

https://dspace.org/

From textual problems to mathematical relationships: case studies of secondary school students and the discourses at play in interpreting word problems

Tobias, Bruce

2011-05-30
http://hdl.handle.net/10539/9955

Downloaded from a DSpace repository. https://dspace.org/

Corona focus group discussion

Stanza 1

1.	BT	Let's just start by just asking you a little bit about yourselves... just to set the scene. Roenel, you tell us where you're from, umm, etc.
2.	Roenel	Err... I'm from Soweto, but I live in the hostel now... I live with my mom and my dad and my aunt... and, umm...
3.	BT	Okay, that's fine. In the hostel do you speak... this applies to all of you of course... do you speak English generally? [All say 'yes'] But you also speak your mother language?
4.	Roenel	I was surprised when I came in in grade 8, coz like, we don't usually speak English. With my aunt and that I usually speak, you know Sotho and all that. And then when I came to hostel I was surprised because all of the people they were all speaking English, so it became [inaudible]...
5.	BT	Okay, Ayanda, what about you?
6.	Ayanda	I'm Ayanda [also gives surname]. People usually call me [a mispronunciation of her first name] because they can't pronounce my name properly. I'm 15 and I live in Soweto. I'm from... err... a location primary school and then I came here, so it's like a huge difference to me, but people don't really notice that I'm from a location school to, like a model C school. Yeah, and I'm really proud that at a younger age I'm in grade 10.
7.	BT	Right. So at your primary school were you taught in English?
8.	Ayanda	Ja, we were forced to talk in English coz, everything you did was… it was just English. I even had to go to the office you had to prepare, what to say, to say to the principal you had to prepare in English.
9.	BT	Okay. It's quite difficult is that, because it's not your home language?
10.	Ayanda	But I was used to it... like everybody... even at home I would sometimes talk in English with our family...
11.	BT	Oh, okay. Right, and Lerato?
12.	Lerato	I'm Lerato, I come from Midrand. I'm 16 years old now.
13.	BT	So you're actually from Midrand?
14.	Lerato	Ja. I enjoy school, and I like maths.
15.	BT	I noticed that from some of your comments, you said you were quite interested. Okay, and... umm... sorry, Roxanne.
16.	Roxanne	I'm Roxanne and I'm 16. I come from Orlando in Soweto and I stay in the hostel since I need more time to do my homework and to study, since I don't get that a lot at home since I tend to watch too much TV.
17.	BT	My kids exactly.

18. Roxanne And then I don't really like maths. I, I actually enjoy geography and biology more than maths.

19. BT Okay. Alright, now I'm just going to ask a few questions, nothing threatening, it's just about what you wrote. If you don't want to answer you're free to say you don't want to answer that question, but I don't think there's going to be anything that will offend you or whatever, okay.

Stanza 2

20. BT Right, let's start with Lerato. You said that word problems are problems that they give you. Okay, now I want you just to explain a little bit more about that, because it didn't tell me enough. What did you mean by that statement?

21. Lerato They give you a sentence that's in words, not in numbers. They just give you the sentence. That's all they give you, in words.

22. BT Okay. What is it about the problem, what sort of problem is it, do you know? Because you're saying it's the problem they give you.

23. Lerato [inaudible – doesn't seem to know how to answer]

24. BT Umm, okay. That's fine. We'll probably come back to that because there are other people saying similar things, okay.

Stanza 3

25. BT Ayanda, you wrote that word problems are given to you in words and not as an equation. Okay, something to that effect. Tell us what made you think about it as a word problem then.

26. Ayanda Err, I prefer to be given an equation rather than words, coz sometimes they put like difficult words, and sometimes they try to trick you by saying, maybe similar not to understanding them, it seems very complicated to understand them. It's better with numbers then you know, then you doing numerals or equations and stuff... in numbers.

27. BT So it's better to have it in numbers rather than in words? [Ayanda nods.] Is that right? Okay, is that just the fact that it's given in words, is that why? Is that what makes it difficult?

28. Ayanda Ja, it's the words.

Stanza 4

29. BT And, why are the words difficult for you?

30. Ayanda I, sometimes I don't understand, but I really try very hard to learn. I practise them but, sometimes if I practise them on my own I, I tend to try to get the right answers but, sometimes no, I need somebody to help me like my maths teacher...

Stanza 5

31. BT And is it the meaning of the words that is a problem?

32. Ayanda Nooo...

33. BT Not necessarily. Okay.

Stanza 6

34. Ayanda — It's the tricks. Sometimes they'll tell you... you know like they give you something very easy, and then... err, you think, okay, it's too hard and then you, you make sure that the other people are not answering.

35. BT — Okay, I think I understand what you're saying. It's how they say it, how they phrase it.

Stanza 7

36. BT — Alright, Roxanne... I got the name right... Okay, you said that word problems are given in the form of a story, which I thought was very interesting... A story that you must solve. Can you explain what you mean by story to start with?

37. Roxanne — A, a like story, like in English when you read a story it's a whole lot of words. And in maths it's a lot of words but then in between it they put numbers, numbers that you can work with in order to... err, in order to answer the required question. So I defined it as a story because they tell you what is happening and then afterwards they ask you a question abou... related to what's happening, it's related to the story given. And so I can say it's the story [inaudible]...

38. BT — Yes, okay. Is there any reason why you chose the word 'story'?

39. Roxanne — No.

40. BT — No, I was just wondering, no, no particular reason?

41. Roxanne — No.

42. BT — Umm... okay, we'll come back to that if, if things go that way.

Stanza 8

43. BT — Alright Lerato, we've got another one for you. Okay, you went on to write that word problems are problems... I said that one... yes, that they give you... we're coming back to that one. Who are they?

44. Lerato — The teachers.

45. BT — The teachers, specifically. Okay. Alright, and then we spoke about what you mean by problems... okay.

Stanza 9

46. BT — Roenel, for you... okay you said that word problems help us to solve problems better. Can you explain actually how these help us with the problem-solving process?

47. Roenel — Ja, like Roxanne said, you know like when they give you a lot of words, like a whole story and they just give you numbers then in order to solve a problem you just use the numbers you are given by putting an equation and then, you know working it all out and then you getting the answer And a story… you know it's just like telling you like something else. But I think it's basically logical thinking, you know like it makes you think like a lot, and just you know...

48. BT — Okay, I think you said something about logical thinking later on, we'll come back to that, because I've made a note of it.

Stanza 10

49. BT — Okay, Lerato, you said word problems are when you solve a problem about maths. Umm, do you think word problems are specifically maths?

50. Lerato — Yes.

51. BT — They are. Okay that's in your experience of them. Okay... umm, why do you think that?

52. Lerato — Because in between the sentences there are numbers. So you could use those numbers to do the algebra.

53. BT — So that's how you see a word problem specifically? Okay, now that's very interesting, it's the first time I've heard of someone talk of word problems quite like that.

Stanza 11

54. BT — And now Roenel you again, you explained how you solve the word problems... umm, and you said the following, instead of reading over word by word, okay… you summarised it and solved it mathematically. Can you just explain that a little bit more to us?

55. Roenel — Well you just... umm... you read, you read like the, the whole problem, and then you just... actually you just read what you given, you know like sometimes when you solve the problem you write what you given and then... or you write like everything that they like, if they say solve the area of a rectangle, you write like... and then write the length and then the breadth, and they're saying solve the area, that's the area... you can use the length and breadth... just use what you given, you know, to calculate... umm, what is needed by the question...

56. BT — Okay, so are you saying that, that some of the things in the word problem you ignore?

57. Roenel — Not really. But I just like using what I'm given to solve the length, the basic question whatever, to get the answer. I just like reading over it like lots of times before.

58. BT — And then you pull out what is important.

59. Roenel — Yes.

60. BT — Okay, I get it.

Stanza 12

61. BT — Alright, Lerato back to you... I seem to be talking to the two of you at the moment. Okay, you said word problems are about how you know your maths, which I also thought was quite interesting. Umm... in what way do you see word problems as helping you to know maths?

62. Lerato — By giving you different things, different equations. You use different equations to get a different answer. So you don't need the same equation for different...

63. BT — ... for different word problems, you mean? So, so there's a variety of different word problems, is that what you say? [Lerato nods].

Stanza 13

64. BT — Alright... umm, Roxanne, right. In a similar way you said word problems test your ability to solve problems in a logical way. So it wasn't you [referring to Roenel] who was speaking about the logic, but anyway, so if you want to comment about the logical side of things then feel free to do that, okay? Alright, let me say that again, in a similar way you said that word problems test your ability to solve problems in a logical way. Alright, can you explain what you mean by test your ability?

65. Roxanne — Well maths... err, it's... err, like... people have different abilities, others they can, can understand word problems by, in different ways, even... err, they understand it by picturising everything that is given in the statement. So if actually... err, word problems are, are a way of trying to see the whole world you understand them, and things. And, if you can understand the statement and you can solve the required... err, question, then it helps, like it helps you to think in a logical way. It's not like, it's not something which you normally do every day but, like that given question it like, it tests you on your abilities to think fast in the required time and to answer the question and how well you understood the question.

Stanza 14

66. BT — Okay. And that's all in the mathematical sense?

67. Roxanne — I think it's basically in every subject but not, like maths tests you like more than any other subject. Because maths it's numbers and maths is, that is actually, in, like in geography and... err, and history, you sometimes use facts and then you sometimes use your own opinion. But then maths you can also find where sometimes you can use your, you can like make up your own way to solve the question, but sometimes like you have to do it this way or else you cannot get the answer with the wrong … [inaudible].

Stanza 15

68. BT — Okay, I want to stick with that for a minute. Firstly... umm... So you saying that there are word problems that are not in maths?

69. Roxanne — Sometimes they, okay everything in life is a bit related to maths, and sometimes it's not. Coz when you calculate height and those things we use, like the things that we really like use in our like everyday lives, but maths they put it in a much more different way. Like they ask you, like to, actually... umm, calculate like the height, sometimes you can look at it and you can estimate, but maths you get like a actual occurrence of the length or height of, of that required thing.

70. BT — So what I hear you're saying there is that maths word problems are different to other word problems.

71. Roxanne — Yes.

72. BT — Okay, I think that's what I heard.

Stanza 16

73. BT — Then the other thing that you mentioned was, that sometimes you get a word problem... umm, that you can only do one particular way to get the answer.

74. Roxanne — It's like sometimes like, sometimes in an exam I try to, it's like I do things and I like... Okay, the teacher teaches you in this way, but when you get to an exam you can't, you don't actually quite remember what she said, so you try to use, you

try to solve it in the best of your understanding. And then afterwards it's like you do get it, but then sometimes you just like in your own way you just like make a mistake or you use another number instead of the, the... err, number that was given to you. And then maybe... but you sometimes you do still get the correct answer but then most of the time you getting the correct answer a bit slow.

Stanza 17

75. BT Alright, Roenel did you want to say anything about that, in terms of the logic?

76. Roenel Ja, I think, ja, it is basically logical thinking coz when I wrote that we use word problems basically in maths, you know like you can use them to calculate anything, that's why like I think you really, really need maths, like maybe when you stuck in a problem or something just by using your maths... err, skills and all that, you can use to calculate like the... err, the, the, let's say the length of [?], or wherever you are like in trigonometry, you have to calculate the height and all that, it's just a logical thinking about things you really need, but word problems like they really help us a lot, they really help us a lot.

Stanza 18

77. Roenel Coz like you can take what they give you and make it into your own story and in that way you can understand better and just use the numbers that you given and, and then...

78. BT So, just to, to go further on that, if you can take it and make it into your own story is that not perhaps saying that the story itself is not important? The story can change, if you know I mean.

79. Roenel It can change, it depends in what way you picture it, you know like. Ja, but just use like, ja it depends on what made you picture it, whether it's your own story, make it look nice, but just put numbers... [inaudible]...

80. BT Okay. We're going to come back to that stuff at a later point.

Stanza 19

81. BT Okay, Ayanda if we can come to you for a minute? You describe how you tried to do question two, which was quite interesting because you said by using the table. Do you remember question two? That was the one about... [Ayanda makes reference to *television*] that's correct... the television rental thing... Firstly, why did you use the table?

82. Ayanda Err, I...err, I saw it in a visual way so that I divide the two shops and divide the... what was it... the basic rates and the daily rates. So I put them in one block, and then calculate them afterwards. And it seems easier than just writing it all down. Coz you wouldn't even see what's happening if I just wrote it down, just wrote first shop and then second shop, then you write the answers, it's more complicated.

83. BT Okay, so you're saying the table gives you a way to put the information so that you can see it easily?

Stanza 20

84. Ayanda Yes.

85. BT Okay, alright, I would say then in what way do they help you... umm, to try and solve the problem?

86. Ayanda Umm... the basic rates, it showed that if you divide them it will give you one answer and then if you divide the daily rates it will give you another answer. But if you divide the price of one shop it gives you the same answer as the basic rates, and the second shop it will give you the same answer as the daily rates. So it seems easy.

87. BT Okay... umm... and then I was going to ask you, let's say... umm, that you didn't know about the table, for argument's sake. Is there any other way that you might handle this problem? What do you think you would have done if you didn't think to use table?

88. Ayanda I would have started by solving for one shop and then the other shop.

89. BT Okay, but do you feel that that wouldn't have been as organised...

90. Ayanda Yes.

Stanza 21

91. BT Right. Roxanne, let's come back to you. You said that word problems can be difficult if you misread them. Now can you tell me what you mean by misread them?

92. Roxanne Sometimes you're given a statement and then, like let's say in an exam, most of the exams that we write they're quite long, and then if you give us a word problem, you know like when you don't have a lot of time to do it... So, if you misread it, if you misread something you're not going to understand it fully, so that will determine whether you are going to get the correct answer or the wrong, or the incorrect answer. So, the time it takes to read the statement and to understand it is going to show in your answer.

93. BT Okay, that's true. But then I'm still not with you, when you say misread...

Stanza 22

94. BT ...umm, let me be more specific. Are you saying that you, you misinterpreted the meaning of the words?

95. Roxanne Yes.

Stanza 23

96. BT Okay, or you don't understand the meaning of the question?

97. Roxanne It can be both things because you can misinterpret what they're saying, or you can, you might misunderstand what the, what the actually, what the question actually means.

98. BT Okay, now do you think that your home language not being English might be a problem there?

99. Roxanne Yes.

100. BT [Roenel nodding...] I see Roenel agrees with that. Okay, it could be, I mean it very definitely could be, even sometimes... umm, in my own experience with English as my home language sometimes I misunderstand what people are actually saying. Anyway, that's just interesting.

Stanza 24

101. BT — Okay, Ayanda, you said that sometimes you don't understand. Umm... in what sense do you not understand, can you say, can you explain that a little bit more?

102. Ayanda — Sometimes you're given like a word problem, and like sometimes like I said you misread. I think I misread... err, most of the questions, sometimes I do read them properly, but then don't understand then what's happening.

103. BT — Okay, and is it not that it's sometimes that the words you actually just don't know, [coughs] excuse me, what they mean?

104. Ayanda — Sometimes ja, I don't know what they mean, but then...

105. BT — And then does that cause you a problem?

106. Ayanda — Yes it does.

Stanza 25

107. BT — Okay, Roenel... umm, you said you enjoy word problems, okay, that's what you wrote at the beginning. And this is very much tied to what you said at the beginning about reading word by word etc., okay? Tell us exactly what it is about word problems that you enjoy.

108. Roenel — Umm... coz basically I like working with numbers and solving the problem with numbers. So they just give you a story and you just picture it and you use the numbers and... I just like working with numbers, basically, and I hate like... I must say I really hate reading. I don't like reading. So by giving you the problem, instead of you like [inaudible]... just give you the main problem, and you just use the, the, the numbers that you're given and I, I can solve it, you know by using the numbers that they give me, and I find it very fun. Coz you just [inaudible] I don't know [?] Just by thinking about it just... you solve it in your own way, and then sometimes you get the answer and sometimes...

Stanza 26

109. BT — Umm... okay, I'm not quite with you here because you said you don't enjoy reading so... but you enjoy the numbers. Okay, so in a word problem, umm, if you don't enjoy the reading... you actually have to read it to start with, don't you, and so you mean it's the actual solving of the problem that you enjoy?

110. Roenel — Ja, it's the actual solving, that they just give you a story and then you said just solve it by using the words, by writing down the words. So I like it because they ask you to solve it by [inaudible]... I just like the solving part, but the reading is really a hassle with the…

111. BT — So, you find that the difficult part about word problems?

112. Roenel — Ja, in reading... and sometimes like you don't understand the question, and even though if you go over it a lot of times, like an exam there's no-one to help you read the question, that's why you just end up getting the answer wrong. Or, you just give up sometimes, but you know I try my best to answer the question even when I don't understand. Or just one word, just don't understand one word, the whole thing... just don't understand one word, the whole thing, it will go wrong. That's why thinking that they shouldn't put bombastic words, you know in word problems. Just give us in a simpler form then we can answer them properly.

113. BT Okay. Point taken, I'll remember that if... But... umm, if that does happen to you where you are having a problem with some words or the understanding of it, do you enjoy the word problem then?

114. Roenel No, I enjoy it [chuckles].

Stanza 27

115. BT ... [inaudible]... Okay, Roxanne, you again. You said you tried to do problem 1 with the x , because you didn't know the length and breadth of the rectangle and that sort of thing. Okay, because they were unknown and such, alright. Now, why did you use that particular approach?

116. Roxanne Well firstly my last year's maths teacher he always told us if like you given, if like that tell you like now in question 1, it's been extended by two metres, right and you don't know the actual size of the length and then that,... umm, length, I… coz they just tell you what was added, added onto it. So by putting, by using x you still put it as an unknown, so at the end you can still say x must equal to that, so that, it actually makes it easier to solve the problem. Because you substituting what you don't know with an x and then at the end then you can say that, you let x to be whatever, whatever, and then after that you... or hopefully when you get it, when you like get your paper like then the teacher will try to explain it to you. But in the case of an exam where you don't know... most of the time you use x.

Stanza 28

117. BT Is that similar to what Ayanda was saying about the table?

118. Roxanne Yes.

119. BT So, it's making it easier for you to work with the problem.

Stanza 29

120. BT Then you said at the end you knew it was wrong... that particular problem of the rectangle. I'm just interested to know if you could explain how you knew you were wrong.

121. Roxanne Well firstly I think I was supposed to end with the number but then I ended up with $x^2 + x$ and then I think minus four...

122. BT $x^2 + 3x - 4$.

123. Roxanne ... So that's how I knew I was wrong. But then it's just a… when I don't understand...

124. BT But, how... how did you know that was wrong? What told you that it was wrong? Not the fact that you didn't get the answer, what told you that that mathematical thing was wrong?

125. Roxanne It just seemed to be [?] wrong. Coz I didn't understand the question... so, I knew that I'm trying to solve this thing but I don't, I don't actually understand that thing, I don't actually understand what is required of me to do... so... ja...

126. BT Well, you had something that didn't seem to tell you anything about the problem?

Stanza 30

127. Roxanne Yes. I like things that are like straightforward.

128. BT ... and you didn't think that that particular question was straightforward? ... Okay [chuckling], okay we'll leave that.

Stanza 31

129. BT Okay, Ayanda, you said that in maths you believed that it would be numbers only, that one particular stage, when you looking at word problems. Why, why did you actually say that, that maths is numbers only?

130. Ayanda So basically I... before when we start with maths like in primary school they tell you maths is numbers, maths is numbers in relation to words and stuff. So then you interpret it as maths is numbers so that if words come then you must get stuck. So, the last time I checked... err, the maths was numbers so what are the words doing here? Why do I have to solve throughout the, the words something that is written instead of solving it as an equation where they give you a number and you have to solve it?

131. BT Okay. So the words kind of disguise the fact that it's a mathematical thing?

132. Ayanda Yes.

133. BT Okay. That's quite an interesting point.

Stanza 32

134. BT Okay, Lerato, you said... umm, that most learners think word problems are easy, or easier you actually said... umm, and that is why they are given to you at school. Okay, you think most learners find them easier, to start with?

135. Lerato Yes.

136. BT You think so. Okay, why is that? Easier than normal maths?

137. Lerato Because most equations they're difficult to work with. In, in a word problem it's much easier for them to work with it.

138. BT Do think the equations in the word problems are easier?

139. Lerato Yes.

Stanza 33

140. BT Okay... umm, and then do you think that the learners generally cope better with word problems than with other maths?

141. Lerato No.

142. BT Not really. And why would that be then?

143. Lerato [Long pause – inaudible]

Stanza 34

144. BT Umm... okay. You also said that you seem to prefer word problems to ordinary maths, or other forms of maths. Okay, can you tell us a little bit... why you prefer them.

145. Lerato Because in the equations they give you lot of numbers to work with, but in word problems maybe they give you two, two numbers to work with. Then it's much easier to work with...

146. BT I think that's true. Sometimes your other equations that you get can be much more complicated. Okay... so... that answers the next question, because I was going to ask you what is it about word problems that make you feel that way, and I think it's because they, they have fewer numbers to deal with.

Stanza 35

147. BT Okay, Roenel, you again. You said that word problems are quicker and easier, I think you said it the other way round, easier and quicker ways to solve problems. Umm, can you tell us what you mean by that, what you mean that it's quicker and easier to solve problems when you have it in a word problem.

148. Roenel Oh, like I basically just use what is given, and then just solve the answer by what is given. Because that's why I like doing, and I find it much easier, ja... And use your equation and then work it out...

Stanza 36

149. BT Just to stop you there for a second... it's easier than what? Let's go to another problem, an ordinary maths problem. In what way is that more difficult than a word problem, or lengthier or something like that?

150. Roenel Well, by making like the unknown *x* I think it's easier. But to solve word problems where you don't have to use an equation like calculating the area and the length...

Stanza 37

151. Roenel I didn't find it difficult coz our teacher showed us like this other way in which you can solve it. I didn't find it difficult, you know.

152. BT What was that other way, can you remember?

153. Roenel I forgot. I just knew that it wasn't, like an equation, just work like everything out itself...

154. BT ... just with numbers?

155. Roenel Ja, so I just like making the unknown *x* and then using it with an equation and, and then just getting what *x* is, and the *x* is what they're asking you to solve. So I just like using the *x*. And I find it much quicker and easier, ja, coz I must say I really got good experience with equations, coz I find them very nice and interesting, and well I'm better at them... sometimes.

Stanza 38

156. BT Okay, but now...umm, you're saying that you use an *x* method, very much what like Roxanne was talking about just now, but do you sometimes just use the numbers... and you don't use an *x* to get your answer?

157. Roenel Ja, ja I do. I try to sometimes. But... but sometimes I like making things complicated, like the last question with 11 cents and 10 cents, I actually used the *x* method but I still got 1 cent, ja. I just like using *x*.

Stanza 39

158. BT Ja, okay. Alright, just a couple more questions. Roxanne, you now... you said you'd like the problems to be closer to reality, and said a little bit about that just now. Can you tell me in what way the problems that we dealt with yesterday are not close to reality for you.

159. Roxanne Err... okay, area, area and stuff, okay I can see that it's just that you don't do much of that in class. So when we do it becomes calculating like towers, and towers... most of the towers I've seen them on like television or something. So it's actually difficult for me to get a picture, to say like most towers are like this long in height and some... So if like they use things like a playground, things like a classroom, in fact you know you can guess, estimate how long they are, and you can know if you are a bit closer to a right answer or something. So if you use things you can see, things that we normally deal with everyday it makes it much more easier.

160. BT Okay. So you're saying that the problem with a rectangle, you're saying that you can't really see that...

161. Roxanne A rectangle I can because I know the length is longer than the breadth. But when, when, when, some... coz they didn't give you the actual size of the length, so it makes it a bit difficult for me to try to... err, to try to solve the question.

Stanza 40

162. BT Okay. What about the boy who was cycling to school?

163. Roxanne That I can imagine but... umm. Sometimes you don't know how fast he's going, two kilometers per hour or *n* kilometers per hour, so it makes it a bit difficult.

Stanza 41

164. BT Fair enough. Can you give me... err, an example of a word problem that you would consider to be very close to reality for you? I know you've mentioned things like classrooms and playgrounds and things but... Is it a bit difficult for you? Okay don't worry.

Stanza 42

165. BT Okay, Roenel, you said that in problem 4 you felt that this was testing your word problem skills, which I thought was quite an interesting way of putting it. Can you just tell me what you mean by testing your word problem skills?

166. Roenel Like umm... you know if you misread the question, even though the answer is just right in front of you, you might have got, gotten it wrong. So, by reading it like clearly and maybe like three times or two times until you understand it then you can get the right answer. But if you reading it like in a rush then instead of eleven you might get, you might write one or something and then you just don't get the whole question or the answer, it just all comes wrong. Just, just if you, if you like concentrating on the question itself and what's given and not, you know this interpreting the question... [inaudible]... the whole story itself.

Stanza 43

167. BT Okay. So what are the skills there for solving a word problem, can you mention what you think they are?

168. Roenel ... skills [inaudible]... Umm...

169. BT Roxanne, say it... you want to speak? What do you think they are?

170. Roxanne I think it's... err, understanding, and it does test a bit of... err... let's say, your reading ability, and...

171. BT Reading ability and understanding I think are probably...

172. Roxanne ... and how you can actually like use like maths in order to solve it... It depends on how well you know maths and how well you concentrate... it actually shows how well you concentrate in class.

Stanza 44

173. BT Okay. [Referring to Roenel] Do you want to say more about... the skills?

174. Roenel How well you, are good at numbers [?]... and your reading... err, your reading skills and ability. Not really how, how well you concentrate in class, coz... umm... ja, but just how you can concentrate on what you were given, like the basic question. Because sometimes you don't answer that question that you're given, which is a problem in most subjects. Like maybe in biology you answer like the wrong question, you not answering what, what they're asking you to answer, you just answer the wrong question. So word problems must just look at what's given and answer the question they asked, nothing else but the question that you're asked. Ja.

Stanza 45

175. BT Roxanne, I'd like to come back to that, because you were saying that one of those skills is, is testing how well you concentrated in class. I'm not saying that is right or wrong, but... umm. Why, why would you say that?

176. Roxanne I think that... umm, if you concentrate in class when you get to the exam you do have a clue as to what to do and... umm, and if you look at... umm, because most of the time in our exams they do repeat the questions that we did in class. But last time with the word problems that we had it was the same ones that we did in class. But then because... umm, because, well our... that [?]... ja, I wasn't concentrating well, so I didn't take the question we used in class, and then when I got to the exam I found that was, I saw that was the exact same question, and instead of doing well I did the direct opposite. I, I minused 48 and I got 12 as my answer when I was supposed to minus 12 and get 48 as my answer.

Stanza 46

177. BT Alright. So are you saying that there is a method for doing these problems?

178. Roxanne Well, sort of.

179. BT Sort of. Alright, is there... Roenel?

180. Roenel Ja, what I would like to know in word problems if there's like a certain method that you have to use to solve word problems, coz my last year's teacher just gave, just said use your logical thinking, just use the numbers you're given and then think actually multiplied or add or what. But my teacher this year says like the best way to solve it is like using an equation and making the unknown *x*. And the other way of calculating the area, and I just don't get it like, which way... actually the best method to use when you using like... umm, a word problem. I'd like to know if there's...

181. BT So the interesting thing you were saying there is that you think there's a method,

that there are methods...

Stanza 47

182. Roenel ... like different methods of calculating different kinds of word problems. Coz they're not all the same.

183. BT They're not all the same. That's also interesting. In what way are they different?

184. Roenel You see, I use [?] method, maybe our method of using unknowns, just checking the number and multiplying and... umm...

Stanza 48

185. BT Okay, that's very interesting. Umm, I think you were saying there are different word problems?

186. Roenel Ja, there are different kinds of word problems. There are the ones where you can just picture them like reality, like the boy cycling from home to school, and the one with the rectangle, I mean you don't know how breadth the rectangle is exactly, whether it's like this small or it's like very big or something, you just, just... ja... just must think of what, just think of things [inaudible]... ja.

Stanza 49

187. BT Okay. Alright, I think that's covered most of... I must say thank you firstly to all of you for some very interesting things that you wrote down and that's what caused this rather interesting discussion, I think. And I'm sure that we could have gone on for quite a lot longer because there's so much here. Is there anything else you want to say, umm, to say just to finish off with? Anything about word problems that you'd like to add.

188. Ayanda I would. I must say that I felt, you know the exercises that we did yesterday, I actually noticed that... err, they are tricky questions and because of it you can also get lost if you don't know what you're doing, and easy questions so, I've noticed my problem, I'm going to have to practise and I have, I have to answer then what the teachers use and then ask questions in the class if you don't understand, even if you're lost, just ask. So I know where my problem is, so I think I understand them better than before.

189. BT Well that's nice. I'm glad that some things happened...

Stanza 50

190. Roxanne What I think is the problem with our maths is this teacher, he is just too fast. Coz he gives us a prob... he gives us a sum and then he walks, he walks from the board to the back and then he gets back and like in less than a minute, you want us to do, already do corrections. And then if his hot students understand and then we'd tell him that we don't understand and he'll tell us that there is no time. But when you find that the every, every term, at the end of the term we're five weeks ahead of other people. We already finished and we doing revision and, and then the test that he gives us it's like, okay we do, do, do corrections, but he doesn't fully like explain it to us, so that the next time there's serious problem we know what to do and we know how to solve it. He's just concentrate on his top students, he doesn't concentrate on the rest of us.

191. BT So do you think that is important in a word problem that you have to have time to try it yourself?

192. Roxanne Yes.

193. Roenel Ja, coz not all of us are like a quick...