

1		
2	Interviewer	Good afternoon. Thank you so much for joining me today. I really appreciate it
4	Participant 1	Good afternoon.
6	Participant 2	Good afternoon.
8	Interviewer	I just have a few questions for you regarding the use of colour in schools and in your school specifically and your own experiences. I would appreciate your input. And and to be as honest as possible telling me how you experience it. Thank you for your willingness to participate. I really appreciate it. Uhm, I think just to make things easier if we can take turns answering uhm that would be great. And then if you want to add something before I go to the next question you're more than welcome to. So my first question to you today is to describe your current awareness of colour-blindness.
10	Participant 2	Okay so I am currently aware of colour-blindness. I have experienced one of my students being colour-blind in one of my math classes in high school that I taught before. So I have experienced colour-blindness from a student and am aware of colour-blindness.
12	Participant 1	Me too, I'm aware of it. In last year, a learner kept on asking me specifically not to write in orange uhm because she can't see that colour on the board.
14	Interviewer	Thank you. Will you please tell me about your experiences with these specific learners that you taught who were colour-blind?
16	Participant 1	Can you please repeat the question?
18	Interviewer	Can you please tell me about your experiences teaching these learners who are colour-blind?
20	Participant 2	The student that I taught he was not able to see the colour red. So when I marked his tests and everything, I had to rewrite his scores and everything in a different colour, so he'll actually be able to see his test scores to see where he made mistakes in tests. As well as when doing examples on the board, I could not use the colour red as he could not see it as sort of colour used to basically share different concepts on the board as well. So that's my experience with a student having colour-blindness.
22	Interviewer	Sjo, that's very interesting. So you saying you had to mark his tests in a different colour? That is so interesting. How did you become aware of it? Did he tell you or did you pick it up?
24	Participant 2	Uhm, he actually told me and I think like it was a bit awkward for him in class, because all the students were like ah he doesn't know. And I think because of the way they reacted as well, he had like a no care uhm attitude towards it. But he was the one who told me there were no other teachers or anybody else that made me aware of it. So he told me teacher I cannot see this colour. What is my test score? And I was like what? Then I had to implement the changes so that he can actually see.
26	Interviewer	Oh, wow, that is so interesting. Tell me uhm, you said the other children reacted in a certain way, how did they react?
28	Participant 2	It was more of like a teasing manner, as some people they do not understand of not being able to see a different colour. So when he was like he cannot see his test scores, all the other students wanted to see his test score and tell him his test score, which kind of led to all students knowing his test scores. And that kind of sometimes leads to teasing from the other students. Some students do understand but others they don't, there not actually quite aware of colour-blindness. So they receive the teasing manner.
30	Interviewer	Thank you for sharing this. I appreciate it. Uhm Participant 1 if you will share with us your experience.
32	Participant 1	Mine was a Grade 8 learner, and she just couldn't see orange so after the one period after the beginning of the first lesson of the year. She actually came to me and she asked me at the end of the period to please not use orange when doing examples on the board, that she could not see the colour. I don't think her friends were aware, but after after the period where nobody could hear her, she asked me politely.
34	Interviewer	So that's not something she did in front of everyone. She did it in private and only asked you.
36	Participant 1	Yes, in private.

1:2 I have... Working with learners w...olour blind/ experience

1:5 I am c... Awareness

1:3 I... Working with learners w...olour blind/ experience

1:4 The student that I taught he... Working with learners w...olour blind/ experience

1:6 The student that I tau... Working with lea

1:7 he actually told... Awareness  
Becoming aware of learners who are colour blind

1:8 I think lik... Emotional/ socie

1:9 It was more of like a teasing... Awareness  
Emotional/ social impact  
Other learners awareness

1:10 a Grade 8 lea... Awareness  
Becoming aware of learners who are colour blind

1:11 I... Emotional/ social impact  
Other learners awareness

38	Interviewer	Okay and uhm when teaching her is it only on the board where you avoid using the colour orange or is it in other places as well?
40	Participant 1	Uhm It was only I tried to to, obviously the posters that were already in my class I couldn't change, but I tried not to use use orange at all.
42	Interviewer	Wow. Okay. So next question, how is colour used in your school and in your classroom?
44	Participant 2	Colour is used for basically to bring out ideas of certain concepts. For example, for math uhm you'll do a question and then I'll use different colours to explain different parts of the question, and what parts that have to remember, and the definitions of different concepts are in different colours as for them not to get confused with the original questions answered. So you'll have the original question, for example, in black and then I'll have in blue the definition of why we're doing a certain step, or the definition of a word or something like that. Especially like in geometry or something like geometry were you use different colours for your different angles and your different sides. So that's also on the board when we use colour. And I also use colour in uhm doing slideshows on the board for them ,to like to do the start of a new or different concept, or start a new chapter, or start of a new unit and then posters on in the classroom as well. As indicated previously the posters are in different colours as well. Colour is used quite generally everywhere in schools or in the school we were teaching at.
46	Participant 1	Ja, then like Participant 2 just said uhm highlighting the certain steps we would use colour or in the process previously mentioned. So it's really used everywhere all the time.
48	Interviewer	And tell me in school itself is colour often used in posters or communication around the school as well?
50	Participant 2	Yes it is.
52	Participant 1	Ja, in all the posters around the school you'd find the colours, different colours, as it tends to draw attention to to the posters.
54	Interviewer	And in extra-mural activities is colour involved there as well?
56	Participant 2	Yes, in a way, so for example, when I was coaching hockey for the Grade 8, you'll have different cones for different steps. So I'll say okay, to the red cones we'll be jogging and the cones next to it will be green cones that we're going to be running or sprinting. And then also for long distances you'll have different colour where we have to do different like the dynamic warm ups. So we'll do high knees to this cone and to the blue cone, for example and then like high kicks to the red cone so it's just different cones will represent different exercises that they will have to do next. Or for example, in the hockey we had okay at the first cone we'll have to hit the ball, and the next cone you'll have to set the ball. So it was just different colours do play a big role in sport and mural activities not just sports.
58	Interviewer	Thank you.
60	Participant 1	Uhm I agree with everything Participant 2 said. But also like I mentioned sometimes especially with the astro we have at school now, they'll make the ball a bright green colour, it's a bright colour because it's easier to be seen on the field. And I think for learners with colour-blindness that could be difficult.
62	Interviewer	Mmm, especially if it's the colour they struggling to differentiate. I assume the school clothing for sports is also different colours for different teams or not?
64	Participant 1	Oh the clothing as well yes. So everyone in your team would wear a certain colour. Even during practices when playing mini games, all the learners from a certain team would wear uhm certain colour bib so that it's easy to identify who's in your team.
66	Interviewer	So colour is actually used all around to identify, to label, to organize. It's really used everywhere in school.
68	Participant 1	Yes, everywhere.
70	Interviewer	So if I then have to ask you what challenges learners with colour-blindness face, would you be able to elaborate on that?

1:12 It...

physical barriers in scholastic resources

1:13 Colour is used for basically to bring out ideas of cert...

use of colour during instruction

1:14 And I al...

physical barriers in scholastic resources

1:15 Il...

use of colour during instruction

1:1... physical barriers in scholastic resources

physical barriers in scholastic resources

1:18 when I was coaching hockey for the Grade...

Extra murals

1:42 2 said. But...

Extra murals

1:20 clothin...

Extra murals

1:40 Colour is used fo...

Colour percepti...

1:1... use of colour du

use of colour du

1:19 somef...

Extra murals

1:19 somef...

Extra murals

72	Participant 2	I think one of the biggest challenges is, if you just look at the two students we've had, is basically being bold enough to come out and say hey, I actually have this problem. I cannot see this colour. So for my student, he was kind of like, teased by his friends, because they were not aware of it. So I think that's a very big step where they have to have a lot of courage to say, hey teacher I cannot see this colour and to kind of admit to having colour-blindness, it's, I think a very big step for them.
74	Participant 1	Um, can I just ask you to repeat the question, I apologize.
76	Interviewer	No problem. I asked, what challenges do learners who are colour-blind face at your school.
78	Participant 1	Like Participant 2 mentioned, it would be very difficult for them to just come forward and say that they have colour-blindness. So the teachers are aware so that they can work around that and accommodate them when necessary if possible. I feel in all high schools uhm teenagers tend to be quite cool. So as soon as learners find out about that they would tease them.
80	Interviewer	So both of you now highlighted that they face the the social and emotional challenges of the way other people react to them being excluded, being teased or laughed at. But then if you think about the scholastic side, what challenges would you think they face with regards to schoolwork and the scholastic side?
82	Participant 2	I think they have to make sure that they are able to work in the, that like write in the colour they were able to see and to make sure that they can actually see their work properly. So if the teacher is doing art in colour, uhm busy, because a lot of kids they learn from using different colours and they, the colours help them to basically remember certain definitions. For someone that has colour-blindness the variety of colours are less sometimes or not as many. So they have a smaller variety of colours to work with, if when doing like examples, or learning different concepts and theories.
84	Participant 1	I think also uhm scholastically a problem would be in textbooks, but the math textbooks wouldn't be a problem because it's all just in black and white. But I know, for the languages uhm a lot of the time the textbooks is in colour and some of the stuff would be in colour or even if you take Science, the experiments that they do requires you to be able to identify certain colours. In experiments if the reactions took place or something like that. And that will be very difficult for them to identify if that is the colour they are having difficulty seeing. So, I think in general and also if they never have the courage to go and tell the teacher or their educator that I can't see this colour or the teacher isn't accommodating of them then it can also be very difficult to see what the teacher is talking about if she is using the colour that they can't identify.
86	Interviewer	So in other words they they might miss information or miss an instruction or struggle to read and take in information if something is in that colour that they are struggling to see. Do I understand you correctly?
88	Participant 1	Yes, that is what I'm trying to say.
90	Interviewer	Tell me, in your first question you indicated that you teach EGD uhm is there colour used in this subjects and how does, what colour influence the child that is struggling to differentiate between colours?
92	Participant 1	Uhm, I don't know. In Civil they use a lot of colour and there's a specific program that we have. We we got a program from the EGD department that helps you that does the questions on the board so then I don't have to do the questions and in that they also use colours to indicate, I want to use the word, steps. So which line you would draw next and I think that would make it difficult for the learner as that is the actual textbook that is being used. Uhm I miss something. I feel that your question wanted me to elaborate more.
94	Interviewer	So are you saying that for certain certain topics the colour is used and they will struggle then to differentiate colour, but also when you say the program does it on the board, are you talking about a projector then showing almost like a video on the board of the steps? Do I understand you correctly?
96	Participant 1	Yes, yes, it's on the projector and could show you what to do next.
98	Interviewer	Okay, so with the use of technology, how do you think that has impacted colour in the classroom?

1:21 I think one of the bigges...	Awareness
	Becoming aware of learners who are colour blind
	Emotional/ social impact

1:22 , it would be very...	Awareness
	Becoming aware of learners who are colour blind
	Emotional/ social impact

1:23 I think they have to make sure...	Challenges for learners who are CVD
	physical barriers in scholastic resources

1:24 scholastically a problem would be in textbook...	Challenges for learners who are CVD
	physical barriers in scholastic resources

1:25 In Civil they use a lo...	Challenges for learners who are CVD
	physical barriers in scholastic resources

100	Participant 1	For the EGD because that's the only time I use the projector, it has impacted a lot because I can't change those colours. And that would uhm make it uhm difficult for me to change the colour to accommodate the learner. However I will try and luckily I haven't had any EGD learner that I am aware of with colour-blindness. Uhm so so that would make it difficult to accommodate the learner but still be still be possible to do so. But those are the colours that are given on the system is the colours that you kind of working with.
102	Interviewer	So if you now think about children who are colour-blind, how can you accommodate these learners in your classroom?
104	Participant 2	I feel like it depends on which colours the students cannot see, if it is a lot of colours the students cannot see, we can maybe look into uhm getting them a book or for example, if it's not a Science to get them a textbook printed in colour so that they can see. Making sure that the test paper, or the examples on the board, are for that specific student or the class that the student is in is than in different colours as well. If it was more colours that the student cannot see it. Yeah, it gets a little bit more difficult to accommodate the students in that way.
106	Interviewer	Can you think of anything else you can use besides colour to differentiate between things or to organise? Like you've said you marked in one colour and the question and then the definitions in other colours. Can you think of another way to do that?
108	Participant 2	Maybe use the different shapes to say okay, at this square this is why we do this step or just using different numbers, but at maths using different numbers would be a bit more difficult. So maybe you can do that in languages but ya.
110	Interviewer	So are you saying everybody look at the star, at the star is the instruction now everybody go and look at the square and at the square is where the definition is? Or the definition for example is inside the square and the question is inside the cloud or something like that. Am I understanding you correctly?
112	Participant 2	Yes, then instead of using different colours, you can use different shapes, cause it's just something different that students can relate to and say okay, this is now a different step, it's not something different, it's not the same. It's just something to for the students to be able to understand.
114	Interviewer	And participant 1 for you, I want you to think maybe specifically at the subjects you teach. How would you accommodate learners who are colour-blind in your subject?
116	Participant 1	What we could do as well, but already do with the colours you can write down the steps next to the question. So for example, step one, for EGD for example, draw the base of the line or bisect the line, step two we did this so you can write down your steps afterwards. Like Participant 2 also mentioned, just writing the steps out in words would also already uhm accommodate the learners and not just drawing the lines or such in a different colour so that you can see which one you're doing and how to do that.
118	Interviewer	Okay, so are you saying while they watch the video you write down the steps next to it, so that the child that is struggling to see the colour in the video can follow the steps that are easy to read?
120	Participant 1	Yes.
122	Interviewer	Okay, if you think about the school in general, how do you think the school can be more accommodating to learners who are colour-blind?

1:26 EGD because that's...

Challenges for learners who are CVD
physical barriers in scholastic resources

1:27 I feel like it depends on whi...

Accommodate learners who are colour blind
---

1:28 se the...

Accommodate learners who are colour blind
---

1:29 instead of ...

Accommodate learners who are colour blind
---

1:30 you can write down the...

Accommodate learners who are colour blind
---

124	Participant 2	I feel that since both of our cases are the student had to tell us that they are colour-blind, that maybe if the school can make everybody, the students more aware of colour-blindness so that students can, don't feel as shy and as intimidated to say hey, I cannot see this colour. For the rest of the students and the rest of the school to be more aware of colour-blindness to maybe have like someone to come in and to speak about colour-blindness and about, like, how to accommodate someone who has colour-blindness just to make people more aware of it. And also for the students to feel more safe to basic to have like maybe in grade eight, where they can come forth and say, okay, I have colour-blindness to have like a more safer environment for them to come out with boldness and say okay, hey, I cannot see this colour or, hey, please don't use this colour because I cannot see it. So just to be more to make the students and the teachers even more aware of colour-blindness in the school. I think that would be the first step for the school to take to improve.
126	Interviewer	Raising awareness.
128	Participant 2	Yes. Raising awareness.
130	Participant 1	I'm just concerned that a lot of the teachers now after we filled out the survey that you gave us, a lot of the teachers said that they were and still are very unaware of colour-blindness and they weren't sure how to answer some of the questions because they haven't even thought about it and in their how many years of teaching. So it's the teachers. It's not even the learners, it is the teachers if they were just more aware of colour-blindness. I feel that we could already start accommodating the learners better.
132	Interviewer	Thank you for that. If you think about school and moving towards more inclusive schooling, have you received any training to support learners with uhm barriers to learning? And in this case, more specifically, have you received any training to support learners who are colour-blind?
134	Participant 2	No, at the school I have not received such training.
136	Participant 1	As I have mentioned in my previous question, a lot of the teachers were so unaware that we haven't even thought about colour-blindness until you brought the survey. So no, I don't think that we have not received any of such training.
138	Interviewer	And my last question is what support do you need in order to accommodate learners who are colour-blind?
140	Participant 2	So I just want to find out when you say support, what do you mean?
142	Interviewer	Whether its training or or uhm it can be any type of support, whether you need training. Do you need additional time? Do you need a uhm just maybe something to read for more information on this, on how to accommodate them? What supports do you need, to include and accommodate those children in your classroom?
144	Participant 2	So basically, I think basically, the extra support that would be most important is awareness. So basically either having like someone coming in with a slideshow making the teachers more aware. Then the teachers can maybe take that information and make the students more aware. And then also with additional time maybe if there's a student that is colour-blind in class to have a little bit more time to prepare beforehand in classes uhm to say okay I'm not going to using these colours or let's change this in the book. If there is something in the book that the student cannot see, to maybe get it printed in a different colour. So in that case, it will completely depend on what severity of colour-blindness the students have in classes.
146	Participant 1	Ja I would have to agree, if if maybe they could come and just like raise the awareness.
148	Interviewer	So you say to come and make the teachers first of all more aware of colour-blindness and how it influences learning? Is that what you are saying? And then?
150	Participant 1	And then more support will also be being able to reprint some of the notes in not in a specific colour. So maybe just black and white reprinting parts of the textbook for the learners that are colour-blind in a specific colour. That would also be very helpful.
152	Interviewer	Okay, when you spoke about awareness, do you, would you say it's only the teachers that need to be aware or other role players in the school as well and why would you say so?

1:31 I feel that since both of our cases are the student had to tell u...	Accommodate learners who are colour blind
	Awareness

...	Teacher support (training)
1:33 As I hav...	Teacher support (training)

1:34 So basicall...	Awareness
	Teacher support (training)
1:35 then also with additiona...	Accommodate learners who are colour blind
	Learner support
1:3...	Awareness

1:37 more su...	Accommodate learners who are colour blind
	Learner support

154  
156  
158  
160  
162  
164  
166  
168  
170  
172  
174  
176  
178  
179

Participant 1	I think the teachers uhm and the learners. The learners should also be more aware of it, so that the teasing doesn't take place or even when they are doing projects, that they uhm are more aware of the learners in their class. And so that they're more aware, not just uhm are insensitive to the fact that they can't see certain colours.
Interviewer	Okay, so basically, in a group project, being understanding that this is my friend's challenge and how can I still include them in the project? Is that what you saying?
Participant 1	Yes, that's what I'm trying to say.
Interviewer	Okay, and awareness amongst the children as well?
Participant 1	Yes.
Interviewer	Okay, that's it from my side. Is there anything else that you maybe want to add?
Participant 2	Nope, there's nothing that I want to add.
Participant 1	What I can say after after being made aware of the colour-blindness through the learner that came to me last year, what I've tried to do what I've tried to do is ask in every class if before using a new colour now, I just ask if everyone is able to see the colour. If they don't want to tell me in class they can come to me after the class and just tell me. The teacher could just be more aware by doing that as well. It already helped.
Interviewer	Almost being open and creating an opportunity for them.
Participant 1	Yes.
Interviewer	Oh wow, that's quite special. I think that's very valuable information. Thank you for that. Ladies, thank you for your time. I really appreciate it. I hope you have a lovely afternoon further.
Participant 1 & 2	Thank you very much.

1:38 he learners sh...

Accommodate learners who are colour blind
Emotional/ social impact
Learner support

1:39 What I can say after...

Accommodate learners who are colour blind
Learner support