

SKSVPX001

INTERVIEWS

Transcript one

(the interview took 12 minutes, through a phone call)

Interviewer: Tell me about your experience teaching your son on how to read a clock.

interviewee1: So far it has not been so difficult, there are times when I teach him a little bit, and sometimes he tells me time that I know I had not taught him, but mostly he always reminds me the time for going to school in the morning after getting him ready.

interviewer: Why do you think that is the case?

interviewee1: He knows time but not perfectly, so he remembers a little bit that he knows every day and that leads him to know the little he knows now.

Interviewer: What does your son struggle the most with regards to reading a clock?

interviewee1: he struggles mostly with reading the clock in English and in the right format, he uses IsiNdebele, his home language, and when using his home language, the format not correct anymore, but he sees the exact numbers of the clock and speaks them, for example he would say "it's 6" in IsiNdebele and at times.

Interviewer: give me an example

interviewee1: usually when he is watching TV, he often tells me the time in his home language meaning that I should change the channel to the channel he wants and that time, and he has only known the time in hours not in minutes.

interviewer: what do you mean?

interviewee1: For example, if it is 10h30, he only says in its ten, it is only the hours not the minutes.

interviewer: Has he ever came with a homework related to this topic?

interviewee1: Nope, I do not recall having to help him with any homework of that sort.

interviewer: Is he excited to learn about time when you're teaching him?

interviewee1: I do not remember a day when he gets excited.

interviewer: what do you think causes that?

interviewee1: The problem is that I teach him the clock in English, and he changes mood because he does not really understand English fully the way he understands his home language.

interviewer: Why don't you teach him in his home language then?

interviewee1: I do not really know my home language that deep, I only know only the basics because mostly at school I was taught in English, so I almost struggle with IsiNdebele, while on the other hand he is taught in both languages, but he understands IsiNdebele much better.

interviewer: Do you use your phone or another device as a teaching aid?

interviewee1: yes, it is only my phone

interviewer: why don't you find another device other than your phone?

interviewee1: which is what? analog?

interviewer: yes

interviewee1: I do not have it in my house that is why he uses his cellphone device

interviewer: Are there any apps in his phone that are/could be teaching him time you know of?

interviewee1: yes, there is one app he had but it was not specifically in teaching time, it was an app where he was taking care of a person throughout the day, wakes up in the morning at 6am, having lunch at 12pm and have dinner at 6pm, that's where he learns most of the time in hours.

interviewer: how long did he use the app?

interviewee1: I don't remember that correctly, but it was not longer than 2 weeks.

interviewer: why do you think that is the case?

interviewee1: he struggles with English in most cases.

interviewer: How bad is he struggling?

interviewee1: Very bad, but he does know a few things it is just that the applications he has used are not easy so he loses interest.

interviewer: What do you think about the idea of a digital tool to help him learn to tell and read time?

interviewee1: I think it is a great idea, a very good idea.

interviewer: why?

interviewee1: because it will allow him to learn to tell/read time in a way that he will spend his attention on a cellphone, which he loves, but on the side, he will be learning all the format in an interesting manner.

interviewer: What do you think could be some good ways to making this digital tool?

interviewee1: You said it will be used by children around grade 1 to 3, right?

interviewer: Yes

interviewee1: I think including interactive cartoons is the best since this would be made for kids, and the cartoons should do something that has time around them, like when it's 6am in the morning they wake up, and maybe at 6:30 am they wake up, it should be something along those lines, I think that would be the best approach

interviewer: why that specific approach of talking cartoons?

interviewee1: I don't think it should be too serious, it should be light and catered for kid basically, and after all kids love cartoons

interviewer: Are there any constraint I should take into consideration implementing a solution through its design?

interviewee1: In the application?

interviewer: yes.

interviewee1: mm, what can I say, when you are teaching them time though app it will be in English right?

interviewer: uhm, I don't know, what do you think?

interviewee1: When you are teaching them through English, do not use big or bombastic words, just use very light English for kids.

interviewer: why? won't it be good for children to learn deep English at same time?

interviewee1: no, of course not, remember that some of the kids like mine do not have English as their home language, and they are so young and by doing that you would be making them lose interest in the app.

interviewer: oh, okay, what type of characteristics would like to see in it?

interviewee1: I think it should not have a ton of options/features inside, they should be small number, and it should not be too fast at the same time, I don't know if you know what I mean, because children are not the same, especially my son is for sure a slow learner if you know what I mean.

interviewer: what do you mean?

interviewee1: He is very smart, but it takes time for him to grasp things, he is a slow learner, like he is not super-fast at grasping what is taught to him, it should be taught at a slow pace, but once he has grasped everything then he will not forget or confuse them.

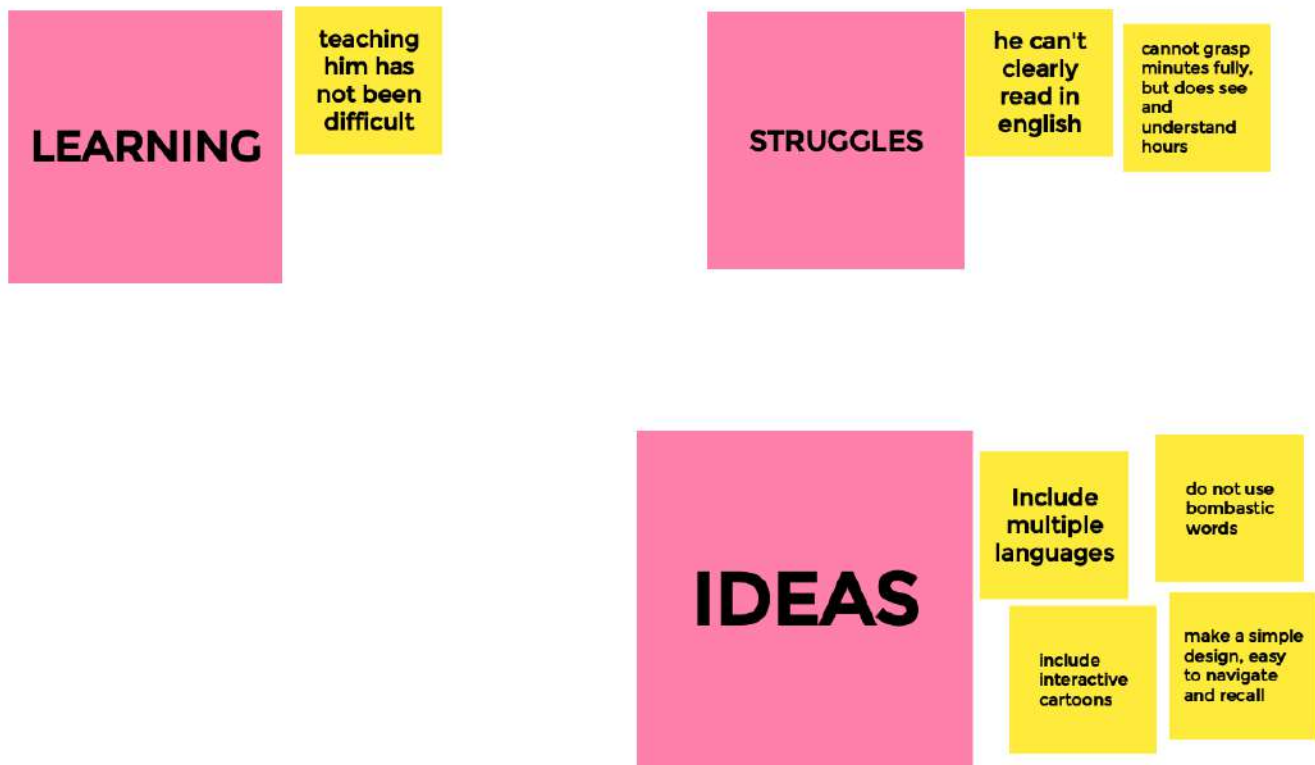
interviewer: oh, now I understand you, thank you very much for your time.

interviewee1: Pleasure.

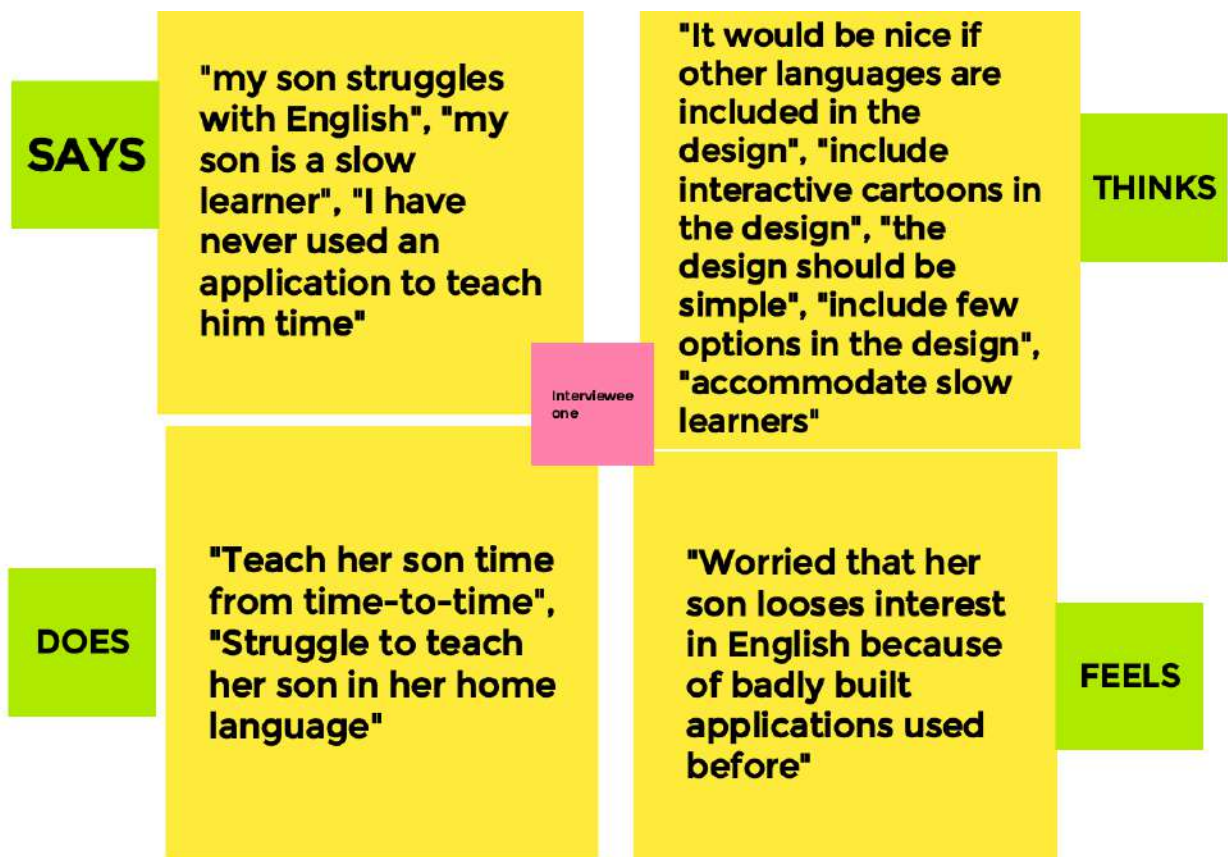
Interviewee one recruitment process

This is a friend, I asked her for the interview, I decided she is good for interviewing since she is so young and represents young adults. She is in her early twenties, a young black mother, living in Mpumalanga, and is currently unemployed, with the highest educational qualification attained in high school. She is a single mother. She lives in a place where 3 in 5 people are working, 2 in 5 are married, 4 in 6 have highest education is High School and 2 in 6 highest level of education is College or University.

AFFINITY SORTING.



EMPATHY MAP.



Transcript two

(the interview took 21 minutes, through a phone call)

Interviewer: Tell me about your experiences teaching your primary school learners how to read a clock.

interviewee2: The experience I noticed on me? or the experience of the learners on how they have been afterwards? What do you mean?

Interviewer: Yes, the experience you've had during the teaching, and the impact on the learners themselves

interviewee2: Well after teaching the children time, they get very excited and it gets to a point where whenever I am wearing a watch they run up to me and start touching and try to tell me the time, and since in classroom we have an analog watch, they often remind me that why I am still teaching them because they can already see that it is launch time, when I ask them who told them that, they point at the analog watch that is pinned to the wall, that makes me laugh at times because what I had taught them is what they are applying on me, meaning that I should stop teaching them and let them go have launch, as I should, but it makes me happy that they do learn and understand what I teach them, in this case time, so they mostly enjoy learning about time.

Interviewer: Oh okay, so how about your experience, how has it been?

interviewee2: It is very good because mid-lesson they ask questions and point at the watch and ask what the time is now which makes me very happy because they see what they are taught, it's tangible, and it makes me to be interested and happy because at times they ask questions that I know they would not be able to grasp fully but they ask because they are interested and do enjoy the lessons, leading me to sometimes off track and teach them other things that I know would help them understand better.

Interviewer: Please give me an example

interviewee2: They would ask what time it is, let say for example the time is 9:45 am and I know that telling them it's them quarter to ten would be problematic because that would imply that they already know what quarter is regarding to time so I have to make examples, and remind them of counting in five's and making them understand for that moment, but I know very well that it does not sink in as the very moment but in due time they would get, because some do quick and some don't

Interviewer: What do they struggle the most with regards to reading a clock?

interviewee2: well, remember that in elapsed time there is "to" and "past", so they often ask me to remind them, they say something like "teacher when the larger arm is pointing at 3 is that past or to?", so I have to explain again that when it is pointing at 3 or before 6 it is quarter past and quarter to when it is pointing to the left of 6, then they go "ooh so when it is pointing to the left of 6 it is quarter to and quarter past when to the right of 6", but the biggest challenge is that, is when it is pointing to the right of 6, in the quarter to region, it get very tricky for them.

Interviewer: Do you give them homework related to this topic of reading time?

interviewee2: Yes, I give it to them so that they should do it and get help from parents

Interviewer: How does that go?

interviewee2: we give them multiple pictures of an analog watch with the arms pointing to different times, and we tell them to explain in the homework what them times are and them should paste the picture given to them to the side of their explanation, so since when I teach them time I do so on the chalk board, so the learner must now go and explain to his/her parent or whoever is helping him/her what I have taught him/her and also get the help from the parent.

Interviewer: Do they seem excited to learn?

interviewee2: They feel very, very happy, they are asking the same thing multiple times, "we are going to learn about time today", I reply yes, then they start pointing and explaining what time it is now without me asking them any question which shows me how interested they are, but the problem is that we only teach them in analog not in digital form.

Interviewer: why?

interviewee2: that is the curriculum.

Interviewer: Do you know maybe what could be the reason they feel very happy about being taught about time?

interviewee2: well from what I noticed it's because they love watches, I saw that from them and my own children, my children every time we get into the shop, they want me to buy them watches of different colors that they see from their friends.

Interviewer: Do you use your phone or another device as a teaching aid?

interviewee2: On the learners at school no, because I only use the chalk board and draw the analog watch there, and teach them using it only, but there are times where they grab my phone and start pressing it and ask me what questions that are related to time, but that is also not so common.

Interviewer: How about your own children?

interviewee2: Yes, I do, because in my phone it is very easy, since they only see numbers that they know how to say.

Interviewer: How do you go about teaching them on your phone?

interviewee2: uhm, so they already know how to count from one to hundred, so it is easy for them when I ask them what time it is, they say something like "it is six forty five" and in my mind I know that is quarter to seven, so what I did at first was teaching them what quarter past, half past, quarter to and O'clock it and that got that really quick. Another thing they understood elapsed time before up to the first 30 minutes of an hour (up to half past) and struggled a little bit with "to" region, but they go along with it when I taught them to subtract the elapsed time from 60 then they practiced it for a few weeks and now they are doing it very well.

Interviewer: Is there an application on your phone that you think maybe has also help you child learn time?

interviewee2: No, I do not recall having such. I have never had such an application.

Interviewer: why could be the reason for that?

interviewee2: I love teaching my children, even my learners at school manually and I want them to touch and feel what they are learning. I think also teaching the kid manually broadens the children's views, in which they get to solve problems not using technology all the time, but also use what they must learn.

Interviewer: What type of manual methods do you use?

interviewee2: It is things like getting them to draw and color the watches or do subtraction calculations to tell me what time has elapsed.

Interviewer: Oh, okay, what might be some good ways to approach this design to teach time?

interviewee2: Basically, it should start from the basics, the kids need to learn to know how to count using ones, twos, threes, fours, fives, e.g., 5, 10, 15, etc. up to a hundred, and they should learn to do this forward and backwards. So it will be very easy for them to learn time, because the root of time is addition and subtraction, this will help them understand both analog and digital time, as in analog they will track longer arm which if for minutes, and the shorter arm for hours, for example it will be easy for them to understand time in the "to" region since they will know that if the count from O'clock backwards then those minutes are the minutes to use in saying maybe "it is nine minutes to ten".

Interviewer: How do you feel about the idea of a digital tool to support learning to tell time?

interviewee2: Personally I feel like it's the best idea, because when you teach a child using method that they are interested in, you will for sure get they're undivided attention, and they learn the most when they are enjoying, and they will feel like they are playing, and this will stay in their minds since it is fun for, children nowadays remember everything that has to do with phones and playing, and this will reduce an effort that teachers have to make because by that time the kids would already have some foundations from the game.

Interviewer: Are there any constraints or wishes we should think about when designing a solution?

interviewee2: It must not be difficult, for example when teaching them subtraction and addition, it should not use big numbers that are in hundreds or thousands because that will confuse them. So, it should be numbers such that if one of them decides maybe to use objects to do subtraction and addition it should be easy because they have already been learning about things like that.

Interviewer: okay, what type of characteristics would like to see in the solution?

interviewee2: Cartoons are the best option, and using a lot of pictures instead of words, because it would allow the child to explain how they see what they see in their own words. If a child has struggles with reading, a picture allows him/her to be able to put it in his/her words.

Interviewer: Oh, could you give me an example?

interviewee2: yes, sure, maybe instead of using words when teaching them addition and subtraction relating to time, there could be a picture with a hand open and they should count the number of fingers open, then maybe get back to an analog clock where they also count how many minutes it would take for the time to get to half past.

Interviewer: anything else?

interviewee2: Maybe add things like cars where they could maybe count the number of the wheels, or add an interactive cartoon that maybe has to wake up, go to school, and would tell the kids things like "the cartoon start going to school at 6 O'clock in the morning, and he/she will travel for 15 minutes, what time will he/she arrive at school?" then add maybe 3 options, i.e., at half past six, at quarter past six or at 6 O'clock. Then after they select each option they select, there should be any explanation why they are right or wrong.

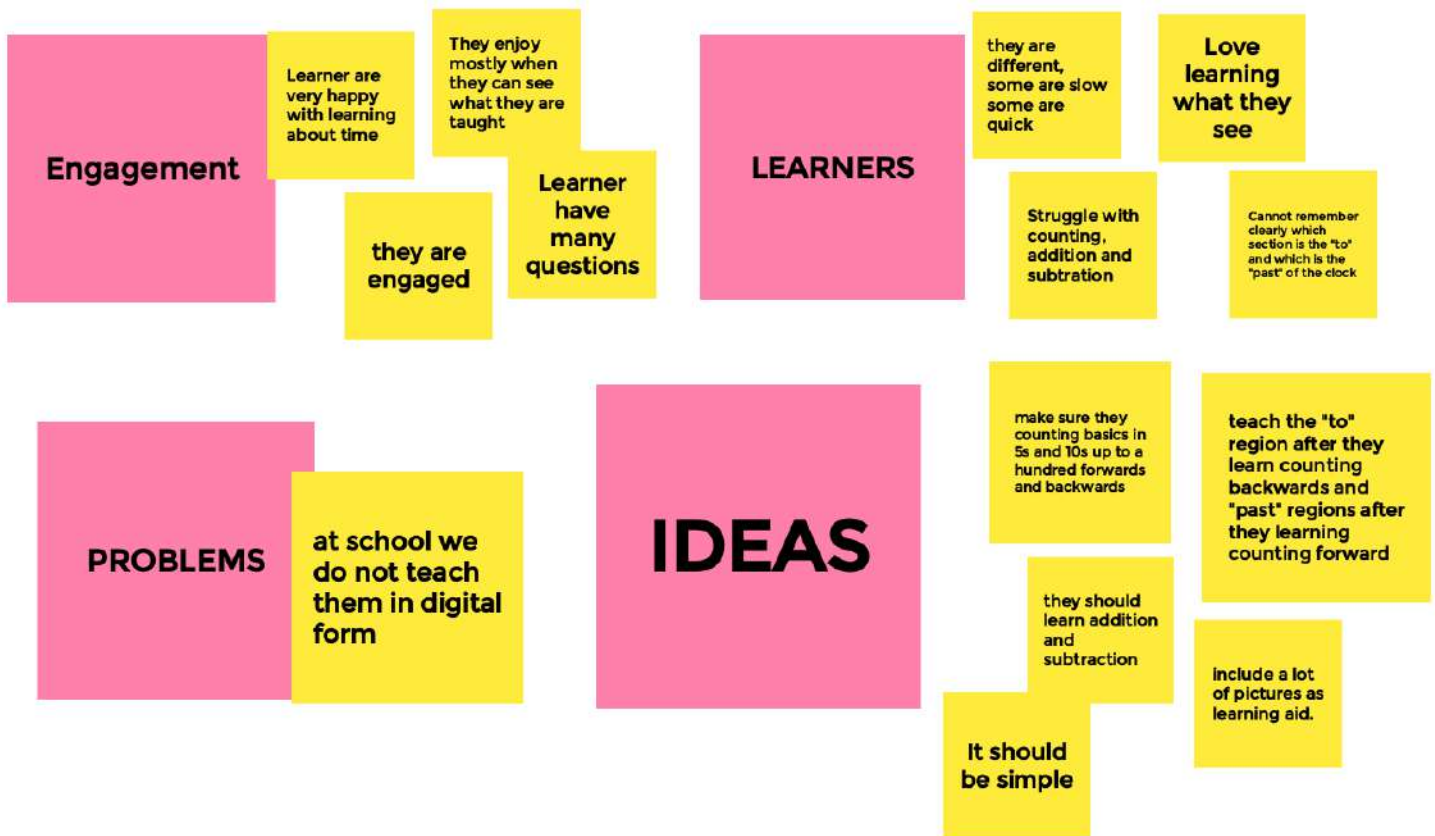
Interviewer: thank you for allowing me to interview you.

interviewee2: You're welcome, I would love if after the solution has me implemented let me know so that I could help you present it at my school and other school.

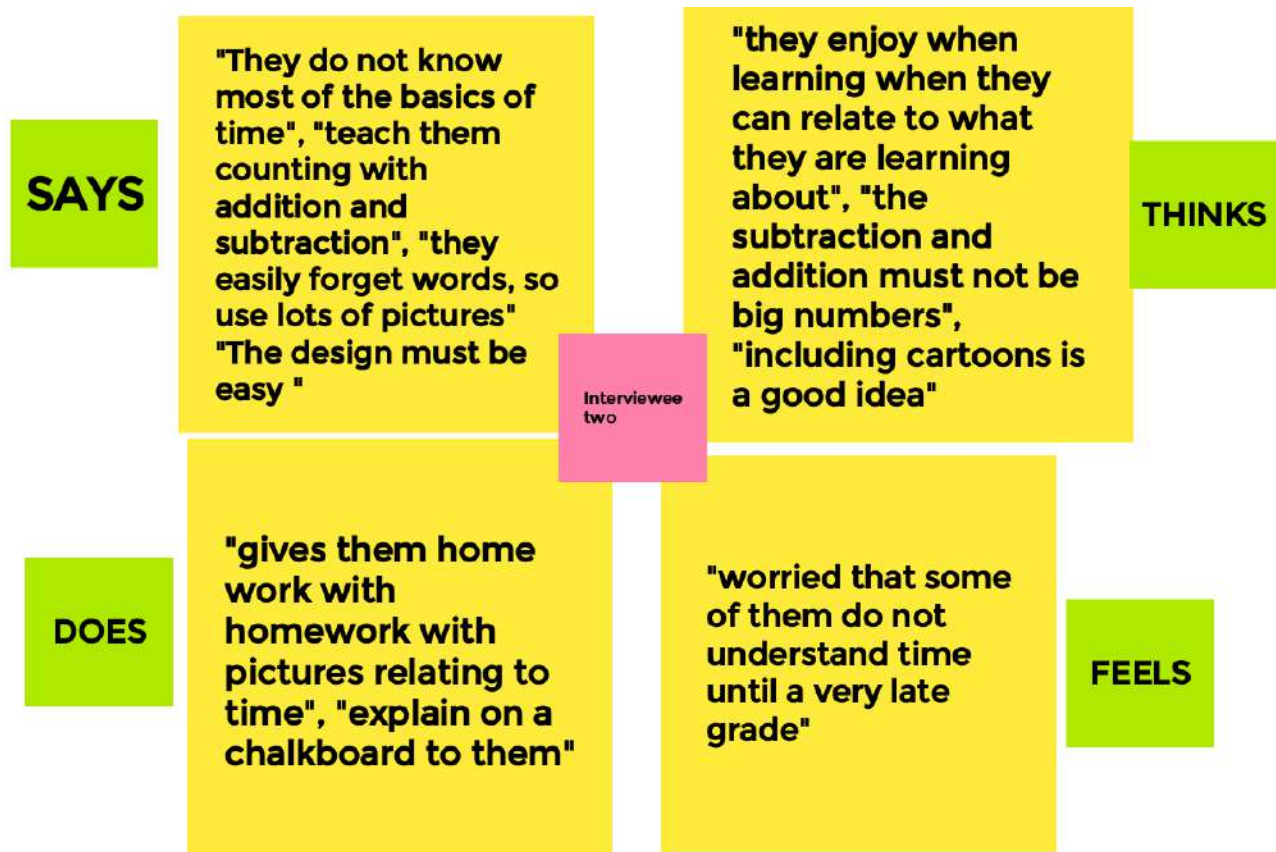
Interviewee two recruitment process

This is a primary school teacher, teaching in Mpumalanga, I asked my siblings if they knew any teacher in the foundation phase grade and they called and asked her for permission, then I was granted her details and permission to interview her. She is in her mid fifties, a black mother of three, living in Mpumalanga, with the highest educational qualification attained in University. She lives in a place where 3 in 5 people are working, 2 in 5 are married, 4 in 6 have highest education is High School and 2 in 6 highest level of education is College or University.

AFFINITY SORTING.



EMPATHY MAP.



Transcript three

(the interview took 17 minutes, through a phone call)

Interviewer: Please walk me through your experiences teaching your son how to read a clock.

interviewee3: I have learnt that since my son is very young, I should not teach him about time all at once. So, I would teach him time from o'clock to quarter past, then from there to half past and from there I would leave him for a few weeks and observe if he has fully grasped it, it he has

then I carry on from half past to quarter to, then to o'clock again, but if he has not grasped it then I would start afresh. This is because since he's so young I should not throw a ton of information and expect him to fully grasp it at that instant.

Interviewer: What does he struggle the most with?

interviewee3: Um It has been easy for him to understand time from o'clock to half past but has been really difficulty to understand from half past to o'clock. It took him almost 3/4 weeks for him to understand it.

Interviewer: Has he ever had a homework related to this topic?

interviewee3: Yes, the one I remember is that at first he had to draw the clock and the second time we had to make a clock using boxes and it had to be set on specific time, and they had already taught him how time at the time but obviously the did not teach him all about the time, because when I would teach him it was almost as if I was start from scratch.

Interviewer: Is he excited to learn anything about time?

interviewee3: It is not the same, sometimes he is happy and he even takes his notebook out and writes down most things I teach him, but at other times he just does not look happy because he probably wants to do or learn something else and here I am teaching him about time so, or it could be because at times I find him watching the television and or watching videos on the phone and I tell him to come and learn he becomes resisting and tells me to wait a little longer until he is done, but eventually gives in at times.

Interviewer: Do you ever use your phone or another device as a teaching aid?

interviewee3: Yes, my phone is in 12-hour format, and I teach him from time to time.

Interviewer: What applications have you ever use to teach him about time?

interviewee3: There has not been any application that I use to teach him because he often uninstalls the apps that he does not want to play anymore so I go with what he wants to play in most cases.

Interviewer: why do you think he uninstalls them?

interviewee3: So, my son is not able to read very well, so the biggest reason I think it is because he struggles to read what the application have written, so he relies on cramming the ins and outs of the game, but when it gets too much for him, he becomes disinterested and quickly uninstall the application and finds a new one to try.

Interviewer: Can you please show me a few of those application after this interview?

interviewee3 Yes, no problem.

Interviewer: Thank you very much, I appreciate that, are there any constraints or wishes we should think about when designing a solution?

interviewee3: Since there is the analog and digital one, you should not mix the two when teaching, the first one to teach should be the analogue one, even when teaching the digital form, it should be in 12-hour, so that it is like the analogue, so you do not want to confuse him/her, you must choose one first, the analogue and 12-hour one first. As time goes by it should then teach the 24-hour watch and that will also add up to the knowledge of not struggling with reading numbers much more.

Interviewer: How do you feel about the idea of a fun digital tool to support learning to tell time?

interviewee3: I think it is a brilliant way because it will accelerate the learning and will be much faster than if a teacher or me would teach him, because mostly the tool would be used in his own time and in his interest. What I love about this idea is that he will be learning in a fun way that he enjoys.

Interviewer: What might be some good ways to approach this idea of creating this digital tool?

interviewee3: Well, I'm not so sure but let me know if this answer is bad.

Interviewer: Oh, remember that this is an interview among other interviews to collect and study the needs of people so there is no wrong or correct answer at all.

interviewee3: Oh okay let me try, the only way to approach I think it could be if the application has maybe a voice that he would repeat after and follow along guiding him though, so starting by teaching them the basics because some don't even know to English or number very well so starting with alphabets and numbers would be the best in my opinion, and after the should be rewards for everything that he learns as that would show him that he is on the right path and would allow him to engage to fully get more points.

Interviewer: oh, that is a very good approach I think, I never thought of something like that.

interviewee3: Did I put it well?

Interviewer: Yes, of course, two more questions to go, are there any constraints or wishes we should think about when designing a solution?

interviewee3: This is for only young children, right?

Interviewer: Yes

interviewee3: yea I think there is, if the digital tool would be appropriate for his age, and it should only stick to being friendly, and for the most part it should not be addictive because that will cause the user to learn time but affect other sides of his life since he will be attracted to the game, and that could cause psychological things.

Interviewer: That was the last question, thank you very much for taking your time in helping me gather this information.

interviewee3: You are welcome.

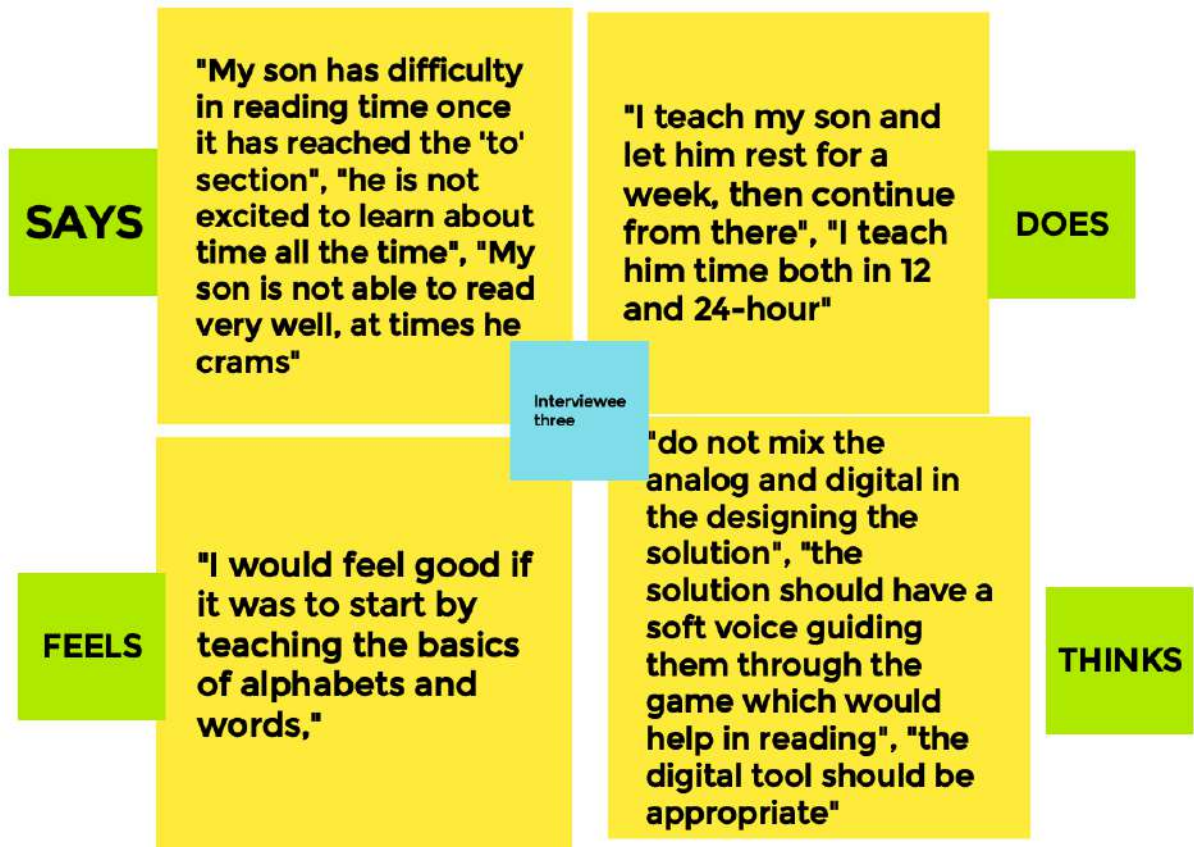
Interviewee three recruitment process

I spoke to my friend about the assignment and asked for help with anyone in the age range I specified and I was provided with her details. She is my friends aunt, and unemployed black mother of one, she is in her mid thirties, living in Gauteng, with the highest educational qualification attained in High School. She lives in a place where 4 in 5 people are working, 4 in 5 are married, 5 in 6 have have highest education is High School and 4 in 6 highest level of education is College or University.

AFFINITY SORTING.



EMPATHY MAP.



Recruitment summary

I recruited the three participants with age sampling, in early twenties, mid-thirties and mid forties, this to represent the different generations, and to show results in different parenting age groups. The recruited participants have a significant amount of bias, with one being all of the participants are female, secondly are of black ethnicity, thirdly two are from the same region, and lastly some all of them went to high school, but one went to university thus leaving out those that did not go to school at all, and showing imbalance in education of the sample. The overall recruitment process was limited to a small side of the population and and three participants leave out males.

IDEATE

OK

It is now
quarter to
seven. Let us
wake up
in the morning
let us wake
up

WAKE UP

17/09/2021 23:26

SELE

- EN

- I

- I

- S

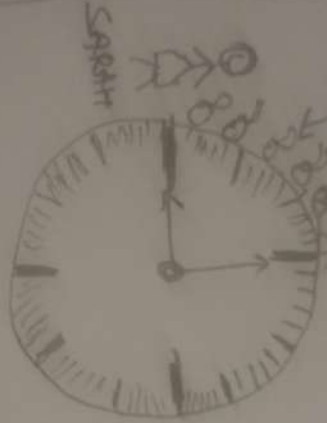
SELE

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Apple's O John



How many apples
there is from John
to Sarah?

1 6 3 12
2 10 4 15

ADDITION



17/09/2021 23:26

SELECT LANGUAGE

- ENGLISH+1
- IS124LE
- INCNDEBEL
- SESOT+10

SELECT MODE

- SLOW
- FAST
- NORMAL

17/09/2021 23:26

to save?

1 6 3 12
2 10 4 15

ADDITION 😊

* $5 + 5 = \square$ hint

* $10 + 5 = \square$ hint

* $15 + 5 = \square$ hint

SUBTRACTION

* $60 - 5 = \square$ hint

* $50 - 10 = \square$ hint

QUARTER PAST TWELVE



12:15 PM

"P-for past"

))) play voice

"t-for to"

))) play voice

"Q-for quarter"

))) play voice