-

Participant 1: (in overlap) Teaching skills and knowledge.

Participant 2: We can count quickly like this, right.

Participant 1; Where they can't.

Participant 2: So we have to learn, you put it on this side, we count. One, two, three.

Researcher 1: That's very important.

Participant 1: And, it must be far away from one another. Not here, not here.

Participant 2: Yes, so it's either like this, I do it like this for my kids. It's up here and we put it to our stomachs because we keep it. So we count like this. (pause) Would you say teaching skills?

Researcher 2: It's all these strategies.

Participant 1: Strategies or methods.

Participant 2: Teaching, well methods and strategies. That would be a big challenge. Because nobody teaches this.

Participant 3: You have to figure it out.

Participant 1: You must figure it out.

Participant 2: There's no book on how to teach.

Participant 1: That's why I say, number one. Know your CAPS extremely well.

Researcher 2: Do you mind if I just quickly ask you about two more things here. I remember reading about the use of the abacus. Do you use the abacus?

Participant 2: It depends on the learner. (Learner's name) who was in my class, last year, could do mathematics with an abacus. That is not all children.

Participant 1: They want to see the amount. They can't say this is a group of ten with the abacus. I will do it with blocks or base ten blocks or something like that.

Participant 2: The abacus is a little bit more abstract. Where we try to do.

Participant 3: And they get confused easily because, if you look at the abacus, the colours can tell it apart for you, as a visual person, but they are not sure if this (requires translation) is part of this (requires translation) or this (requires translation). I'm not sure where did I move the ten to or where.

Researcher 1: And it's not also a lot of space. From listening to what you're saying.

Participant 2: (in overlap) Ja, Ja. They need, they use their whole table. They use their whole table to do math.

Participant 3: I also, we only divide up to five. So I only have five counters on their whole table to make sure there's enough space between there to not confuse them as well.

Participant 2: Ja, we don't discourage learners obviously. (Learner's name) wanted to use an abacus. He heard the word somewhere, he wanted to know what it is. I gave him one, he tried it. He got it.

Participant 3: But also, his eyes are a little bit stronger.

Participant 2: They do ja. Ja the eyes, well (Other learner's name) as well. She can use an abacus.

Participant 3: (in overlap) Is it?!

Participant 2: So, it depends on the child. If they want to do it like that, I never say no. I never tell them: "We learn how to use blocks and we count with blocks and this is how we count with blocks". If they eventually prefer to do it differently to what I teach them, as long as they have the basic concept of what plus means and what minus means, then they do it the way they want to.

Researcher 2: But the strategies that you have discussed have been the strategies that have been generally best?

Participant 2: Those are the ones we have found. You do get your learners that we feel could skip a few grades and go straight there.

Researcher 1: But you highlighted a very important thing is that, you acknowledge, and I mean I think that that's the best of the best practices, is you acknowledge the child's need for curiosity, um for them to experience this and not just say no we use this.

Participant 2: You have to. They generally, blind people are generally more curious.

Participant 3: And if they are, (Learner's name) is exposed to a lot of stimulus.

Participant 2: Ya, if they are exposed obviously, but they naturally curious. Their hands are always, always.

Participant 3: Touching and feeling. Like at your table, if they are standing there to read, they will feel here. "Teacher what is this? What is this?"

Participant 2: Ja, always they naturally curious. This is their eyes. If you had eyes on your hands that's.

Participant 3: And even they will come and "Whoo you have a ball today!"

Participant 2: (in overlap) "Your hair! Oh your hair is long."

Participant 3: They touch and feel you the whole time. So if you like your personal space, don't become a braille teacher.

Researcher 3: Yes, that's what I was actually mentioning it takes someone with a passion. It really takes a lot out of you.

Participant 1: (in overlap) Oh, ja.

Participant 3: And that's what I said the other, like previously, if you, that's why you must be exposed to everything to see where your passion lies so that you can do that. Because we are sitting with teachers that don't want to be in the special needs schools. It's not where they are meant to be. They want to be in a mainstream school and they want to teach mainstream kids. And that's fine if you are like that. It's great but they cannot, they get very impatient with our learners and they shout at them and then they don't, their passion is just not where it's supposed to be so that's why I think they need to be exposed. A student needs to be exposed

to different disabilities to see if I want to do this. Because many people come to us with stars in their eyes. Ag, they are going to change the world.

Participant 2: Oh, and they get to teach blind children and they get to learn braille.

Participant 3: And then it's not what they thought it was. And then it is very discouraging for the learners.

Participant 1: (in overlap) And they leave quickly.

Researcher 1: So you would say, in terms of, I don't know, characteristic or, that something like passion is part of best practice.

Participant 2: (In overlap) Oh you have to.

Researcher 1: I know it's very general

Participant 2: You have to. Definitely.

Participant 3: And you need a specific type of person. I'm saying this with all due respect but most of us at the school get along with each other because we are the same type of person. Because we have the best interest of the learner at heart and that is why we are here. We are not there for ourselves. Where other people are just there, you won't believe this, but for the salary and then, that does not make sense. And then we get discouraged because they are making our lives living hell. And then that gets very difficult because you are always just thinking of the child, thinking of the child, and then educators makes it hard for you to do that. That's why you really need a specific type of person.

Participant 2: And they become comfortable. They become comfortable in what they do. So as soon as change comes in and whether it's from the school's side or whether it comes from the department's side, they don't like change. And you kind of can't do that. You have, you need to adapt.

Participant 3: You need to be adaptable.

Participant 2: Constantly. You adapt yourself, your environment, your work.

Participant 3: Your resources.

Participant 2: Ok, we don't adapt our environment a lot. You never change an environment, your seating, your class.

Participant 3: (in overlap) Your seating, because they will not find their place again.

Participant 2: And the playground stays the same for as long as it possibly can. Unless we bring something new in or something is broken but otherwise it stays the same.

Participant 3: So it really takes a specific type of person to do this and I think students need to know that. I know that you are still young when you are studying but you need to know where your passion lies. So I know like, for example, I went to the Grade R class. It wasn't for me. I hated it, it was terrible but then I thought, ok maybe Grade three's ah ok. And then I went to special needs and then I'm like this is where I want to be. So you need to find your market.

Participant 2: (in overlap) Your niche

Participant 3: Your own little safe space.

Researcher 1: So if you say a certain type of personality, what do you mean? Except for passion because that's important.

Participant 3: First of all I need to say, and this is not discriminating, but clever. Special needs teachers need to be clever. Because learning braille and teaching braille takes a lot of brain power and you need to figure it out as you go. So you need to be able to think, and to think critically and be able to take things and say ok this is not working, this is not working, let's do this. So it needs to be someone that can think. That can use their brain and that doesn't want somebody else to do everything for them.

Participant 1: Oh yes. There's not time for that.

Participant 3: There's not time for that because I have to do my own class things so I can't do yours as well. It's not possible for me because there's so much in my class that I can't do yours as well. So it really, and it's someone that's.

Participant 1: (I will say) analytical.

Participant 2: Organised.

Participant 1: Analytical, creative. (You must have very creative thinking).

Participant 3: But not creative like I want to make something pretty creative.

Participant 2: Like art, not art creative.

Participant 3: Because people confuse that. And they think ah I can make a cool poster so that's creative. And that's not the creativity that we're looking for. Someone analytical.

Participant 1: And very analytical.

Participant 3: (in overlap) Ja, because there's steps.

Participant 1: You break down, you must break down things and see what is this child's problem. Why is he struggling with that sum? What is the (inaudible).

Participant 3: The essence.

Participant 1: The essence of where is this.

Participant 2: You need OCD.

(general laughter)

Participant 1: And you must really want to help the child.

Researcher 1: So there's many things if I listen to you, something that you say break down. So in the theory we learn a lot about cubing, you cube stuff to. so that's one thing that both of you can use. The other thing I was thinking about was peer learning, how you communicate with each other as teachers.

Participant 1: Oooh, these two (laughs) they visit me very often. ("Miss, did you think about this. Mustn't we do this (Learner's name) da, da, da.")

Participant 3: And you must be able to improve, because, like you said, not one year is the same so I must be able to see, and you must be able to understand that you made a mistake. That must also be something. Because sometimes I will do fractions and I'm like, ooh this did not work at all.

Participant 2 and 1: Ja, ja.

Participant 3: and then you have to go back to the drawing board, this is not working. So it has to be someone that can understand, I made a mistake but I'm there to improve so I need to think of a better way. Then I go and I ask the Grade four math teacher: "How do you teach fractions? Because I tried this and it's not working". So you need to be able to admit that you're not getting there.

Participant 1: You must be able to judge yourself on what to work. Not judge.

Participant 2: Evaluate yourself.

Participant 1: Ja, evaluate yourself, ja. Very much.

Researcher 1: So you need to be able to be a reflective teacher? Think about your teaching. Adapt your teaching.

Participant 1: Oh, ja.

Participant 2: You can't be hard on yourself.

Researcher 1: Discuss. Ja, not hard on yourself but think about and rework and ja.

Participant 3: So it really takes a specific type of person. And everybody does not always understand that. And then the learners suffer. It's not their fault that they are in a special school and then the teachers make them suffer and that is not fair so that I really. I remember when we had special needs here. And we still had (Lecturer's name). and he was always this gentle, kind person and I was like, "That is the type of person I would go to if I had special needs" and that is the type of thing that you want to be for the learners is that gentle soul that they can confide in because the whole community pushes them out and they are outcasts and then we are the only ones.

Participant 2: (in overlap) They are scared enough as it is.

Participant 3: Ja, we are the only stability that they have. The only constant. That is why, when something like maternity leave happens, it's really disruptive for the learners because then for four months there's something new that they have to adapt to and then you're coming back. So it's really something very difficult for them.

Participant 2: And you don't know the quality of teacher that walks into your position when you are on maternity or when you go to a different section. Or when you resign.

Participant 1: They talk about experience (laughs)

Participant 3: Then you get to someone else's class and you think, what did you do?

Participant 2: And the kids pick up on it immediately. They can immediately pick up on, she doesn't teach us the same way. She teaches us wrong. She reads wrong. They pick up on it. You might think that-

Participant 3: and that's another thing about educators that need to be educated, because sometimes with the braille, they translate it directly. For example, if there's bullets in my

sighted and I translate it to braille, you mustn't use bullets because the foundation phase doesn't know what the points are for bullets so it's very confusing to them so when they ask you "What is this ma'am?" You need to be able to tell them, "Oh, this is this and this is why it's like that." And explain it to them. So that's why you need someone that, that is intellectually on a very good standard. So that they can explain things like that to learners because they ja the children are like "This is not in my book." And then the some teachers who do not understand braille will be like "No, but it must be there somewhere just go find it." Where I will take the book and I will see ok this is what they ok no, you are on this page. There we go. You show them where to go to on the page. So if you don't know braille, you can't help like that. So they get lost.

Participant 1: And everything, at the end of the day, the child wants to feel safe in your class. That is the bottom line. Because the teacher understands me, she knows what are my problems and she knows how to solve it. That's what they want to hear at the end (what else will you write?)

Participant 2: (I don't know. I was thinking the same)

Participant 3: "See notes"

(general laughter)

Participant 2: See (laughs) see literacy notes.

Participant 3: "Look at the video" (laughs) because the questions are very –

Participant 2: (No, but the best classroom practices for teaching numeracy is almost the same as for literacy)

Participant 3: (in overlap) Again, real life.

Participant 2: real life. Concrete.

Participant 3: (in overlap) Considering different learners' abilities.

Researcher 2: So there's overlap, there's overlap with the literacy.

Participant 2: (in overlap) ja, there is.

Researcher 2: And then I think, some of the, would it be fair to say what you demonstrated to us with some of the ways with the fraction circles that would be would you consider best practices for teaching fractions?

Participant 3: Ja

Researcher 2: So if we take some of those and we include it on the best practices?

Participant 3: ja

Participant 2: Mm (yes)

Participant 3: Ja, because there are things that like they say ch- wh- our learners struggle to organise themselves and that is one of the problems. We must overcome it and they can't put fractions together. Don't cut things and then let put them back together. Those are two things.

Researcher 2: Yes, are the very specific (inaudible) yes.

Researcher 1: Can I maybe ask, can we maybe get your telephone numbers that if, if we have questions or

Participant 1: (in overlap) You are welcome.

Researcher 1: Obviously we will not bother you.

Participant 1: No, no.

Researcher 1: Because after they have analysed all the data we need to do member-checking.