Lost in Translation

A comparative research on
Authentic and Translated
Geography TTO coursebooks

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Abstract

One of the issues in TTO education is selecting an appropriate coursebook. Although translated books (from Dutch to English) conform to the Dutch national curriculum, the books seem ineffective in terms of language acquisition. Alternatively, authentic coursebooks can be used, though they often fall short in terms of the curriculum requirements. In this research we compare a translated Geography coursebook (The Geo) with an authentic one (Geog). We aim to provide a framework of criteria to be taken into consideration when choosing a coursebook, based on pupils', teachers' and CLIL experts' opinions on the language, content and layout features of the books.

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Contents

1 Introduction

Ever since TTO (bilingual) education has been introduced to the Netherland in 1989 it has grown exponentially and now includes more than 125 schools in the entire Netherlands (http://www.leraar24.nl/dossier/1717). Realising the increasing demand for bilingual education, publishers have slowly discovered the benefits of translating the original Dutch coursebooks into English for this new and growing market. Despite the obvious benefits for teachers, who can use the translated textbook parallel to their Dutch classes without having to worry about information gaps and curriculum requirements, many complaints within various subjects have been heard regarding these translated books. One such complaint came from SG van der Capellen in Zwolle, where a Geography teacher considered the downsides of the translated Geography book (*The Geo*) so detrimental, that he decided to switch to Geog, an authentic coursebook (a book that is used in English speaking countries such as Britain), despite the curriculum problems that that choice brings along. But what exactly causes dissatisfaction with the translated coursebook and is opting for an authentic coursebook really the best option? Due to the scope of our research, we have decided to limit our research to a comparison between two Geography coursebooks, the translated coursebook *The Geo* and the authentic coursebook *Geog*, even though similar complaints have arisen within other subject areas as well. This research will attempt to answer the question: what causes (dis)satisfaction with the translated and authentic Geography coursebooks *The Geo* and *Geog* for first year pupils? With our research we hope to assist schools in finding appropriate coursebooks for their TTO department by providing a basic framework. Furthermore, it will illuminate the problem from three perspectives represented by three research groups; teachers, pupils, and CLIL (content and language integrated learning) experts, as they might have divergent opinions on the causes of satisfaction or dissatisfaction with the books. During our internships over the last year, we have come across some of the issues described above as several teachers have openly discussed their dilemma of choosing a coursebook. As we intend to work in a TTO environment in the future we will very likely be faced with a similar dilemma ourselves when we have to select a book for our own pupils.

2 Theoretical Framework

2.1 Principles and pitfalls of coursebooks

First and foremost, it is important to establish whether or not a coursebook really is necessary in the (bilingual) classroom. In general, learning takes places when pupils receive new information and store that information in the brain. In order to provide learners with that information, some sort of input is necessary. More specifically, '[i]nput is the foundation of every lesson' (Dale, van der Es & Tanner, 2010, p. 37). The most simple and obvious way to obtain this input is by using a coursebook. Hence, the coursebook is an important aspect of the lesson and contributes greatly to the learning session, although of course, ideally it is combined with other teaching resources.

Secondly, it is useful to consider the advantages and disadvantages of coursebooks. Several academics have researched the positive and negative implications a textbook might hold. Using a coursebook in an educational setting is beneficial to the student because coursebooks provide a framework which shows both the teacher and the student where they are heading to, they form a carefully planned syllabus, they shorten the teacher's preparation time, financially speaking they are the best option to provide every student with learning material, they serve as useful guides for the teacher and they help the student to learn and study independently (Ur cited in Kayapinar, 2009, p. 69). However, coursebooks also have certain disadvantages, among which that they are nonflexible, contain biases and may limit a teacher's creativity (Kayapinar, 2009, p. 70).

Another academic who has researched coursebooks is Iakovos Tsiplakides (2011). He also states the advantages of using a coursebook and emphasises the importance and difficulty of selecting one (p. 758). In addition to the advantages mentioned by Kayapinar, he explains that students rate published material at higher value than teacher-generated material (Sheldon cited in Tsiplakides, 2011, p. 759). He also mentions that if coursebooks turn out to bear negative consequences for the students, the teacher should adapt or supplement them to suit the students' needs (p. 759). This is often needed since, according to Tsiplakides (2011), materials used in coursebooks are not always suitable for every teacher because the books have not been designed 'with a particular classroom of students in mind' (p. 761).

2.2 Coursebooks within the TTO environment

Selecting appropriate material for the secondary school classroom clearly proves much more difficult than it seems. The TTO situation, in particular, might turn out to present even greater difficulties since it deals with books written in a language which is not the pupils' first language. Hence, the

texts might use language which is too difficult even though the content is at the correct cognitive level, or the language is appropriate but the content is too simple (Dale et al., 2010, p. 39). Thus, coursebooks for TTO pupils – in particular first form pupils - should primarily aim to cater to pupils' needs. Former IVLOS students who have conducted a research into the educational experience of TTO pupils with regards to the subjects of History and Geography mention this difficulty of finding appropriate coursebooks. They feel that correct English should not be the only criterion and suggest that elaborate research should be done concerning the quality of TTO textbooks (de With, van Bruche, & van de Ruit, 2009, p. 6). Within the TTO environment, teachers could opt for authentic English books or translated material. These IVLOS students found that pupils believe coursebooks do not influence them and their learning (de With et al., 2009, p. 6). However, TTO teachers expressed their preference for authentic English books over translated ones, because of the poor language translation. Translated books are often poorly translated. The teachers suggested that bad translations would have a negative effect on the English language learning of the pupils (de With et al., 2009, p. 6). Researchers have confirmed this worry by emphasising that translated books intended for the bilingual classroom should be 'previewed by native speakers for accuracy of translation and content' (Ernst-Slavit & Mulhern, 2003, par. 5).

Although translated books might not always be appropriate and/or correct in their use of language, authentic books do not automatically qualify as a better option or solution. Drexel-Andrieu (1993) describes his experiences in bilingual education (German-French) in Germany as a Geography teacher. He mentions that the pupils prefer the authentic French books, because they are attractive, using many pictures and only little text. However, the text is quite difficult and the teacher has to provide scaffolding tools to make it accessible (Drexel-Andrieu, 1993, p. 177). Another issue he raises is that using French textbooks means neglecting the German curriculum by using French examples only. This, according to Drexel-Andrieu (1993), can also lead to motivation issues. For example, a pupil might not be interested in the activities of the Marseilles port, when no reference is made to their own port in Hamburg. Moreover, the French books have a different approach to Geography; German books often use more concrete examples, whereas French books take a more 'global approach' (Drexel-Andrieu, 1993, p. 174; p. 180-181).

Hence, it can be concluded that the complex phenomenon of finding a suitable coursebook is enhanced in the TTO situation where the translated book might lack authentic and appropriate use of language, while the authentic (English) book might exceed the language level of its users and fall short of the desired curriculum. It now remains to be seen what pupils, teachers, and CLIL experts

think of the translated and authentic books and if the translated book is really as problematic as assumed.

2.3 Elements to take into consideration

In order to establish which aspects of the book need to be researched, various resources have been used. Dale et al. (2010) mentions several elements which influence the comprehensibility of a text; 'amount of visual support and the layout' (p. 45), sentence and word length (p. 48), text length, complexity of tenses and vocabulary (p. 53) and the organization/structure of the input (p. 55). Furthermore, in his article on learnable texts, Bruce Britton (1986) explains that the surface linguistic features can have an effect on the text's readability and the content may also influence its complexity (p. 336). , His research also shows that texts which provide some sort of structure (by means of signalling) elicited better learning outcomes and hence were easier understood (Bruce Britton, 1986, p. 347). Tsiplakides (2011) emphasises that the exercises provided in the books should be varied, interesting and relevant for the learner, well-organised and well-designed. Besides, the activities should include authentic material, should encourage cooperative learning and should show a correlation between the learners' language level and language ability (p. 762). Kayapinar's (2009) research – which included questionnaires – used categories such as subject matter (content), design, structure, exercises and illustrations (p. 70). Finally, Marina Admiraal (2001) in her dissertation on the understanding of a text reveals that structure, linguistic marking (such as headings) and interest, play crucial roles in text comprehensibility, especially with teenagers (p. iv). She explains that teenagers often struggle to recognise the text's structure (Admiraal, 2001, p. 15) and hence this structure needs to be made clear, for example by using paragraphs or linguistic markers. Also, the learner's interest towards a piece of text and the curiosity it might generate, influences the amount of attention paid to the text and the level of cognitive effort to try and read it; an increase in interest showed an increase in comprehension (Admiraal, 2001, p. 10). Admiraal quotes Anderson, Shirey, Wilson and Fielding who have researched the text qualities which contribute to the interest. They distinguish four qualities, namely; 'character identification', 'activity level' (using active rather than passive tenses), 'novelty' and 'life-theme' (Admiraal, 2001, p. 11).

From the literature discussion above, it becomes clear that relevant elements contributing to a coursebooks' quality can be largely divided into three categories, namely; content, language, and layout. These categories encompass elements such as exercises, visual attractiveness, structure, linguistic markers, interest in topic, CLIL features, vocabulary, sentence length, (cultural) variation, language level, language quality, amount of text, and use of pictures.

At the start of the research, it seemed that language quality was the logical category to look for the cause of dissatisfaction of the translated coursebook, as the content and layout of these books would be identical to the original Dutch coursebook. However, from literature, we have reason to assume that textbooks for bilingual education require more visual structure in order to get the information across. So, even though the layout might work for the Dutch original textbook read by Dutch native speakers, it might insufficiently support the content for non-native English learners when translated. Furthermore, the content of the book is translated directly to English, which means that examples used might often relate to the Dutch context. Students choosing the TTO programme, and teachers teaching in the TTO programme, however, might be more internationally orientated and therefore prefer to have a more culturally diverse content. So besides the quality of the actual translation, it is important to investigate layout and content as well.

2.4 Research questions and hypothesis

From previous research and suggestions from literature, we decided to formulate our research question as follows: What causes (dis)satisfaction with *The Geo* and *Geog* from a pupil's, teacher's and CLIL expert's perspective when looking at content, language quality, and layout? This question can be divided into smaller sub-questions: What do TTO teachers think of *The Geo* and *Geog*? What do first grade learners like/dislike about *The Geo* and *Geog*? What do CLIL experts like/dislike about *The Geo* and *Geog*?

For each research group we will look at their opinion on the language, content, and layout of the books. Based on our own examination of the books, we predict a more positive attitude from all three research groups on language and layout of the authentic book, because this book seems to include more of the content, language and layout features put forward by the literature. However, we expect a more positive attitude from the teachers regarding the content of the translated book, as it matches the Dutch curriculum.

3 Research Method

3.1 Respondents

We looked at the phenomenon dissatisfaction from three different perspectives; namely TTO Geography teachers, first year TTO pupils, and experts on bilingual education. We conducted pupil and teacher questionnaires at two experienced TTO schools, namely SG van der Capellen (SGvdC) in Zwolle and Anna van Rijn college (AvR) in Nieuwegein. The Geography department of SGvdC chose the authentic textbook *Geog* for their first year TTO pupils. At AvR the Geography teachers decided to use the translated coursebook *The Geo* in their first year TTO classes.

The respondents of the teacher questionnaires are the TTO geography teachers at the schools. Both schools had three TTO geography teachers and they all completed the questionnaire. There was only one female Geography teacher and one native speaker of English, both at AvR. There is a variety in years of experience in TTO teaching, but all teachers have at least three years of experience teaching TTO.

At AvR the pupil's questionnaire was conducted in three first year TTO classes. A total of 75 pupils from AvR completed the questionnaire. The questionnaire was completed by 84 pupils at SGvdC from four different classes. It is important to mention that the four first year TTO classes at SGvdC were all taught by the same Geography teacher, whereas the three classes at AvR were each taught by a different Geography teacher. The respondents at both schools have a similar demographic. The age of the pupils ranged from 12 to 14 years old. In both schools the classes consisted of slightly more girls than boys. The vast majority of the pupils are native speakers of Dutch. There are few native English speakers and pupils with another native language.

The third group of respondents consists of experts on bilingual education. In total we have interviewed four experts all working at the University of Utrecht and all with a slightly different background. Two of the experts are native speakers of English, namely Jason Skeet and Rosie Tanner. Skeet has seven years of teaching experience as an English teacher at a TTO school. Currently he is a CLIL trainer and advisor at the University of Utrecht. Tanner used to teach student teachers of CLIL. Currently she provides in-service CLIL training for TTO teachers. Rick de Graaff also provides in-service CLIL training to TTO teachers. Furthermore, he is an expert on pedagogy for bilingual education, focusing on how best to support pupil's language development. Gerrit-Jan

Koopman used to give in-service CLIL training, but currently is mainly involved in guiding student teachers and conducting research into the nature of CLIL.

3.2 Instrumentation

3.2.1 Questionnaires

For the first two groups we decided to design a questionnaire where statements on the book could be commented on by choosing one of the following options: completely agree (4 points), somewhat agree (3 points), somewhat disagree (2 points), or completely disagree (1 point). During the analysis of the data the negative formulated questions were awarded points in reverse (completely agree becomes 1 point).

The questionnaires do not have a very high internal validity, the extent to which it is possible to draw causal conclusions. The set-up of our research does not guarantee that the association between the independent variables (all the variables – content, language and layout – that might influence the dependent variable) and the dependent variable ((dis)satisfaction) are causal ones (Hoyle, Harris & Judd, 2002, p. 32). As it is impossible to have the same students be familiar with two different books, it was necessary for us to collect data from two groups of pupils, one from AvR, the other from SGvdC. Our respondents groups were therefore not homogenous. Consequently, the pupils' appreciation of their coursebook could be influenced by different factors, such as different teachers. Furthermore, due to time constraints we were not able to pilot the questionnaires. However, we did ensure all classes received the same instructions. When conducting a questionnaire at least one of us was present to give the instructions we had discussed.

In order to maximize the construct validity of the questionnaires we based the structure and questions of the questionnaires on our literature research. The questions focus on the elements that are considered to be most crucial in coursebooks as discussed in section 2.3. and 2.4. Also, control questions were added to the questionnaire by having both a positive and negative formulation of the same question (Hoyle, 2002, pp. 32, 33). Furthermore, the questionnaires were written in Dutch to avoid misunderstanding of the questions. The external validity, to what extent we can generalize from our research sample is an important aspect to discuss (Hoyle, 2002, pp. 33, 34). In this research we only focus on two specific Geography coursebooks. Therefore it cannot be said that the results apply to all translated and authentic (Geography) coursebooks. Furthermore, we only had a small sample of teachers. Hence, it is difficult to generalise based on the teacher's data.

3.2.2 Interviews

For the CLIL experts we decided on the format of an in-depth interview as we hoped to discover unmentioned variables instead of only asking an expert opinion on our pre-established variables. We were not able to conduct a pilot interview, which may influence the internal validity. However, we did use different interviewers for each interview to prevent bias (Baarda, De Goede, en van der Meer-Middelburg, 2007, p.22). Furthermore, apart from the interviewer, one other person was present to take notes using a pre-designed table with the interview questions. Similar to the questionnaires, the questions and structure of the interview are based on literature previously mentioned in 2.3 to ensure construct validity. Overall, we can assume that the external validity is quite high. Other CLIL experts would probably come with similar answers.

As hard as we tried to avoid statistical issues, we could not entirely escape them as can be read above. The generated data from our research must therefore be carefully interpreted.

3.3 Data analysis

We analysed the data from the student questionnaire using a Two-Sample T-Test. With a Two-Sample T-Test, two different research groups can be compared, which in our case meant comparing the scores from the AvR pupils with those of the SGvdC pupils. Similarly, we analysed the scores from the AvR teachers with the SGvdC teachers, although due to the limit sample number we have some reliability problems.

All the interviews were taped and subsequently transcribed. We analysed the data by placing the statements of the experts in various categories. Again we based the categories on the crucial elements of a coursebook found in the literature. We did this individually and compared our tables afterwards, this to ensure an objective analysis of the interviews. We compiled all the data in two tables – one for each book – using different colours for the statements of different experts (see appendix). These tables gave us a good overview of the opinions of the experts to draw conclusions from.
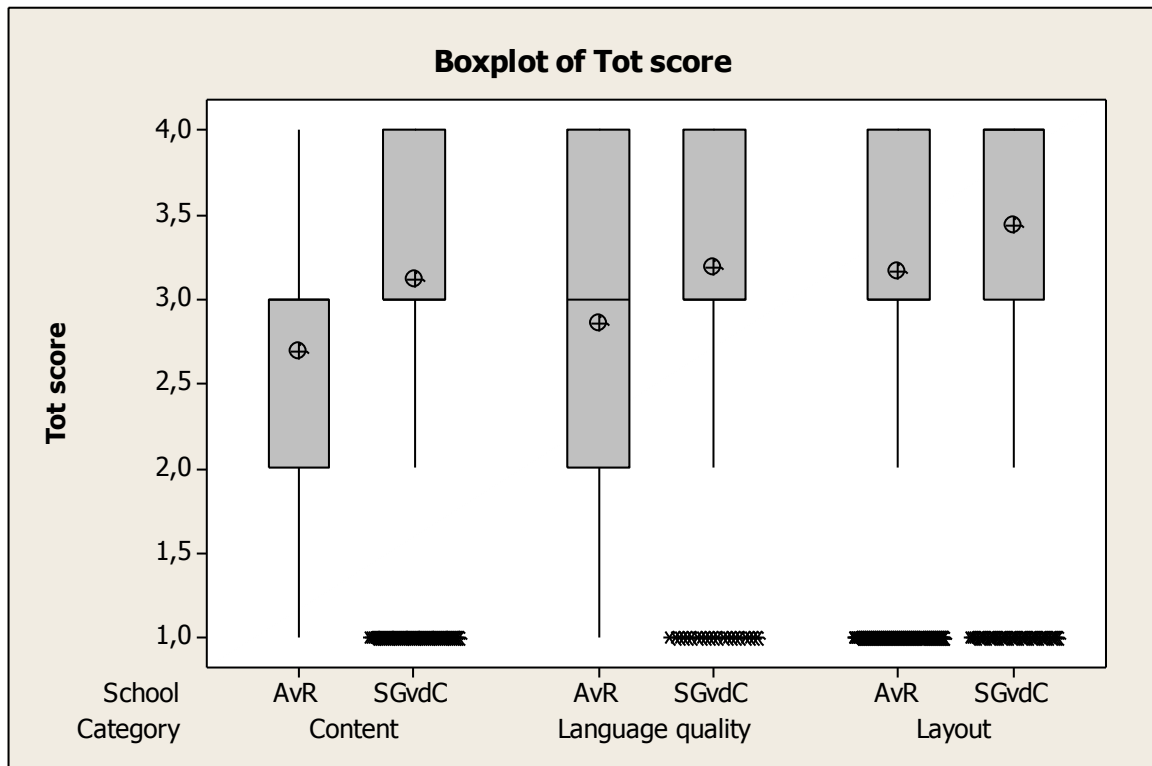
4 Results

The research's set-up is based on the method of triangulation; the results from the three research groups (pupils, teachers, and CLIL experts) will be compared and contrasted in order to determine what factors have the most influence on the respondents' (dis)satisfaction with their respective coursebooks (*The Geo* and *Geog*). In order to apply triangulation to the research data, it needs to be established which variables are indicated as most relevant within each research group. We looked at the variables that caused a large difference in satisfaction between the two books. In what follows, the results will be discussed per research group, drawing attention to the variables that each group puts forward as most significant. First, the pupils' (dis)satisfaction of their respective coursebooks will be discussed, followed by the teachers' opinion, and finally the CLIL experts' opinions on the features of both coursebooks.

4.1 Comparative results pupils

A Two-Sample T-Test comparison on the average score of AvR pupils' satisfaction with *The Geo* compared to the SGvdC pupils' satisfaction of *Geog*, taking all the questions from the questionnaire into account, shows a significant lower satisfaction of the AvR pupils for *The Geo* (2,922), compared to the SGvdC pupils satisfaction for *Geog* (3.271). The average mean difference between the two groups is 0,349. Looking at the average score per research category (content, language, layout), it becomes apparent that neither groups are extremely dissatisfied with their respective books. Out of a maximum of four points, the AvR pupils give *The Geo* 2,68 points for content, 2,85 for language quality, and 3.145 for the book's layout. SGvdC pupils give *Geog* 3.114 for its content, 3.19 for its language quality, and 3.43 for its layout. The AvR pupils have rate their book (The Geo) lower on all these aspects with a difference of; content = 0,3891, language = 0,34, and layout = 0,285.

The boxplots below illustrate the pupils' average score on the content, language, and layout questions. The boxplots visualise the spread of the pupils' scores. The grey boxes indicate where most answers lie, and the individual dots below the boxplots are the outliers. The mean score per group is indicated with the circle. The boxplots are organised from the largest mean difference to the smallest mean difference.

Average difference between pupils scores AvR and SGvdC per category content, language, and layout.

4.1.1 Results content questions

Looking at the individual questions from the questionnaire, the results reveal in more detail which specific factors of content, language, and/or layout are mainly responsible for the differences in satisfaction. We ranked the variables from causing the largest difference to the least difference and ignored differences between AvR and SGvdC lower than 0,3. The largest difference between the two groups' satisfaction is caused by the factors in the content section. The main factors responsible for AvR pupils' significant lower satisfaction with their coursebook's content emanates from their comparatively lower scores (from largest difference to smallest difference) on the book's *comprehensibility*, *general satisfaction*, *diverse exercises*, *useful information*, and *appealing examples*. The only time *The Geo* scores better than *Geog* is regarding the book's use of different cultural examples for which *The Geo* scores 3,473 and *Geog* 2,878 (question 2).

The most significant variable in this list is AvR pupils' scoring of *The Geo* as significantly more difficult than SGvdC pupils scoring of *Geog*. The difference in the score on the question whether the book contains irrelevant information can be explained by *The Geo*'s larger amount of text (thus more risk of less relevant information).

Boxplot of Content variables
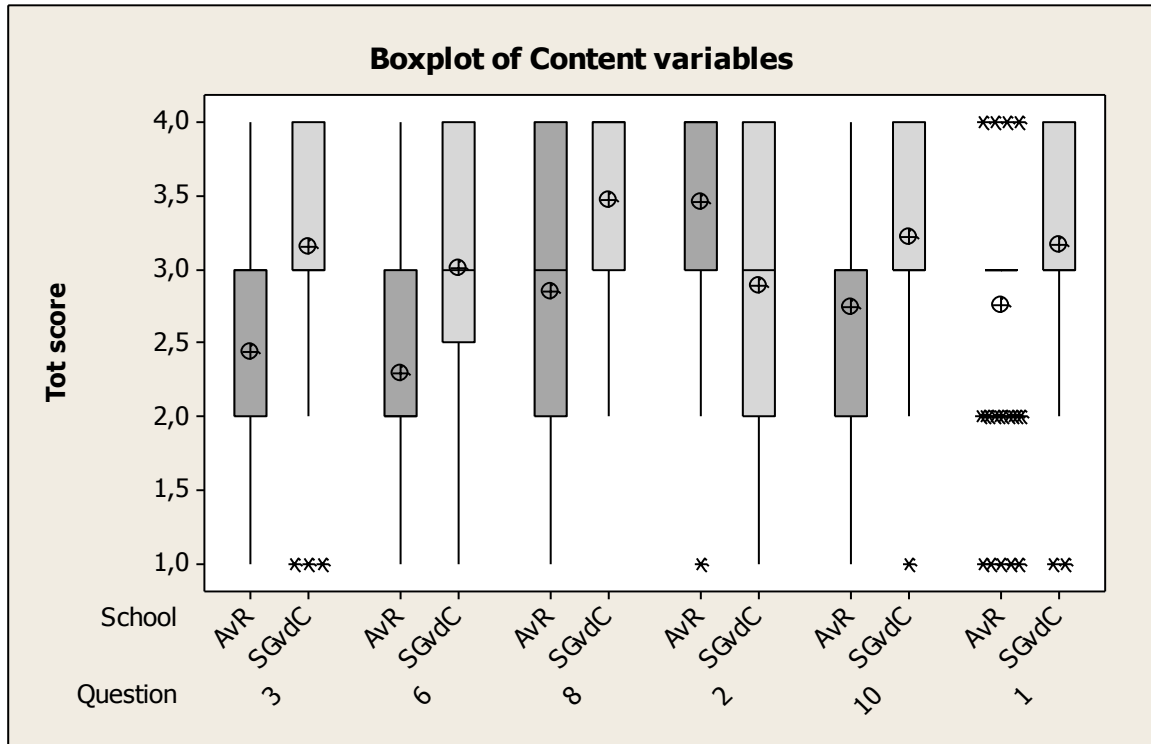
Question 3 = good comprehensibility

Question 6 = general satisfaction

Question 8 = diverse exercises

Question 2 = inter-cultural references

Question 10 = relevant information

Question 1 = appealing examples

4.1.2 Results language quality questions

The second largest difference between the two groups' satisfaction is caused by the scores on the language questions. The most prominent variables causing AvR pupils' greater dissatisfaction with *The Geo* compared to SGvdC pupils' satisfaction with *Geog* are: the book's *explanation of difficult words*, the *language errors*, *language acquisition,* and *sentence length*. SGvdC pupils are more satisfied with the way *Geog* explains difficult terms than the AvR pupils are with *The Geo*'s explanations. Both groups of pupils agree that there are no major language errors in their respective books, however, SGvdC believes there are almost none, whereas AvR thinks there are some. The SGvdC pupils are significantly more positive about the books contribution to their language acquisition than the AvR pupils; AvR scores the sentence lengths of the books at 2,761 whereas SGvdC scores the same variable at 3,176.

Boxplot of Language variables
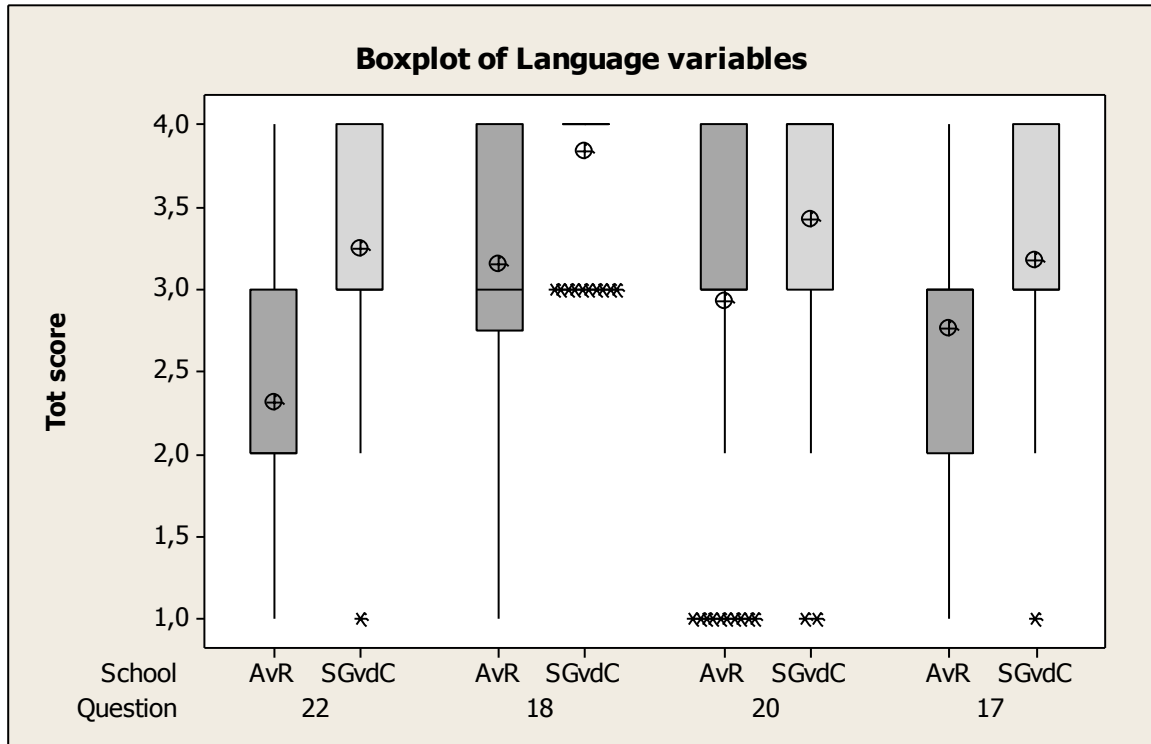
Question 22 = clear explanation of difficult words

Question 18 = language errors (reversed scoring)

Question 20 = helps to improve pupil's English

Question 17 = sentence length too long (reversed scoring)

4.1.3 Results layout questions

Both books scored high on questions relating to the layout. However, again, *Geog* scores higher on all these questions than *The Geo*. Some notable differences between the two books are found in relation to the books': *amount of text*, *structure*, *bolded words* in the text, *helpful visual support*, and amount of *visual support*. According to the pupils, the amount of text in *The Geo* is somewhat satisfactory, and that of *Geog* is satisfactory. The same counts for the structure of the books, where *Geog* again scores higher than *The Geo*. Although there is a difference in the pupils' satisfaction of the quality and the amount of visual support, both books score above 3 on these questions.

Boxplot of Layout variables
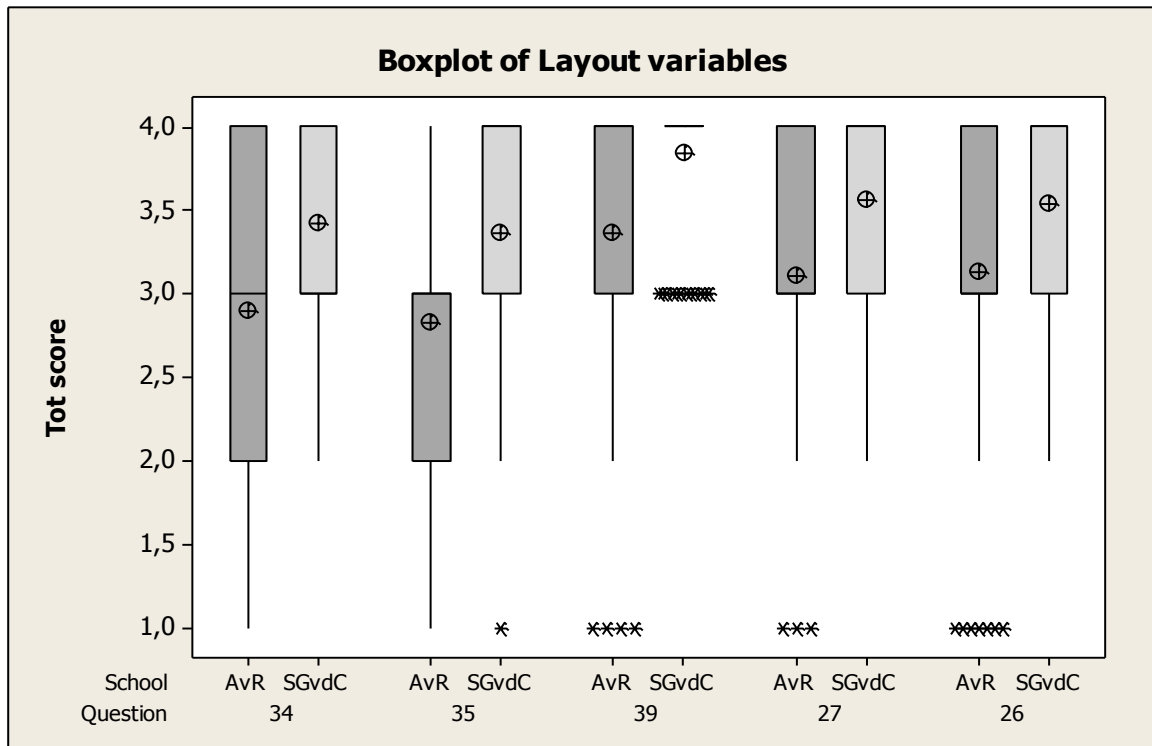
Question 34 = too much text (reversed scoring)

Question 35 = unclear structure (reversed scoring)

Question 39 = bolding of words is helpful

Question 27 = helpful visual support

Question 26 = too little visual support (reversed scoring)

4.1.4 Alternative explanation

The differences in the coursebooks' content, language and layout cannot be regarded as the sole causational factors for the difference in satisfaction between the AvR pupils and the SGvdC pupils. It is likely that AvR's more negative attitude towards *The Geo*, can to some extent be contributed to their general dislike of Geography as a subject, which they rated 1,7 in comparison to SGvdC 2,74. The reason for AvR pupils' dislike of the subject is unlikely to be solely the cause of the coursebook and is probably influenced by the teacher amongst other factors. Some of the SGvdC pupils specifically commented on the teacher making the subject more interesting, which would explain their higher appreciation of the subject. Thus, the AvR pupils' lesser satisfaction of *The Geo* is possibly partially the result of their dislike of the subject (for whatever reason) and does not entirely reflect the actual dissatisfaction with the book based on its content, language, or layout.

4.2 Comparative Results Teachers

Due to the limited available number of respondents for this research group (TTO teachers working with either *The Geo* or *Geog*), we could not apply statistical analysis such as a Two-Sample T-Test on the data from the teachers' questionnaires. We grouped the outcomes of the questionnaire to see where the main differences between the teachers from AvR using *The Geo* and teachers from SGvdC

using *Geog* could be found (see Appendix). However, due to a large spread within the two research groups for most of the questions, no hard conclusion could be drawn.

4.2.1 Results content questions

Looking at the questions pertaining to the books' content, the only differences in satisfaction relates to the books' correspondence to the national curriculum and the variety of exercises offered. *The Geo* relates better to the curriculum than *Geog*, which is understandable as *The Geo* is a translation of a Dutch coursebook that was specifically designed to meet the national curriculum requirements, whereas the authentic English book is designed to meet the British curriculum requirements. As for the variety of exercises, the teachers from SGvdC score this higher than the AvR teachers. From written remarks on the content, the following variables are pointed out as causes for dissatisfaction with the translated book: too much information in the book which cannot be covered in the available amount of time and the questions are not reflective enough.

4.2.2 Results language quality and layout questions

Interestingly, language quality is the only category where some differences in satisfaction become apparent. SGvdC teachers' satisfaction with the language quality is in general more positive than AvR teachers', though neither research group appears to be very negative about the language quality of their respective books. The following language aspects were questioned: general *language difficulty*, *choice of words, sentence structure, grammar, subject specific terminology*, and *Dunglish expressions*. Except for the last two variables which do not apply to the authentic book, *Geog* scored full marks for all these language features from all the SGvdC teachers, whereas *The Geo* scored between 2 and 3. It can thus be concluded that there is a difference between the teacher's satisfaction of *The Geo* and *Geog* based on language quality.

This assumption is further supported by the written AvR teachers' remarks on the language aspects of *The Geo*. They claim that the language level of the translated book does not match the L2 level of the pupils at the start of TTO education, as the language level in the book is equivalent to their L1 level. The text in *The Geo* guide is too difficult for most first year pupils, and sometimes still for second year pupils. Lastly, they mention that CLIL exercises and didactics are missing in *The Geo*.

As for layout, the data the teachers provided were largely overlapping and so nothing can be said with any certainty about the differences in satisfaction for this variable. No further comments were made on this section either.

4.3 Results from CLIL experts interviews

The third research group consists of four CLIL experts from the University of Utrecht. Through in-depth interviews, they were asked to formulate general requirements for second language coursebooks regarding language and layout and give their opinion on *The Geo* and *Geog* (see appendix). All of the experts agreed that a successful coursebook for second language acquisition should focus on language support next to content support. This can be achieved through some or all of the following features:

4.3.1 Language support features

-   Sufficient multi-modal input (visuals, diagrams, variety of tasks, etc.)
-   Activating tasks that generate both written and spoken output.
-   An international perspective in order to meet the cultural aims (EIO).
-   Good structure of content using visual indications such as headings, italics, paragraphs etc.
-   The language should not exceed level A2 of the Common European Framework of Reference.
-   Both content and language aims should be stated and emphasised.
-   The book should include a repertoire of different activities.
-   The texts should not be too dense, and there should be sufficient visual support.

Besides the above mentioned desirable coursebook features to guide learners in the process of content and language learning, they stress the role of the teacher in this process as well. The experts would advise teachers to go beyond the book and use plenty of other resources alongside the book.

4.3.2 General observations

From the experts' personal experiences, they provided some insights in general issues relating to translated and authentic course books for Dutch bilingual education. A translation is generally perceived as easy and useful, because it fits the Dutch curriculum and can easily be used when the teacher also teaches in a parallel Dutch class. Unfortunately, teachers often think they can go through the material in English just as rapidly as in Dutch, according to the experts, which is a misunderstanding. Even though the translation meets the curriculum criteria, it generally is of poor language quality, does not offer language support, has too much text, and uses vocabulary which is too complex. An authentic book, on the other hand, contains rich and authentic English which is beneficial to the learners' language acquisition. However, an authentic book does not automatically match the curriculum, might be too difficult in terms of language level and does not offer sufficient language support either.

4.3.3 Content, language and layout observations

As for *The Geo*'s (the translated method) content, it offers less variety in tasks, there is too much text on the page and the content is not child-centred and thus not appealing to the learner, according to the experts. *Geog* (the authentic method), on the other hand, contains more multi-modal and varied input. Regarding *The Geo*'s language quality, the native speakers immediately recognised that the text was translated and not authentic; there were occasions of strange word order, strange use of the verb 'will' and some odd sentence structures. However, the language quality would not necessarily impede with the learning process and there were no substantial language errors. The experts rated the language level of *The Geo* as too high; difficult tenses, complex wording and at times almost academic language. *Geog* offers a more appropriate language level for first year pupils. When it comes to layout, the experts are also more positive about *Geog* than *The Geo*. They feel that the authentic book is visually more attractive, more mature and more relevant to teenagers. Furthermore, the book has a good structure and offers plenty of varied visual support, which *The Geo* does to a lesser extent.

4.3.4 Conclusion

When the experts were asked to review the books used for this research, they unanimously opted for the authentic book, even though (like the translated book) it does not contain specific language aims, does not focus on language support and might be slightly above the required language level. The reasons for choosing this book include the more varied, activating and challenging tasks, the authentic language, the multi-modal input, the structure, the repetition of key-vocabulary, the language level, the visual support, the visual attractiveness, the visual variety, the amount of text (shorter chunks of text than in the translated book) and the fact that the content was much more directed at the child. Nevertheless, according to the experts, both books lack CLIL features; they do not offer sufficient language support and they do not provide opportunities for cooperative learning and communicative approaches in their exercises. However, the authentic book is more varied and hence more appealing. Furthermore, the experts emphasise that teachers can point out specific language aims and adapt the tasks offered by the books to make them more appropriate for the CLIL context.

Still, the experts acknowledged that many teachers might opt for the translated book because it is more teacher guided and its structure is clear. Hence, it is a relatively easy book to use in the classroom. Besides, the content would match the Dutch curriculum. The experts recognised that the

translation would be a logical, but wrong choice; almost an easy way out for the teacher who prefers to quickly finish preparation rather than to put extra effort in to guide learners in the CLIL context.

4.4 Triangulation

Although the research groups do not unanimously point towards the same variables with equal determination, the importance of some variables is repeated throughout the entire research. One of the most notable variables put forward by teachers, pupils and CLIl experts, is the quality and diversity of the books' exercises. The AvR teachers score the diversity of *The Geo*'s exercises at 1,67 whereas the SGvdC teachers score *Geog* at 2,67. The pupils' results also indicate that *The Geo* scores significantly lower on both diverse (2,845) and appealing (2,735) exercises compared to *Geog* (diverse = 3,469 and appealing = 3,160). The AvR teachers are more negative about the exercises than the AvR pupils, but in both research groups it becomes apparent that *The Geo* scores lower on the quality of its exercises than *Geog*. The CLIL experts confirm this opinion as they point out that *Geog* offers more varied, activating and challenging tasks. Furthermore, they comment on the more pupil centred approach in *Geog* through exercises, examples and visual material which relate more closely to teenager's interests and perspectives.

Looking at the responses on the books' language quality some significant variables can be pointed out. AvR pupils are least satisfied with *The Geo*'s explanation of difficult words and the sentence length, but in general they score the language features above 3. The AvR teachers are more negative about *The Geo*'s language quality. They feel that it contains mistakes as well as the language being too difficult for first year pupils. The AvR pupils confirm this as they score *The Geo* low on comprehensibility, which corresponds to the same low pupil scores on the explanation of difficult words and sentence length. The native English CLIL experts (Tanner and Skeet) are not very negative about *The Geo*'s language quality regarding grammar, spelling, and sentence structures, although they do recognise some Dutch influences in the language. They do feel that *The Geo*'s language level is too high for non-native first year pupils as it contains many unfamiliar academic words and difficult tenses. This confirms the teachers' opinions on the language difficulty.

Layout seems to be the least problematic feature in either book. Both books support the text with plenty of visuals although the CLIL experts favour *Geog*'s visual support and structure over *The Geo*. This opinion is repeated by the AvR pupils and teachers who are only slightly less positive about *The Geog*'s layout compared to SGvdC pupils and teachers about *Geog*. The AvR pupils are least positive about *The Geo*'s amount of text, which is confirmed by the CLIL teachers who made the same observation.

5 Conclusion and discussion

5.1. Conclusion

The main – and very general – conclusion which can be drawn from this research is that the authentic coursebook works better in the TTO classroom and hence should be the preferred choice. Thus, our hypothesis has been confirmed; we expected the translated book to score lower in terms of satisfaction. Of course, this research focuses on two books only, which means generalisations should be handled with care. Because of our small sample of books and pupils, it is also difficult to fully explain the answers given in the questionnaires. There are many factors that ought to be taken into account, such as the pupils' interest in the topic and the teacher's practical use of the book.

The language quality of the books does not generate shocking results. The quality of the translated book might not be perfect, but it is certainly not as poor as sometimes is assumed. The pupils of both schools convey pretty positive attitudes towards the language quality of their books, the teachers are slightly more negative and the experts acknowledge that the translated language is simply not authentic and find some faults (or unnatural constructions). However, no detrimental issues regarding the language quality were expressed by the teachers and experts.

As far as the layout is concerned, the experts argue that the translated book has too much text and consequently less visual support. The authentic book has a better balance between picture and text, according to the experts. The pupils and teachers, on the other hand, rate both books positively on these issues.

When it comes to the content, our prediction has been confirmed. In this case, the teachers were more positive about the translated book, precisely because it fits the Dutch curriculum better. However, the authentic book scores higher regarding the attractiveness of the examples. This means that the pupils consider the examples found in the authentic book more appealing than the pupils using the translated book. This is contradictory to the theory found above, in which Drexel-Andrieu argued that the students preferred to be confronted with examples from their own culture rather than from abroad.

The answers given by the CLIL experts on the features of a good CLIL book correspond to the theory on the elements a good coursebook should contain. Variety appears to be a keyword in this matter. Both the theory and the experts express that dealing with the input is more important than the book itself. The teacher can add, delete and adapt the texts, tasks or visuals in order to guide the learner's understanding. Admiraal's notion of the pupils' interest is relevant for this research too; the interest

is probably influenced by the appreciation of the teacher and subject and might explain why some classes scored higher or lower than other classes (from the same school but) with a different teacher. Furthermore, the more positive attitude towards *Geog* might be explained by this interest. Two out of four qualities described by Admiraal which contribute to the interest (character identification & activity level) are more prominently apparent from the authentic book and were mentioned by the CLIL experts.

5.2 Recommendations for the school

Based on the conclusions drawn from this research, it can be said that schools should carefully consider the various books they can choose from. When evaluating a book, attention should be paid not only to the language (is it at the appropriate level) and the curriculum, but layout (in particular the balance between pictures and text, and visual support) and activities should be examined as well. It is useful for teachers to consider whether or not the activities appeal to different intelligences and offer plenty of opportunities for output. Elements which may facilitate the language learning – such as a glossary, bold terms and summaries – could be great tools, but will not in themselves add to the language acquisition. Of course, the content and curriculum requirements are of importance, but the TTO implications such as an international perspective, focus on language as well as content, and emphasis on output should not be overlooked or dismissed. It might be difficult to find a coursebook that ticks all the boxes, but this is, even though it would be ideal, not necessary. The quality of the coursebook is not the only factor; more important is how the teacher uses the book. Furthermore, it is also important to provide the pupils with different types of input, not solely the coursebook. As a teacher and especially as a TTO teacher it is essential for providing pupils with additional explanations, materials and activities in order for them to fully grasp both content and language. It might also be beneficial to include pupils in choosing a coursebook, asking which book they find most appealing looking at language, content and lay-out.

5.3 Suggestions for further research

Obviously this research was done at a very small scale. For further research it would be advisable to broaden the scope of the research in order to improve the external validity. This can be done by including other coursebooks, but also other subjects. It would be ideal to conduct the research at different schools that use the same books (to also improve the internal validity). Furthermore, a fourth group of respondents should be included, namely the publishers. What are their views on TTO coursebooks and do they approach making coursebooks specifically intended for TTO differently than books intended for the Dutch stream?

5.4 Reflection

Looking back on the research process there are some steps that we would have done differently in hindsight. The importance of a well-designed questionnaire is one of the most essential realisations. Although the questions in the questionnaire were relevant and did measure satisfaction, we could have rephrased some of the questions to make the results more specific. Some questions were too general and the collected data would not give us relevant information. We should have made the questions more specific on the pupils' opinion of various elements in the books and not ask them whether or not these elements are in the book (which we can see for ourselves). Also, we sometimes fell into the trap of asking them if they use or do something (e.g. do you use the glossary) which does not tell us anything about their opinion of the glossary. We would also change the scoring. Instead of asking them whether they agree or disagree with the statements, we could have related the answer more specifically to satisfaction e.g. how satisfied are you with…. A pilot run of the questionnaire would have improved the questionnaire and therefore the usefulness of the results but due to the limited amount of time and the small research sample, we could not influence the research sample by giving them a pilot.

The method of data collection for the teachers we would change completely from a questionnaire to an interview. Although the questionnaire offers the possibility to analyse data statically, the limited sample of teachers prevented us from doing so in the first place, and more qualitative data through in-depth-interviews would therefore have been more useful.

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Appendix

Questionnaire for TTO Teachers

Authentic course books for Dutch TTO pupils (*Geog*)

General

Name	
Years of experience with this book	
Years of TTO teaching experience	

What are your reasons for using the <u>Authentic</u> course book you are currently using?
What other course books have you used prior to the one you are using now?
Do you work/ or have you worked with the translated Dutch course book?
Is the book you are using intended for the age group/level of pupils you are teaching?

Content

*Please tick the box that expresses your opinion on the **content** aspects of the book:*

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	n/a
The book supports and follows the aims of the Dutch National Curriculum.					
The book contains examples relevant to Dutch pupils.					
The book contains examples relevant to pupils of various cultural backgrounds.					
The book's knowledge level is appropriate for first year pupils.					
The pupils understand the contents of the book without further explanation from the teacher.					
The pupils get through the material quickly.					
The book's content can be covered in a reasonable pace.					
The pupils have a positive attitude towards the book.					
The book offers a wide variety of different exercises/tasks to help the students master the content.					
The content of the book simulates/reflects real life situations.					

The book supports the teaching objectives					
Non-functional /time consuming materials/ information is avoided.					
The book's publisher provides additional learning resources i.e. website, CD, workbook.					
The book's publisher provides additional teaching resources i.e. teacher's book, tests, CD, etc.					
The additional resourced provided are useful for the pupils.					
The additional resources provided are useful for the teacher.					

Additional comments on the _content_ of the book.

Language Quality

*Please tick the box that expresses your opinion on the **language quality** of the book best.*

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	n/a
The general language level (difficulty) is appropriate for non-native speakers of English.					
The choice of words is appropriate for first year pupils.					
The sentence structures are correct.					
The grammar is correct.					
The subject specific terminology is translated correctly.					
There are no *Dunglish* (Dutch sounding words and phrases) expressions in the text.					
I also use other materials apart from the book.					
I adapt exercises from the book to also include language acquisition.					
The book offers a wide variety of different exercise/tasks to help the students master the English language.					

Additional comments on the *language quality* of the book.

Lay-Out

*Please tick the box that expresses your opinion on the **lay-out** of the book best.*

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	n/a
The book has an appropriate number of pictures to support the text.					
The quality of the pictures is satisfactory.					
The pictures are consistent with the text.					
The book's graphic design is attractive and inviting.					
The book's graphic design enhances the structure of the content.					
The content is divided in subtexts/paragraphs which make the structure of the information clear.					
The book uses sufficient headings and titles to structure the content.					
The book has a clear and logical structure.					
The amount of text per page is appropriate for first year learners.					
Signal words are used to enhance the structure and readablitiy of the text.					
The letter font is legibable and					

functional.					32
The letter size is comfortable.					
I refer to the glossary in my lessons.					
I think that having important terms in bold helps the pupils to understand the content.					
I think that having important terms in bold helps the pupils acquire the language.					
I think that the summary provided helps the pupils to grasp the content better.					

Additional comments on the *lay-out* of the book.

Thank you for filling out this questionnaire!

Vragenlijst voor TTO leerlingen over ervaringen met aardrijkskunde lesboek

Algemeen

Kruis het juiste rondje aan.

Leeftijd	○ 10 ○ 11 ○ 12 ○ 13 ○ Anders …………………
Geslacht	○ jongen ○ meisje
Aantal jaren Engelse les	○ 0-1 ○ 1-2 ○ 2-3 ○ Meer dan 3
Moedertaal	○ Nederlands ○ Engels ○ Arabisch ○ Turks ○ Anders...

Boek Inhoud

Kruis het vakje aan dat overeenkomt met jouw mening.

	Helemaal mee eens	Beetje mee eens	Beetje mee oneens	Helemaal mee oneens	Niet van toepassing / weet ik niet
De voorbeelden in dit boek spreken mij aan.					
Het boek gebruikt voorbeelden over verschillende culturen.					
Het boek is makkelijk te begrijpen.					
Aardrijkskunde is één van mijn favoriete vakken.					

Ik heb uitleg van mijn docent nodig om het boek te begrijpen.					34
Ik vind het een leuk boek.					
Het boek is moeilijk te begrijpen.					
Het boek heeft veel verschillende opdrachten.					
Het boek gebruikt voorbeelden uit het echte leven.					
Alle informatie in het boek is nuttig.					
In de les oefenen we met de betekenis van de begrippen uit het boek.					
Mijn docent gebruikt andere materialen naast het boek in de les.					
Het werkboek helpt mij de stof te begrijpen.					
Ik vind aardrijkskunde geen leuk vak.					

Als je nog iets wil vertellen over de inhoud van het boek kun je dat hieronder schrijven.

Taalniveau

Kruis het vakje aan dat overeenkomt met jouw mening.

	Helemaal mee eens	Beetje mee eens	Beetje mee oneens	Helemaal mee oneens	Niet van toepassing / weet ik niet
Het Engels in het boek is goed te begrijpen.					
Het boek gebruikt moeilijke woorden.					
De zinnen in het boek zijn te lang.					
Er zitten taalfouten in het boek.					
Ik erger mij aan de taalfouten in het boek.					
Het boek helpt me mijn Engels te verbeteren.					
Het taalgebruik is te makkelijk voor mij.					
Moeilijke woorden worden duidelijk uitgelegd in het boek.					
Ik heb moeite de inhoud van het boek te begrijpen, omdat het in het Engels is.					

Als je nog iets wil vertellen over het taalgebruik in het boek kun je dat hieronder schrijven.

Opmaak

Kruis het vakje aan dat overeenkomt met jouw mening.

	Helemaal mee eens	Beetje mee eens	Beetje mee oneens	Helemaal mee oneens	Niet van toepassing / weet ik niet
Er staat te weinig tekst op één pagina.					
De kwaliteit van de plaatjes is goed.					
Het boek heeft te weinig plaatjes.					
De plaatjes verduidelijken de tekst.					
Het boek ziet er leuk uit.					
De kopjes helpen mij de tekst te begrijpen.					
De tekst in het boek is duidelijk onderverdeeld in paragrafen.					
Het boek heeft te veel plaatjes.					
Het boek gebruikt genoeg titels en kopjes.					
Het boek is logisch opgebouwd.					
Er staat te veel tekst op één pagina.					
De structuur van de tekst is onduidelijk.					
Het lettertype is goed leesbaar.					
De lettergrootte is goed.					
Ik gebruik de begrippenlijst bij het lezen van de tekst.					
Ik vind het fijn dat de belangrijkste begrippen vetgedrukt zijn.					
De plaatjes helpen mij niet de tekst te begrijpen.					

De samenvatting helpt mij bij het leren.					37
Als je nog iets wil vertellen over de <u>opmaak</u> van het boek kun je dat hieronder schrijven.					

Bedankt voor het invullen van de enquête!

Interview Questions CLIL Experts

1. What issues have you encountered with regard to translated textbooks for TTO education? i.e. what is the most common heard complaint regarding the books?
2. What aspects make a good TTO course book?
3. What issues do you think teachers face when using an Authentic English book?
4. Do you have experience using either Translated or Authentic textbooks in a classroom situation?
5. If you compare the two textbooks, what is the most notable difference in your opinion?
6. Which of the two textbook would you like to use, why?

In our research we focus on content, language, and lay-out.

7. Did you notice any major language issues?
8. Do you think language, or lay-out is more important in supporting pupil's content learning?

In a TTO environment, language acquisition is an important part of the learning process, not just content acquisition.

9. Do you think the Translated textbook supports language acquisition.
10. Do you think the Authentic textbook supports language acquisition.

Language quality

11. How do you feel about the general language level in the books? Is it appropriate for first year non native learners?
12. How do you feel about the general language quality of the texts i.e. grammar, sentence length/structure, choice of words etc.
13. Do you feel that there Dunglish feel to the Translated text?
14. Do you feel that the exercises in the book help the learner's master both content and language?

Visual support

15. Which of the two books do you find visually more interesting?
16. How important is visual support for content acquisition?
17. Which of the two books support content acquisition best?
18. Do the books provide enough structure i.e. headings, subtexts.
19. Is the amount of text appropriate for first year learners?

CLIL

20. How useful is a glossary?
21. How useful is a summary?

22. What are the CLIL features of the Translated textbook as it is designed for non-native speakers of English.
23. Of the two books, which would be more appropriate for first year learners?

Transcription Table Interviews CLIL Experts

Answers relating to the translated book (The Geo)

	Positive	Negative
Language	General: - The content is the same as the Dutch book - It focuses on the Netherlands - School seem quite happy with them - Only have to prepare content once when using translated and original in bilingual and regular stream → making sure you're testing the same content level of both streams - Cheaper than creating new CLIL book	General: - Language is generally not really supported - Language level is too high - Vocab might be too complex - Sentence construction might be too complex - Concepts might be too difficult → Directly translated across - Books are almost literally translated and hence of very poor English - The texts are often too dense - Language is too dense and difficult - Books don't have good language support when merely translated - Do hear complaints about language quality of translated books
Content		It's about geography out there, doesn't refer to the child Quite Holland based
Language level	Simple language (especially beginning) Pretty good language level, appropriate for first year learners (also the way the topics are being dealt with) Pupils learn basic language and a lot of geography terminology, but…. Density of the text not too bad	Language level is (too) high Perhaps too easy Much more dense, almost academic text; tenses are too difficult (literally translated, so aimed at native speakers) Text is too difficult and not motivating …. Not a lot of academic language being taught Difficult wording (relationship) Haven't taken new 'normal'

		terminology into account Language level too high
Language quality	Short sentences Fine, language is correct Clear/good use of imperatives	Some sentences might seem a bit odd (fluency) Always complete sentences and hence sounds unnatural Style is rather dry Language is less active, talks about things outside of the kids so not intrinsically interesting Strange use of 'will' (Dunglish, p5-7), some odd sentences Wrong word order (p9) Some strange things, but….
	… not too bad compared to blatant mistakes found in for example math books	
activities	Questions/aims are simpler, less challenging → supports content acquisition best Questions help kids to understand the text Tasks refer to the visuals More factual questions, much more guided way of going through the curriculum	Activities are not aimed at having pupils communicate (produce output) The activities do not focus on language that needs to be learned More factual questions, much more guided way of going through the curriculum Activities are not about language, but about terminology and understanding geography concepts It is all being supported meticulously Missed opportunity: make pupils produce language Missed opportunity: no real focus on language in exercises Variety of tasks is not motivating (or less motivating), less varied Not much doing (just look, read & answer):
	Some are quite active,…	…but mostly answering questions Tasks are only checking understanding (not getting pupils to think) No real speaking or writing activities Tasks just support content acquisition, not language No particular language tasks
	Quite a few activities – also in	

	other resources Exercises make use of the Geo guide with the concepts	
Lay-Out Pictures	Pictures are ok, but… Input is visualised *More pictures, photos, various kinds of visuals, more graphs, tables: more variation*	… no teenagers in the pictures Boring colours, boring pictures Visually dryer, more of the same
Relationship text-picture	Appropriate Okay, lots of visual support	Too much text on the page ("text heavy") Too much text More running text
Structure	Teacher/curriculum guided → caring book Easier to work with Structure is okay: short paragraph, subtitle, short paragraphs, subtitle, etc. Not a main issue (provides goals & main questions)	
CLIL summary		Summary is content-focused
Key-vocab	Some language is highlighted (box 'things to learn') → points out specific vocab	Key-vocab is not repeated
Glossary		There is no glossary
CLIL features	The visuals Adapting the language level (making it easier) 'Things to learn' → recap Visual support Subtitles Tasks relating to the text, tasks relating to visuals Some highlighting of vocab Variety of tasks, but….	There are not really any CLIL features Book does not draw attention in any way to vocabulary There is no focus on word-level, sentence-level or text-level language use There is only a focus on content-aims, language aim is not mentioned …not a huge variety Doesn't work on language of the unit All the goals are content goals No real focus on language Needs extra support No language support

Answers related to the authentic book (Geog)

	Positive	Negative
Language		General: - Teachers still need to

		consider how they can consolidate the learning, guide the learners - Topics do not match curriculum - Too difficult (B2 instead of A1, A2) - Too many words on the page - They go through it slower and then worry about finishing it on time - Does not automatically all the aims (subject, language, EIO) for bilingual pupils in Dutch education
Language level	Less concerned about language level Bit more sophisticated language (gerunds, passives) Has been simplified for natives, not that difficult A bit easier than Translated one	Similar language level (high) Needs extra scaffolding and material, but is doable Perhaps a little bit too difficult in the beginning Difficult words (marsh,disappear) → needs support Language level too high
Activities	Rich in materials Also asks 'why' questions More challenging tasks Thinking skills, awareness of concepts is much more being developed; broader view on what is geography It contains thinking skills More multi-modal (do things) Support language & content acquisition a little bit more as they are more directed at different learning styles & more varied Much more doing (so more output) and learner centred Tasks are related to the visuals Tasks are more interesting Tasks get the children to think more (higher level thinking questions) Are presented along with the text which makes it easier to work with the book	Activities are not aimed at having pupils communicate (produce output) *Activities do not require the learner to use the glossary* Activities implicitly support language acquisition, but no real speaking or writing activities No particular language tasks Tasks only support content acquisition

	Gives the impression of a workbook	
Content	Relates content to children's lives; more learner centred → more motivating More interesting topics (silly facts) It gives pupils aims which connect to the child	
Language quality	Use of phrases; not complete sentences which makes it sound more natural Also fairly short sentences, but more challenging More authentic language Language is more active and more connected to the child	
Lay-Out pictures	Visually more interesting Visually more relevant and personal to teenagers, more memorable (going from globe to home) Visually more variety Looks more mature Visually more attractive Input is more varied	
Relationship text-picture	Less text on the page Appropriate; not endless pages of text Less language on each page Amount of text is okay Small pieces of text → easier to handle for students	
Visual support	So, more visual support which helps the understanding, but… More challenging visuals (filling in diagram) → support learning Visual ways of creating output	…not enough support for the language (not designed to) Book does not make it clear visually what the main issues are
structure	More subheadings, so structured more effectively, easier to see the subheadings Provides enough structure More space for individual work (not as much teacher/curriculum guided) Enough structure; subtitling is okay Well-structured More summaries and more bulleted points	

	Not a main issue (provides goals & main questions)	
CLIL Key-vocab	Repetition of key vocabulary which supports language acquisition Highlights language	
Glossary		Glossary is at the back of the book Some of the definitions are too difficult (should be simple text) Should perhaps be supported by visuals
Clil features	More language being offered, hence more beneficial to language acquisition	There is only a focus on content-aims, language aim is not mentioned Doesn't work on language of the unit All the goals are content goals No language support

Jason = Red

Gerrit Jan = Blue

Rosie = Green

Rick = purple

Important quotes to be categorised?:

Aspects good tto book:
One in which language learning is as much supported as the concept learning
The level of English should be in a way fairly demanding . So we know about the n+1, that is one thing that is necessary. It should be multi-model in terms of input. The third that i think that it would be great there is a focus on language, which we call noticing. I feel there should be ample opportunities for them to produce output either written or spoken.
I think multi-modal input, Visuals, lots of visuals, active activating tasks. Ehm and then I think the cultural element you know the EIO. And not just a text and questions, but a variety of texts appealing to different intelligences or different learning styles.
Well actually, one of the things you would, you aim students at well developing is that they are able to read authentic texts and to make sense of authentic texts. Also texts which are not immediately within their own framework of reference. Because they are preparing themselves for an international context. On the other hand that doesn't mean that right from the start from the brugklas they should only be confronted with authentic texts as language is concerned and as content, the context is concerned.
An international perspective. A perspective of comparing different points of view. And a perspective of language support.
you really have to work with textbooks with less blocks text than you would have in a regular Dutch havo/vwo book. I think they should learn from for example, the way their vmbo book is structured. I

mean content wise it has to be at the same level of course. But text wise and visual wise etc you have to be much more creative.
So that's one thing and the other thing is how can you provide extra support for your pupils to better work with the text, elaborate with the text. Both focusing on the subject specific terminology and the general academic terminology, which for children from an English speaking context they have learned a lot of general academic language already during their primary education. Dutch learners have learned so only in Dutch. So you have to help them working on this as well.

Judging level:
When judging level You have to look at vocabulary, number of words per sentence.
Very generally you are aiming at a sort of A2 level. Kids coming into the brugklas for some of them that might even be a little bit too high
I think you have to look at the language level to see if it is ok for the children. And also if there are thinking skills in it. The rule of thumb is that there shouldn't be more than 15 new words on the page.
in many occasions that it is also the general academic terminology that is really difficult in the first and second year.

Lay-out:
Lay-out is important in terms of visualisation
There is a number of things that helps in terms of lay-out from the point of view of the teacher to draw attention to the language, sub headings, things in bold italicized texts, that sort of thing. In itself it doesn't help, it is only if it is used in the context of an activity when the teacher asks to do something with those words, its activating them with that language.
language is more important, but I think lay –out with this generation of children lay-out is very important. That they are attracted to the page.

Language acquisition:
Of course your questions might presuppose that language acquisition happens in a certain way emerging children in an environment where they are exposed to English Other people would argue you need to set up more concrete learning experiences and activities. Support language learning in concrete ways (better according to Jason)
Ideally for CLIL it would be really nice if there was more emphasis on language. Or highlight it more, I think because they probably work on it but don't realise and it would be nice.
In learning any language language is important. And the support is important, because any knowledge is expressed by language and is processed and elaborated by language. So you really have to take the language issue and development into account. One of the ways to support language development and to support understanding is by visual support, by using graphs and diagrams etc.

Content acquisition:
So if the content is difficult you would need more support in terms of pictures, diagrams etc. You also do need the language to talk about whatever you have learned. So I feel they are equally important. You cannot do without. You also need language to talk about and understand the content. You cannot learn language from pictures, diagrams.
Sometimes the focus is a bit more on the language acquisition sometimes it is a bit more on the content. So what kind of learning takes place depends on how difficult the topic is and how much support , scaffolding there is. Make sure the task they have to do are difficult otherwise there is no content learning going on. It is just language learning and that should not be the aim.
And I can imagine, particularly with geography, the pedagogy of geography learning how to work with visuals and graphs etc.is a very important issue.

Visualisation:

There is some research that shows that in part of the brain that involves visualising especially if you are trying to imagine something that area of the brain is connected to the area that connects with language. There is some sort of connection going on between the two, it suggests that ehm using visual support is actual helping to fire up the literate brain. There seems to be a connection between language and visualisation

I think the way the brain stores things, or makes connections it is much better if you have various entries. All the connections in your brain become much richer instead of only one way of being able to describe it. So from an output hypothesis it is very important to have materials and use them. It is a very useful tool to help produce language or to understand language.

I think very important for those children I think more and more children are more and more visual, just because of the world in which they live.

But particularly for then we're coming back to clil, that's particularly for a textbook which is designed for tto further visual support is required.

Glossary:

Glossary its useful, but again it's what the teacher does with it. If i was designing a book I would have it on the page, in some way building up as the book progresses. And i would design activities that are using the glossary in some way.

But in the end you simply have to study words. So yes glossaries are useful but however you should explain to your pupils how to deal with them. You have to understand the language concept but then in the end it is about repetition. Having to learn it by heart.

I think a glossary is only useful if the teachers do something with it. Otherwise I don´t think that children bother with it. If they are taught how to use it and they know it is there. But you have to be careful, it s useful if the definitions are useful to understand. But if the definition is as hard as the word it doesn´t helpI think maybe both, if they highlight the vocab in the unit it would probably be better. I think the teachers have to work actively with the words otherwise it is not worth it.

I wouldn't think of a bilingual glossary in the first place. But I would think of a way to explain new concepts with words that the students can understand. And support it by visuals. You could for example bold words with two different colours one for subject specific words and one for the academic words.

Summary:

For me all these kind of things are only gonna be useful in a clil context if the teacher uses them in an active way. So a summary could be useful at the beginning.

i feel that the risk of the summary is that they only read the summary that they only study the summary. That's is not what we want.

The trouble is a summary is usually quite a high level text. I suppose it depends what it is.

If it is like a bulleted list or Might help the learners who need structure. Not vital I don´t think

EIO:

i suppose with EIO there is a need to draw attention to a wider cultural awareness You could argue though that's a good starting point. To move out of the Netherlands you know and have this UK context

I think geography is always EIO in terms of the learning about other cultures

Schools & Teachers:

No, I don't really hear that many complaints. I think schools are quite happy with them.

So the teachers are a bit too dependent on the book I think. Some of the less experienced teachers don't know so well how to develop their own things. Also if you have got 28 hours a week you don't have time to prepare so time is also an issue. Teachers aren't very capable maybe that's different now of choosing the right book.

Then actually in both cases they see that the textbook as such won't offer them everything they need. So in both cases there is extra material, extra support needed.

Whereas I think that when you focus on what is bilingual education about and what is clil about then it is never only the textbook which would be the main concern for a selection. But the aims you have with your teaching, and then you have both the subject aims and the language aims and also EIO aims

And of course you cannot all provide the support from the textbook. It has to be first of all well the focus of the teacher. With many of them you can provide extra support.

Well I think as a publisher and also as a subject teacher you have to take into account what is the kind of terminology they have to understand and to be able use from geography and what is the kind of terminology they have to acquire related to academic language.

That is another issue, but a lot of this terminology pops up both in geography, history, biology. It is not the teachers that make the connections, because they are just not aware of it. I think also the English teacher should be able to understand that this is the kind of terminology that students need to understand in the first place and maybe use as well. So they have a role in that respect too.

I think a good structure is important for good learning in general. But that's in the first place a teacher's responsibility to provide that structure with the textbook as a support.

Helping students to rehearse and prepare for the test and understand what are the key issues and what are less key issues that's something they need I suppose more support for. Than the book can itself provide.

And teachers need to have well, a repertoire of activities to help their students work with these words and acquire these words. Also to help their students understand which of the words they need to know productively and which they only need to know in order to understand the text. Collaborating between departments from different schools to work on support that can be used by their colleagues from other schools.

Learners:
I think their receptive knowledge is much higher than we think.
I think we have to accept that children just don´t read. It is hard to get them reading. And how you then get them active and how do you get them to understand something.

Publishers:
I think it would be great if there were publishers who would like to publish CLIL books, so aiming at an international European audience.
Every publisher should have a clil expert when they are preparing a tto version.

Questionnaire Results for TTO Teachers

Authentic and Translated course books for Dutch TTO pupils (*Geog and The Geo*)

General

Name	
Years of experience with this book	
Years of TTO teaching experience	

What are your reasons for using the <u>Authentic/Translated</u> course book you are currently using?
Translated: - **Dutch curriculum/content** - **The method seemed more interesting than the other option we've used beforehand (Geo Matters)** - **It offered more structure to the lessons and there was a greater knowledge element involved. The English books we had been using before had nice some assignments but left a lot up to the teachers in terms of presenting information and it wasn't possible for the pupils to study this information at home because it simply wasn't in the book. I still need to present a lot of information to the pupils of course, but to a lesser extent. Furthermore, as a native speaker I was am to gloss over the errors and point out vocabulary mistakes made in The Geo.** **Authentic** - **Lot of info, nice diagrams and useful in the neth?** - **Better use of English 2x** - **Better understandable English for bilingual students** - **Better exercises**
What other course books have you used prior to the one you are using now?
Translated: Key Geography and Geography Matters **Authentic: Key Geography (Foundations/Interactions)**

Do you work/ or have you worked with the translated Dutch course book?
Translated: yes 1x no 2x Authentic: no 3x
Is the book you are using intended for the age group/level of pupils you are teaching?
Translated: yes Authentic: no > for younger students

Content

Please tick the box that expresses your opinion on the **content** *aspects of the book:*

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	n/a
The book supports and follows the aims of the Dutch National Curriculum.	AvR 2	SGvdC 2	AvR 1 SGvdC 1		
The book contains examples relevant to Dutch pupils.	AvR 2	AvR1	SGvdC 3		
The book contains examples relevant to pupils of various cultural backgrounds.		AvR2 SGvdC 2	AvR1 SGVDC1		
The book's knowledge level is appropriate for first year pupils.		AVR2 SGVDC3	AVR1		
The pupils understand the contents of the book without further explanation from the teacher.		SGVDG2	AVR3	SGVDC1	
The pupils get through the material quickly.		AVR2 SGVDC 3	AVR1		
The book's content can be covered in a reasonable pace.	SGVDC1	AVR3 SGVDC2			
The pupils have a positive attitude		AVR2 SGVDC3	AVR1		

towards the book.					
The book offers a wide variety of different exercises/tasks to help the students master the content.	SGVDC1	AVR1 SGVDC1		AVR2 SGVDC1	
The content of the book simulates/reflects real life situations.	SGVDC1	AVR1 SGVDC1	AVR1 SGVDC1	AVR1	
The book supports the teaching objectives		AVR2 SGVDC3	AVR1		
Non-functional /time consuming materials/ information is avoided.	AVR1	SGVDC1	AVR2 SGVDC1		SGVDC1
The book's publisher provides additional learning resources i.e. website, CD, workbook.	SGVDC1	AVR1 SGVDC2	AVR1	AVR1	
The book's publisher provides additional teaching resources i.e. teacher's book, tests, CD, etc.	SGVDC1	AVR2 SGVDC2	AVR1		
The additional resourced provided are useful for the pupils.		AVR1 SGVDC1	AVR2 SGVDC1	SGVDC1	
The additional resources provided are useful for the teacher.		AVR1	AVR1 SGVDC2	SGVDC1	

Additional comments on the _content_ of the book.

Translated:
- **For a useful planning there is too much content**
- **New edition underlines important goals**
- **CLIL didactics are absent**
- **Book is OK, however, I always make additional powerpoints, and look for some extra short activities (the menus at the end of each Chapter are usually too time consuming)**
- **Pupils get through the material quickly:**

- Depends how thoroughly you want to do it and how much supplementary information you add. Some chapters were interesting and there were plenty of extra things that could be done.
- **Additional resources**
- Aren't all that fantastic, to be honest. The tests were all multiple choice, for example. We use some questions but write most of the tests ourselves.
- **Reflective questions**
- There could have been more of these. Asking pupils' opinions in discussion boxes and that sort of thing.

Authentic
- The content is understandable but at the start of the first year the speed is very slow as many students need time to get used to the English.
- The content focuses on the UK and not NL

Language Quality

*Please tick the box that expresses your opinion on the **language quality** of the book best.*

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	n/a
The general language level (difficulty) is appropriate for non-native speakers of English.	SGVDC3	AVR3			
The choice of words is appropriate for first year pupils.	SGVDC2	AVR1 SGVDC1	AVR2		
The sentence structures are correct.	SGVDC3	AVR2	AVR1		
The grammar is correct.	SGVDC3	AVR1	AVR2		
The subject specific terminology is translated correctly.		AVR2	AVR1		SGVDC3
There are no *Dunglish* (Dutch sounding words and phrases) expressions in the text.			AVR3		SGVDC3
I also use other materials apart from the book.	AVR2	AVR1 SGVDC2	SGVDC1		
I adapt exercises from the book to also include language acquisition.	AVR1	AVR1	AVR1 SGVDC2	SGVDC1	
The book offers a wide variety of different exercise/tasks to help the students master the English language.			AVR1 SGVDC1	AVR2 SGVDC1	SGVDC1

Additional comments on the *language quality* of the book.

Translated:
- It's translated, so the language does not connect to the vocabulary/language level of the pupils at the start of TTO.
- **I add CLIL-exercises myself.**
- **The general language level (difficulty) is appropriate for non-native speakers of English.**
- The text in the geo guide was often too difficult, especially for first years, but often for 2nd

years too)
- CLIL is becoming increasingly more important so some language assignments would have been great as well.

Authentic:
- nothing

Lay-Out

*Please tick the box that expresses your opinion on the **lay-out** of the book best.*

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	n/a
The book has an appropriate number of pictures to support the text.	AVR2 SGVDC3	AVR1			
The quality of the pictures is satisfactory.	AVR3 SGVDC1	SGVDC1	SGVDC1		
The pictures are consistent with the text.	AVR2 SGVDC3	AVR1			
The book's graphic design is attractive and inviting.	AVR1 SGVDC1	AVR1 SGVDC2	AVR1		
The book's graphic design enhances the structure of the content.	AVR2 SGVDC1	AVR1 SGVDC2			
The content is divided in subtexts/paragraphs which make the structure of the information clear.	AVR2	AVR1 SGVDC3			
The book uses sufficient headings and titles to structure the content.	AVR2	AVR1 SGVDC3			
The book has a clear and logical structure.	AVR1 SGVDC1	AVR2 SGVDC2			
The amount of text per page is appropriate for first year learners.	AVR1 SGVDC1	AVR1 SGVDC1		AVR1 SGVDC1	
Signal words are used to enhance the	AVR1	SGVDC1	AVR2 SGVDC1	SGVDC1	

structure and readablitiy of the text.						54
The letter font is legibable and functional.	AVR2 SGVDC2	AVR1 SGVDC1				
The letter size is comfortable.	AVR2 SGVDC2	AVR1 SGVDC2				
I refer to the glossary in my lessons.	SGVDC1		AVR2 SGVDC2	AVR1		
I think that having important terms in bold helps the pupils to understand the content.	AVR1 SGVDC3	AVR1		AVR1		
I think that having important terms in bold helps the pupils acquire the language.	AVR1 SGVDC1	AVR2 SGVDC1	SGVDC1			
I think that the summary provided helps the pupils to grasp the content better.		AVR1 AVR1	AVR1 SGVDC1	AVR1	SGVDC1	

Additional comments on the _lay-out_ of the book.

Translated
- **Sometimes the division of the sub-paragraphs could be clearer. As a result I spend time to provide the pupils with schematic overviews/ summaries.**
- I'm not sure a summary was provided in the edition we used. I don't like the fact that the assignments are always the same: Text with pictures and graphs, followed by questions.

Authentic: nothing

Thank you for filling out this questionnaire!

Minitab Project Report

Comparative Two-Sample T-Test result pupils AvR & SGvdC

All Questions
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School     N   Mean  StDev  SE Mean
AvR     2896  2.922  0.982    0.018
SGvdC   3131  3.271  0.824    0.015


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.3482
95% CI for difference:  (-0.3942, -0.3022)
T-Test of difference = 0 (vs not =): T-Value = -14.85  P-Value = 0.000  DF =
    5669
```
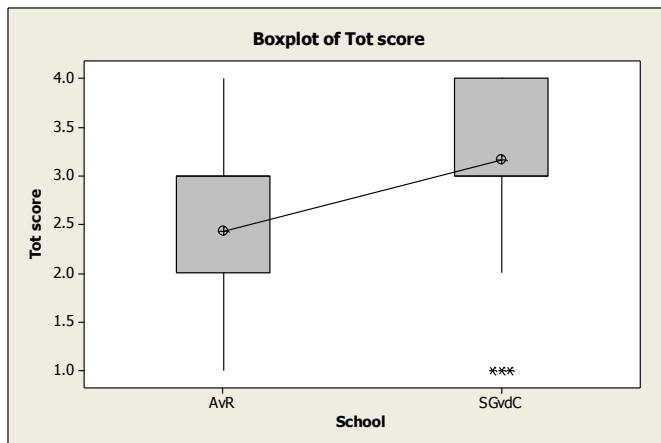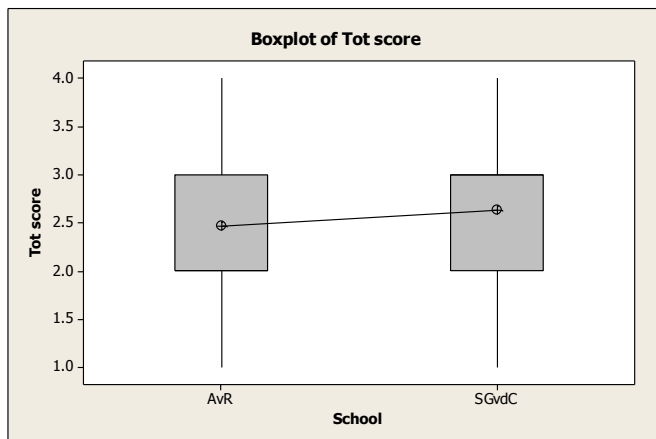
Boxplot of Tot score

Results for: Worksheet 2
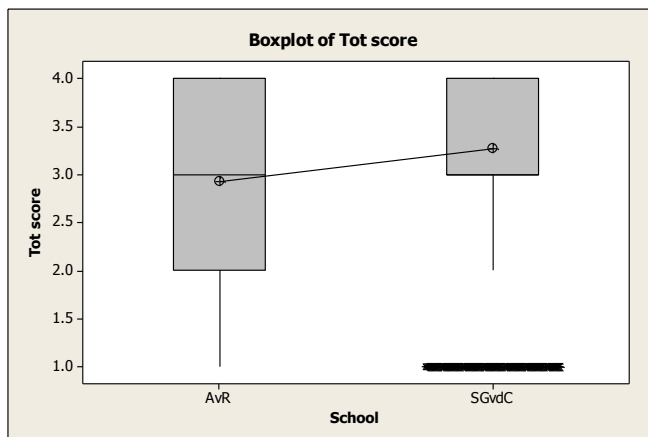
Conten Questions
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School     N   Mean  StDev  SE Mean
AvR      989  2.680  0.990    0.031
SGvdC   1079  3.114  0.859    0.026


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.4335
95% CI for difference:  (-0.5138, -0.3532)
T-Test of difference = 0 (vs not =): T-Value = -10.59  P-Value = 0.000  DF =
    1964
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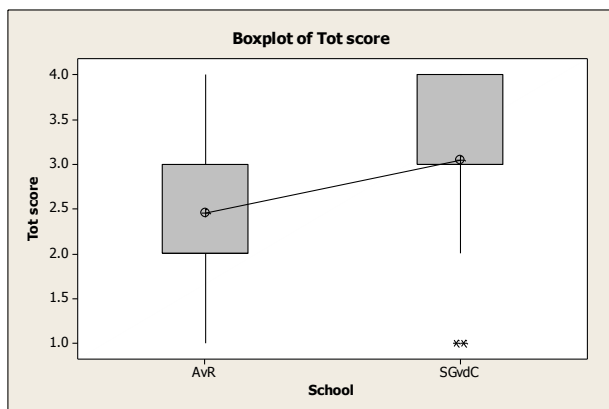
Boxplot of Tot score

Results for: Worksheet 3

Boxplot of Tot score
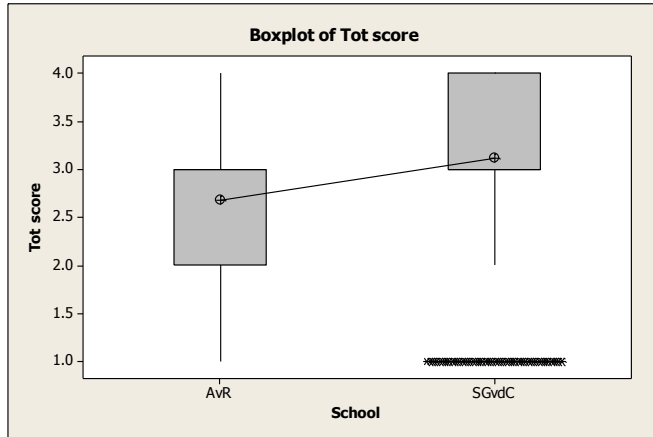
Language Questions
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School    N   Mean  StDev  SE Mean
AvR      629  2.85   1.00    0.040
SGvdC    659  3.190  0.839   0.033


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.3391
95% CI for difference:  (-0.4405, -0.2378)
T-Test of difference = 0 (vs not =): T-Value = -6.57  P-Value = 0.000  DF =
    1225
```
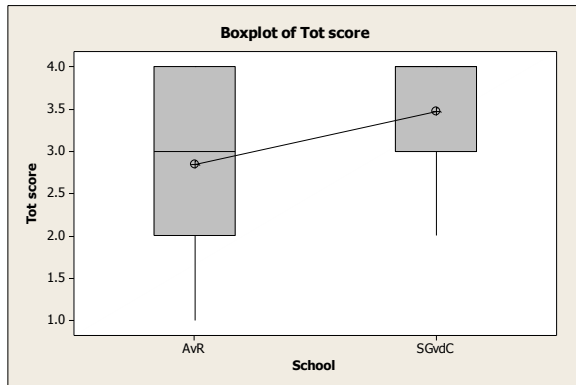
Boxplot of Tot score

Results for: Worksheet 4

Boxplot of Tot score
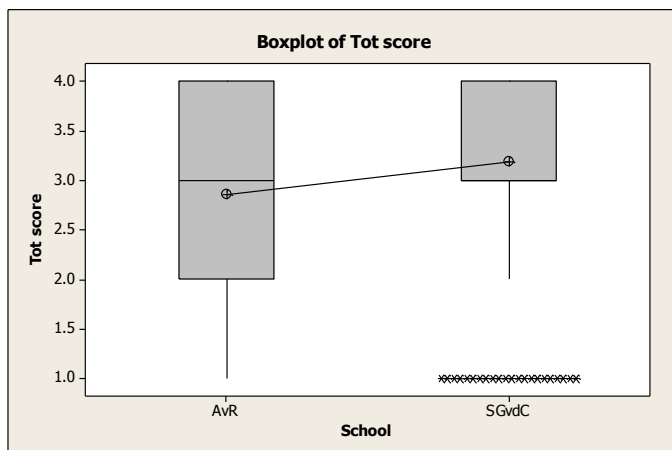
Lay-out Questions
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School     N   Mean  StDev  SE Mean
AvR     1278  3.145  0.915    0.026
SGvdC   1393  3.430  0.759    0.020


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.2852
95% CI for difference:  (-0.3493, -0.2212)
T-Test of difference = 0 (vs not =): T-Value = -8.73  P-Value = 0.000  DF =
     2488
```

Boxplot of Tot score

Results for: Worksheet 5
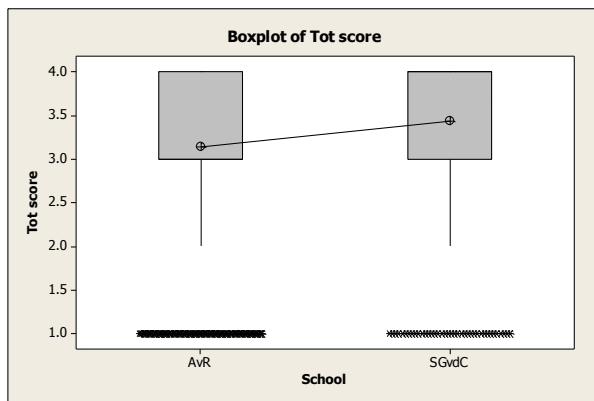
Question 1
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     68  2.735  0.683    0.083
SGvdC   81  3.160  0.641    0.071


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.425
95% CI for difference:  (-0.641, -0.209)
T-Test of difference = 0 (vs not =): T-Value = -3.89  P-Value = 0.000  DF = 139
```
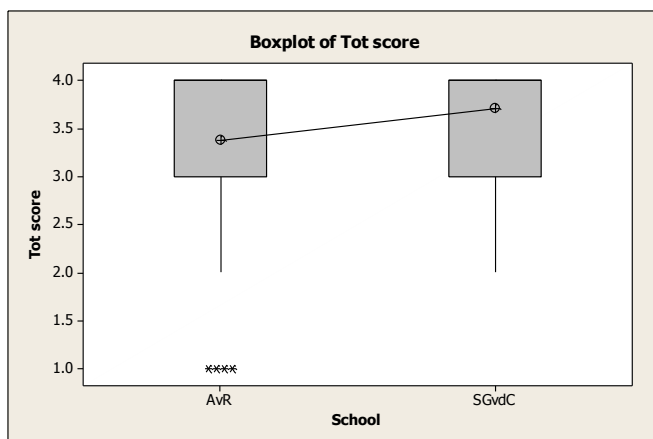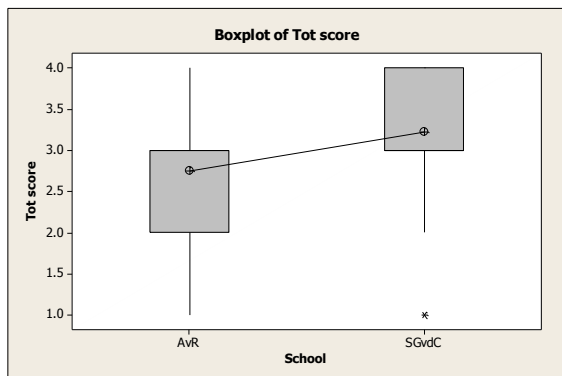
Boxplot of Tot score

Results for: Worksheet 6

Boxplot of Tot score
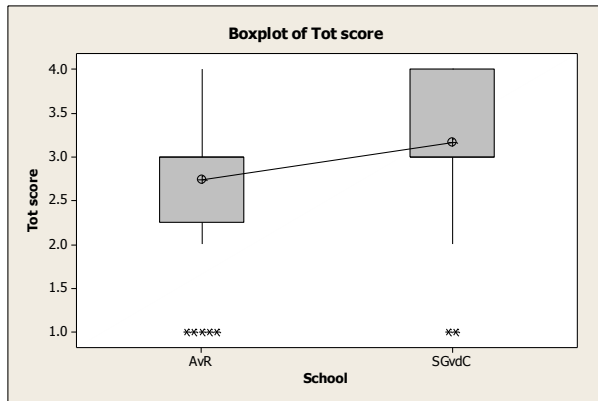
Question 2
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School    N   Mean  StDev  SE Mean
AvR      74  3.473  0.646    0.075
SGvdC    74  2.878  0.843    0.098


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  0.595
95% CI for difference:  (0.350, 0.839)
T-Test of difference = 0 (vs not =): T-Value = 4.82  P-Value = 0.000  DF = 136
```

Boxplot of Tot score

Results for: Worksheet 7

Boxplot of Tot score
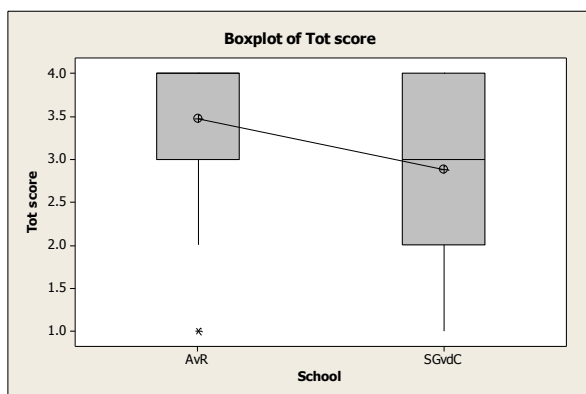
Question 3
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School    N   Mean  StDev  SE Mean
AvR      72  2.431  0.901     0.11
```

```
SGvdC   84  3.167  0.804    0.088


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.736
95% CI for difference:  (-1.008, -0.464)
T-Test of difference = 0 (vs not =): T-Value = -5.34  P-Value = 0.000  DF = 143
```

Boxplot of Tot score

Results for: Worksheet 8

Question 4
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     70  1.743  0.896    0.11
SGvdC   82  2.74   1.00     0.11


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -1.001
95% CI for difference:  (-1.306, -0.697)
T-Test of difference = 0 (vs not =): T-Value = -6.50  P-Value = 0.000  DF = 149
```
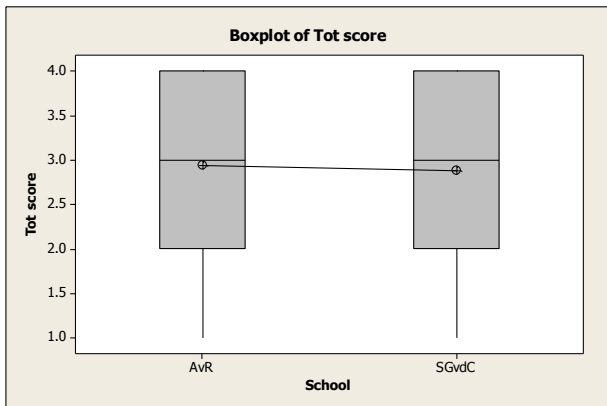
Boxplot of Tot score

Results for: Worksheet 9

Boxplot of Tot score
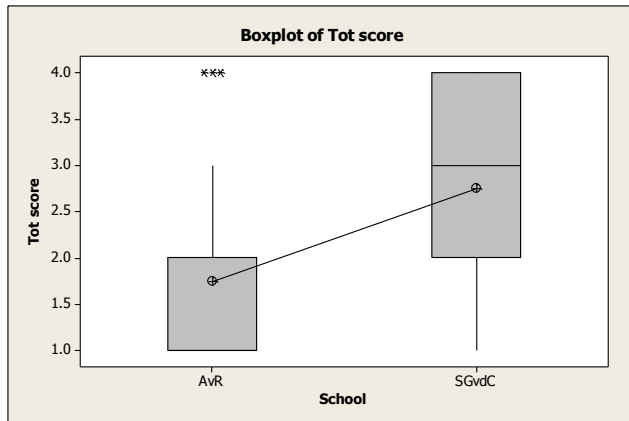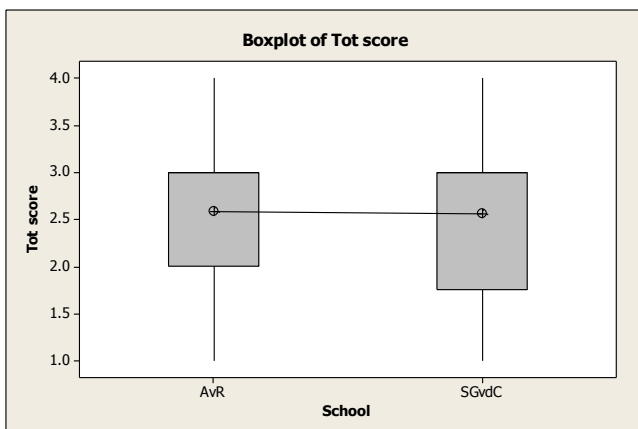
Question 5
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     69   2.46   1.01     0.12
SGvdC   83   2.627  0.920    0.10


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.163
95% CI for difference:  (-0.475, 0.150)
T-Test of difference = 0 (vs not =): T-Value = -1.03  P-Value = 0.305  DF = 139
```


Boxplot of Tot score

———————— **21/05/2012 10:14:14** ————————————————————————

```
Welcome to Minitab, press F1 for help.
Retrieving project from file: 'I:\My Documents\U-Teach 2\PBR\Minitab
Student and School diffences.MPJ'
```

Question 6
Two-Sample T-Test and CI: Tot score, School
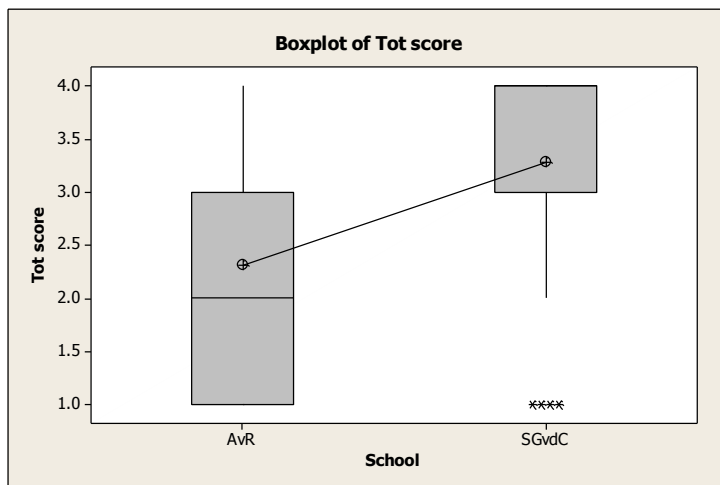
```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR      70  2.300 0.922     0.11
SGvdC    81  3.012 0.873     0.097


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.712
95% CI for difference:  (-1.003, -0.422)
T-Test of difference = 0 (vs not =): T-Value = -4.85  P-Value = 0.000  DF = 143
```
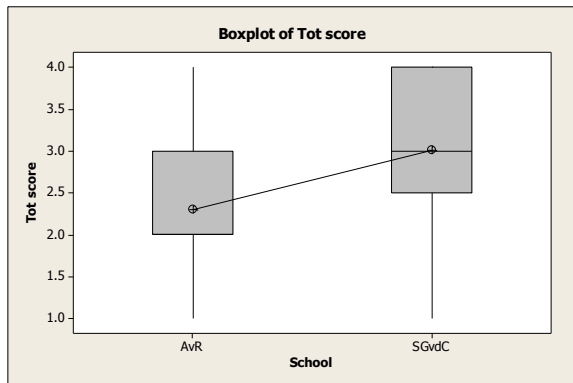

Question 7
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR      70  2.457 0.943     0.11
SGvdC    80  3.050 0.794     0.089


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.593
95% CI for difference:  (-0.877, -0.309)
T-Test of difference = 0 (vs not =): T-Value = -4.13  P-Value = 0.000  DF = 135
```


Question 8
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score
```

```
School   N   Mean  StDev  SE Mean
AvR      71  2.845 0.936     0.11
SGvdC    81  3.469 0.634    0.070


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.624
95% CI for difference:  (-0.884, -0.364)
T-Test of difference = 0 (vs not =): T-Value = -4.74  P-Value = 0.000  DF = 120
```


Question 9
Two-Sample T-Test and CI: Tot score, School
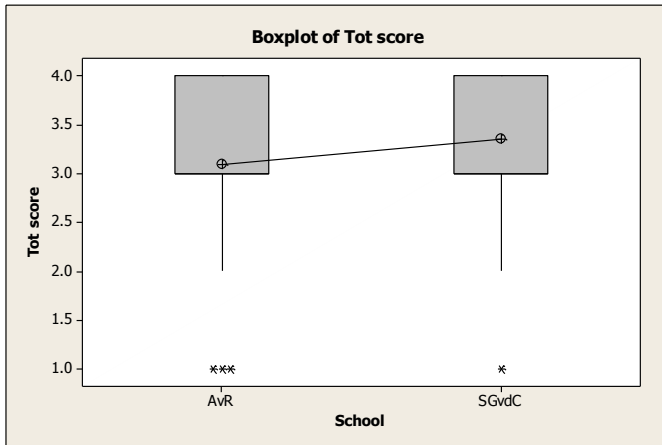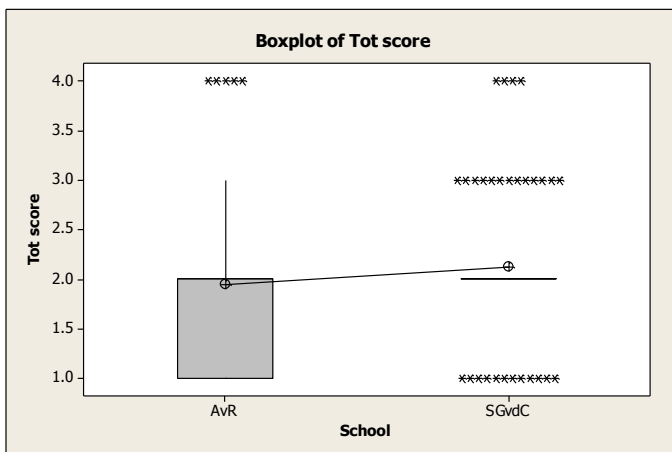
```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR      70  3.371 0.820    0.098
SGvdC    80  3.712 0.482    0.054


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.341
95% CI for difference:  (-0.563, -0.119)
T-Test of difference = 0 (vs not =): T-Value = -3.05  P-Value = 0.003  DF = 108
```
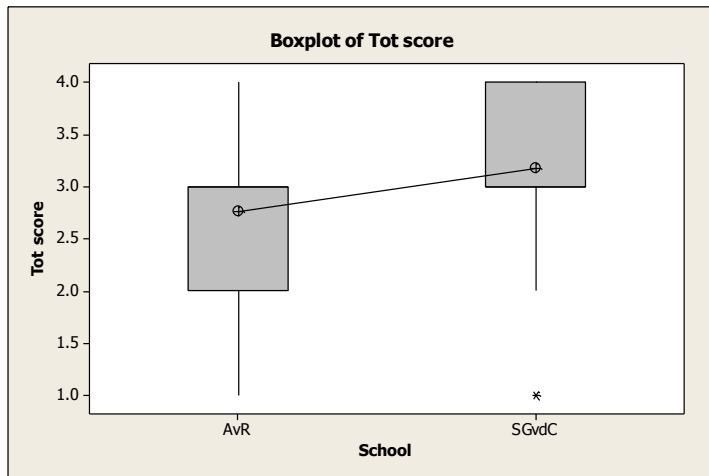

Question 10
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     68  2.750  0.817    0.099
SGvdC   81  3.222  0.652    0.072


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.472
95% CI for difference:  (-0.715, -0.229)
T-Test of difference = 0 (vs not =): T-Value = -3.85  P-Value = 0.000  DF = 127
```


Boxplot of Tot score

Question 11
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     71  3.070  0.900     0.11
SGvdC   79  3.430  0.746    0.084


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.360
95% CI for difference:  (-0.628, -0.091)
T-Test of difference = 0 (vs not =): T-Value = -2.65  P-Value = 0.009  DF = 136
```
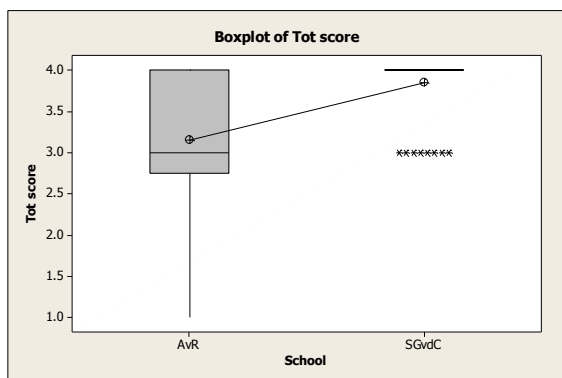

Boxplot of Tot score
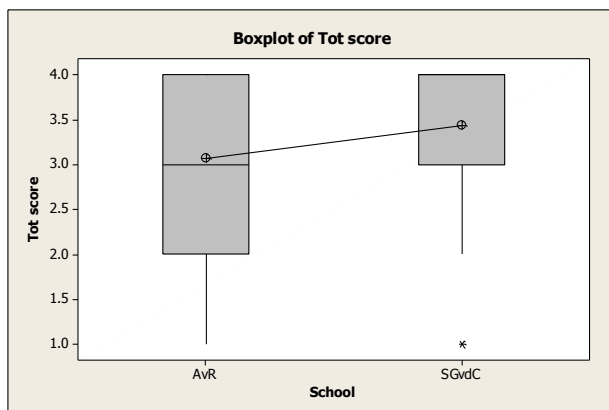
Question 12
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR      70  2.94  1.01     0.12
SGvdC    75  2.880 0.999    0.12


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  0.063
95% CI for difference:  (-0.267, 0.392)
T-Test of difference = 0 (vs not =): T-Value = 0.38  P-Value = 0.707  DF = 142
```
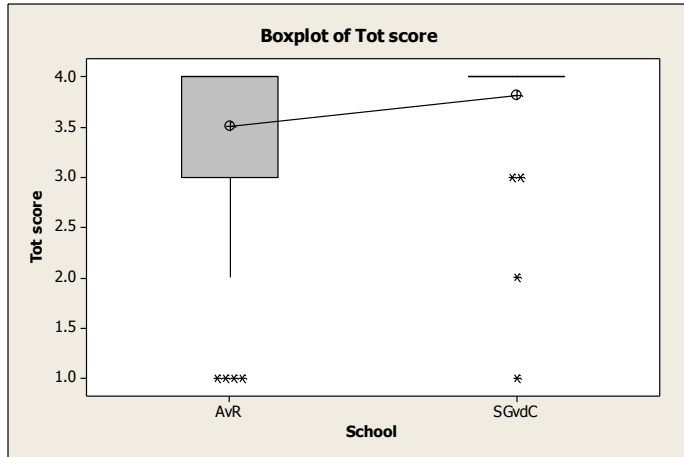

Question 13
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR      60  2.583 0.850    0.11
SGvdC    18  2.56  1.04     0.25


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  0.028
95% CI for difference:  (-0.527, 0.583)
T-Test of difference = 0 (vs not =): T-Value = 0.10  P-Value = 0.919  DF = 24
```
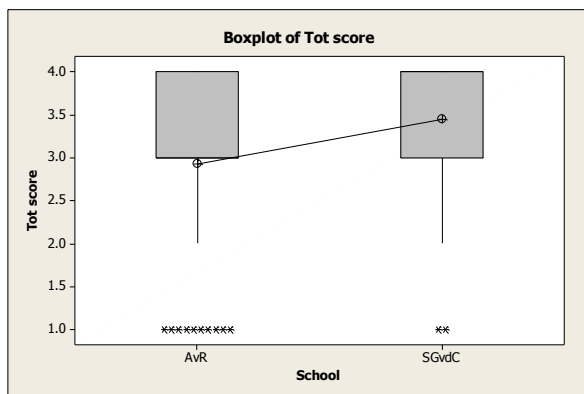

Question 14

Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR      68  2.31   1.10      0.13
SGvdC    70  3.286  0.903     0.11


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.977
95% CI for difference:  (-1.316, -0.638)
T-Test of difference = 0 (vs not =): T-Value = -5.70  P-Value = 0.000  DF = 129
```
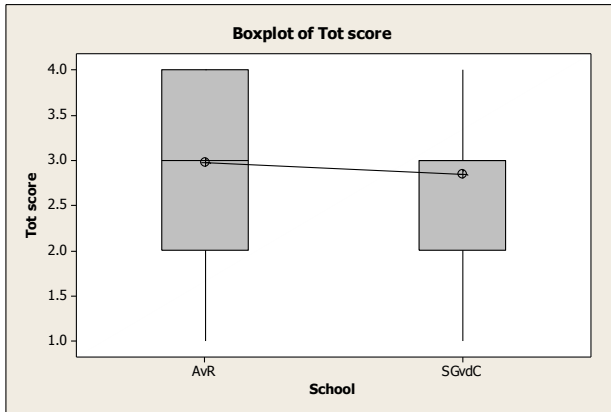

Boxplot of Tot score

Question 15
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR      72  3.097  0.842     0.099
SGvdC    72  3.347  0.653     0.077


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.250
95% CI for difference:  (-0.498, -0.002)
T-Test of difference = 0 (vs not =): T-Value = -1.99  P-Value = 0.049  DF = 133
```

Boxplot of Tot score

Question 16
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N    Mean   StDev   SE Mean
AvR     70   1.943   0.866      0.10
SGvdC   73   2.123   0.744     0.087


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.180
95% CI for difference:  (-0.448, 0.087)
T-Test of difference = 0 (vs not =): T-Value = -1.33  P-Value = 0.185  DF = 135
```
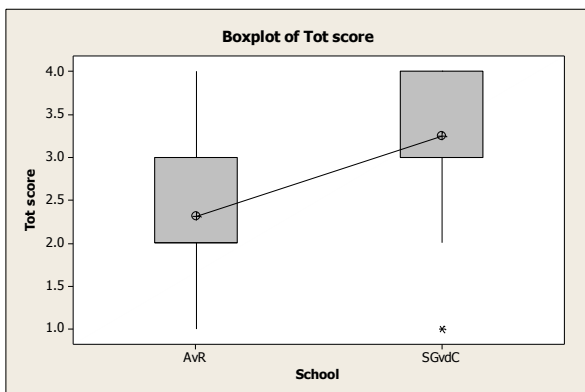

Boxplot of Tot score

Question 17
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N    Mean   StDev   SE Mean
AvR     67   2.761   0.761     0.093
SGvdC   68   3.176   0.732     0.089


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.415
95% CI for difference:  (-0.669, -0.161)
```

```
T-Test of difference = 0 (vs not =): T-Value = -3.23  P-Value = 0.002  DF = 132
```
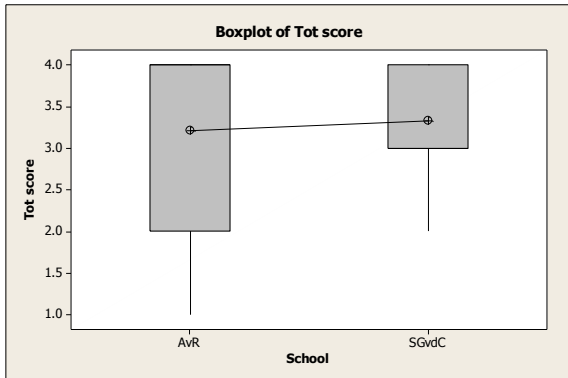

Question 18
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR      62  3.145  0.973     0.12
SGvdC    54  3.852  0.359     0.049


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.707
95% CI for difference:  (-0.971, -0.442)
T-Test of difference = 0 (vs not =): T-Value = -5.32  P-Value = 0.000  DF = 79
```


Question 19
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR      59  3.508  0.917     0.12
SGvdC    38  3.816  0.609     0.099
```

```
Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.307
95% CI for difference:  (-0.615, 0.000)
T-Test of difference = 0 (vs not =): T-Value = -1.98  P-Value = 0.050  DF = 94
```
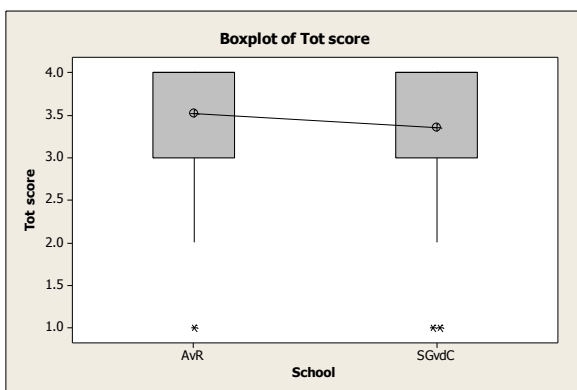

Question 20
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     72  2.931  0.969     0.11
SGvdC   67  3.448  0.724    0.088


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.517
95% CI for difference:  (-0.803, -0.232)
T-Test of difference = 0 (vs not =): T-Value = -3.58  P-Value = 0.000  DF = 131
```
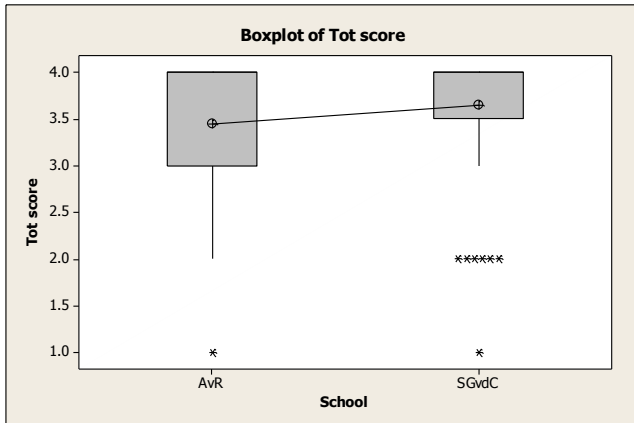

Question 21
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     71  2.972  0.845     0.10
```

```
SGvdC   76  2.842  0.731    0.084


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  0.130
95% CI for difference:  (-0.129, 0.388)
T-Test of difference = 0 (vs not =): T-Value = 0.99  P-Value = 0.323  DF = 138
```
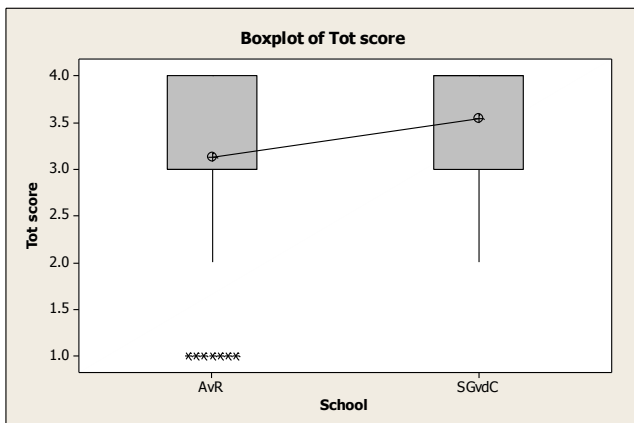

Question 22
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     72  2.306  0.959     0.11
SGvdC   77  3.247  0.781    0.089


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.941
95% CI for difference:  (-1.226, -0.657)
T-Test of difference = 0 (vs not =): T-Value = -6.54  P-Value = 0.000  DF = 137
```


Question 23
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
```

```
AvR      66   3.212   0.953      0.12
SGvdC    74   3.324   0.742      0.086


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.112
95% CI for difference:  (-0.400, 0.176)
T-Test of difference = 0 (vs not =): T-Value = -0.77  P-Value = 0.442  DF = 122
```


Question 24
Two-Sample T-Test and CI: Tot score, School
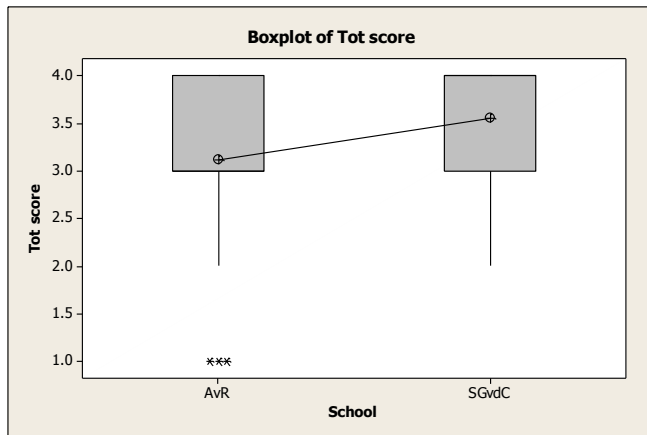
```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR      71   3.521   0.694    0.082
SGvdC    75   3.347   0.797    0.092


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  0.174
95% CI for difference:  (-0.070, 0.419)
T-Test of difference = 0 (vs not =): T-Value = 1.41  P-Value = 0.160  DF = 143
```


Question 25
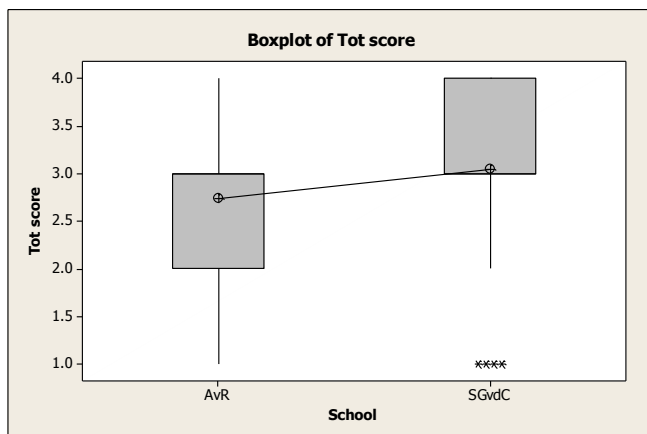## Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
```

```
AvR      73   3.452   0.688      0.081
SGvdC    77   3.649   0.684      0.078


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.197
95% CI for difference:  (-0.419, 0.024)
T-Test of difference = 0 (vs not =): T-Value = -1.76  P-Value = 0.080  DF = 147
```
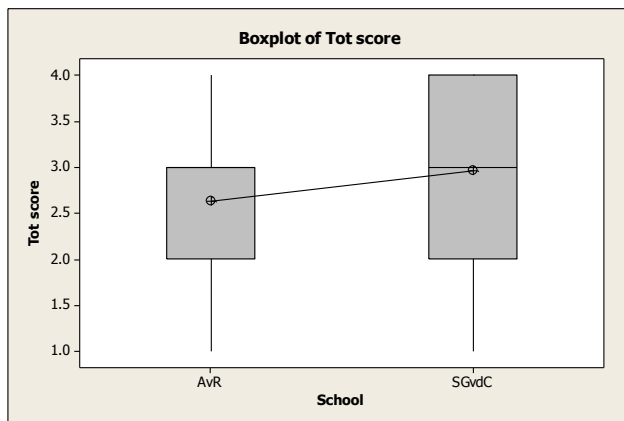

Boxplot of Tot score

Question 26
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N    Mean  StDev  SE Mean
AvR      71   3.127  0.970     0.12
SGvdC    77   3.545  0.575     0.065


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.419
95% CI for difference:  (-0.681, -0.156)
T-Test of difference = 0 (vs not =): T-Value = -3.16  P-Value = 0.002  DF = 111
```


Boxplot of Tot score

Question 27
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR     72   3.111   0.832    0.098
SGvdC   79   3.557   0.615    0.069


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.446
95% CI for difference:  (-0.683, -0.208)
T-Test of difference = 0 (vs not =): T-Value = -3.72  P-Value = 0.000  DF = 129
```
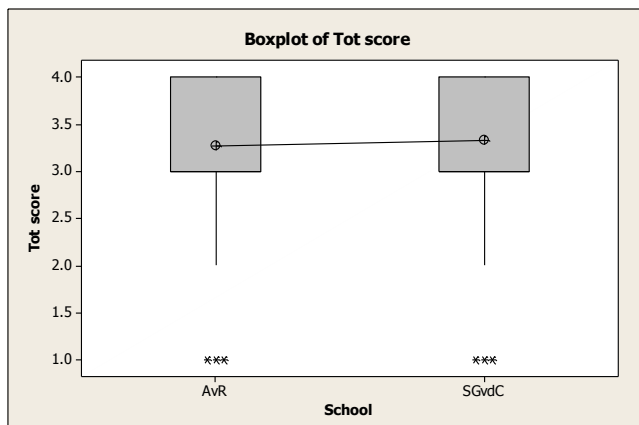

Question 28
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR     72   2.736   0.904    0.11
SGvdC   77   3.039   0.834    0.095


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.303
95% CI for difference:  (-0.585, -0.021)
T-Test of difference = 0 (vs not =): T-Value = -2.12  P-Value = 0.036  DF = 143
```
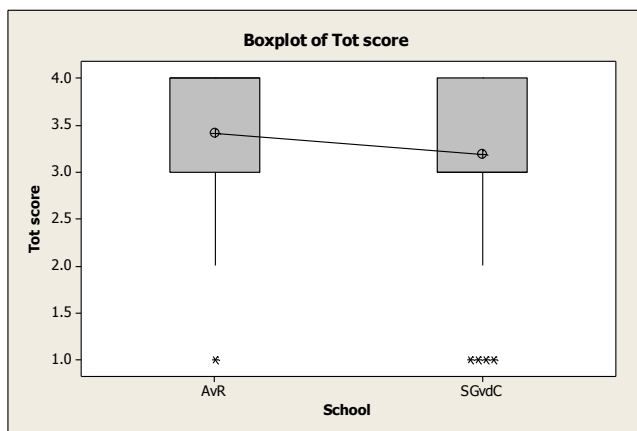
Question 29
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     71  2.634  0.945     0.11
SGvdC   75  2.960  0.779    0.090


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.326
95% CI for difference:  (-0.610, -0.042)
T-Test of difference = 0 (vs not =): T-Value = -2.27  P-Value = 0.025  DF = 135
```


Question 30
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     71  3.268  0.774    0.092
SGvdC   75  3.333  0.777    0.090


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.066
95% CI for difference:  (-0.319, 0.188)
T-Test of difference = 0 (vs not =): T-Value = -0.51  P-Value = 0.609  DF = 143
```

Question 31
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     69  3.406  0.714    0.086
SGvdC   76  3.184  0.844    0.097


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  0.222
95% CI for difference:  (-0.034, 0.477)
T-Test of difference = 0 (vs not =): T-Value = 1.71  P-Value = 0.089  DF = 142
```
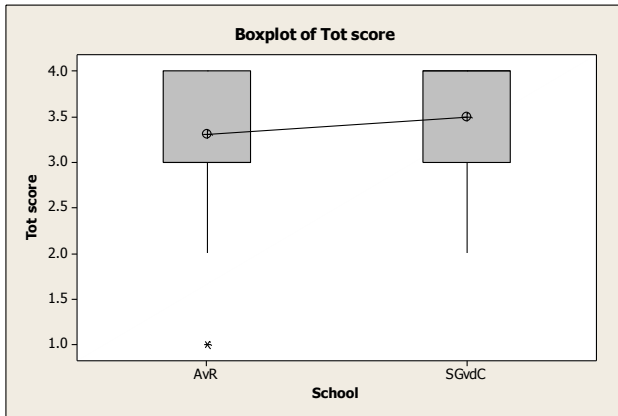
Boxplot of Tot score

Question 32
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean  StDev  SE Mean
AvR     72  3.306  0.725    0.085
SGvdC   77  3.494  0.576    0.066


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.188
95% CI for difference:  (-0.401, 0.025)
T-Test of difference = 0 (vs not =): T-Value = -1.74  P-Value = 0.083  DF = 135
```
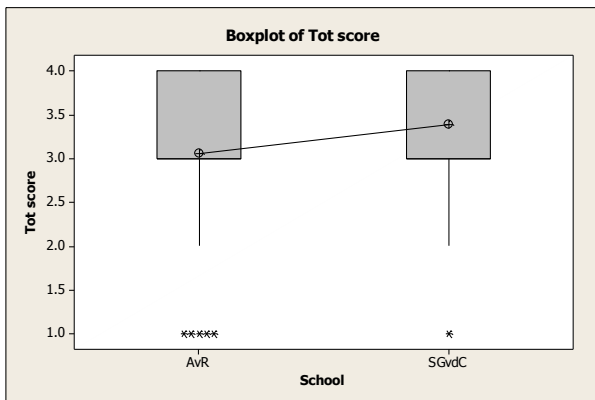
Question 33
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR      69  3.058  0.873      0.11
SGvdC    75  3.387  0.676      0.078


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.329
95% CI for difference:  (-0.588, -0.070)
T-Test of difference = 0 (vs not =): T-Value = -2.51  P-Value = 0.013  DF = 127
```
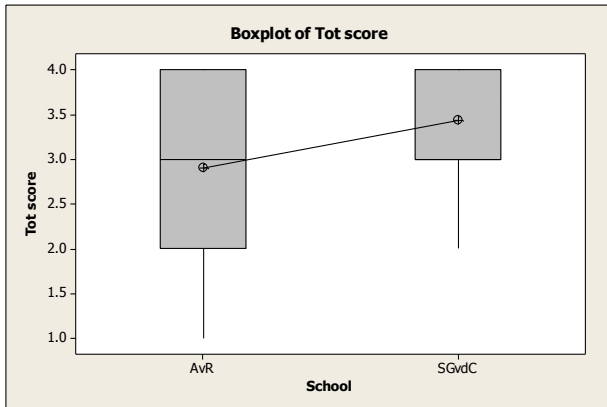

Question 34
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR      71  2.901  0.958      0.11
SGvdC    79  3.430  0.614      0.069


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.529
95% CI for difference:  (-0.793, -0.265)
T-Test of difference = 0 (vs not =): T-Value = -3.98  P-Value = 0.000  DF = 116
```
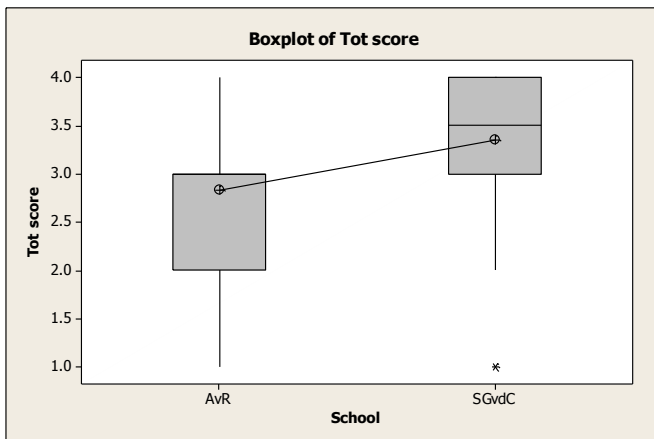
Boxplot of Tot score

Question 35
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR     65   2.831  0.876     0.11
SGvdC   70   3.357  0.743     0.089


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.526
95% CI for difference:  (-0.804, -0.249)
T-Test of difference = 0 (vs not =): T-Value = -3.75  P-Value = 0.000  DF = 125
```
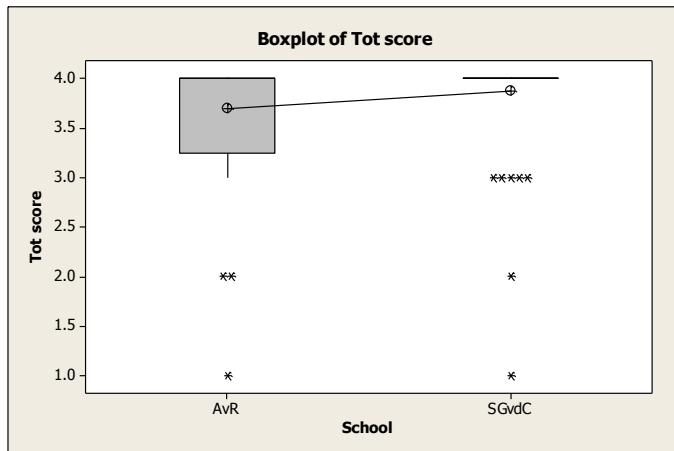

Boxplot of Tot score

Question 36
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev   SE Mean
AvR     72   3.694  0.597     0.070
SGvdC   79   3.873  0.463     0.052


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.1790
95% CI for difference:  (-0.3521, -0.0059)
```

```
T-Test of difference = 0 (vs not =): T-Value = -2.04  P-Value = 0.043  DF = 133
```
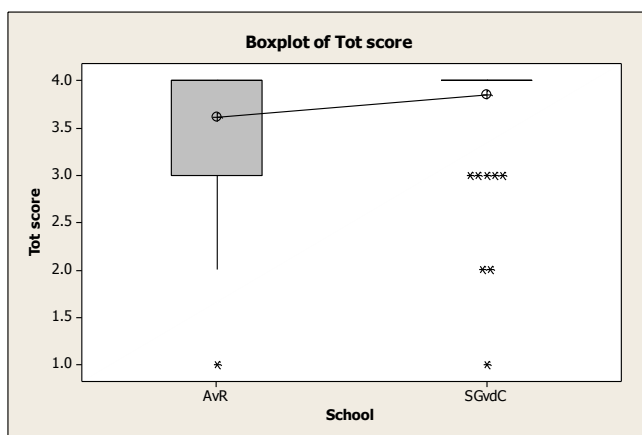

Boxplot of Tot score

Question 37
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N   Mean   StDev  SE Mean
AvR     72  3.611   0.683   0.080
SGvdC   79  3.848   0.509   0.057


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.2370
95% CI for difference:  (-0.4324, -0.0416)
T-Test of difference = 0 (vs not =): T-Value = -2.40  P-Value = 0.018  DF = 130
```
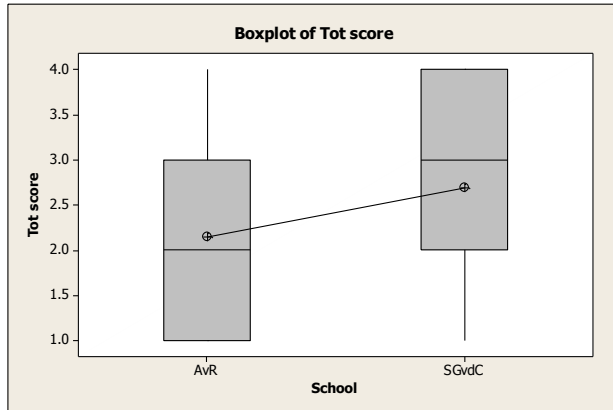

Boxplot of Tot score

Question 38
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N  Mean  StDev  SE Mean
AvR     54  2.15   1.02    0.14
SGvdC   72  2.69   1.07    0.13
```

```
Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.546
95% CI for difference:  (-0.917, -0.176)
T-Test of difference = 0 (vs not =): T-Value = -2.92  P-Value = 0.004  DF = 117
```
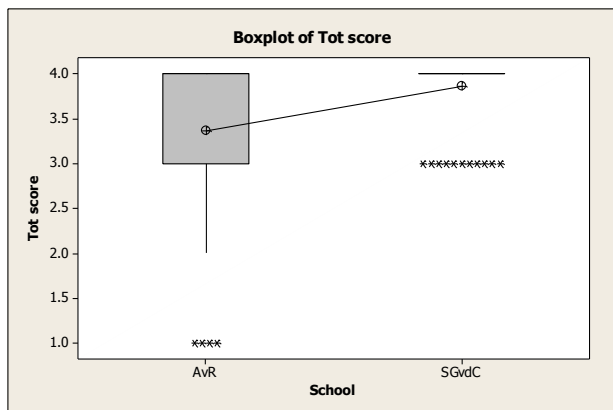

Boxplot of Tot score

Question 39
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School    N    Mean   StDev   SE Mean
AvR      68   3.368   0.896      0.11
SGvdC    77   3.857   0.352     0.040


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.489
95% CI for difference:  (-0.720, -0.259)
T-Test of difference = 0 (vs not =): T-Value = -4.23  P-Value = 0.000  DF = 85
```
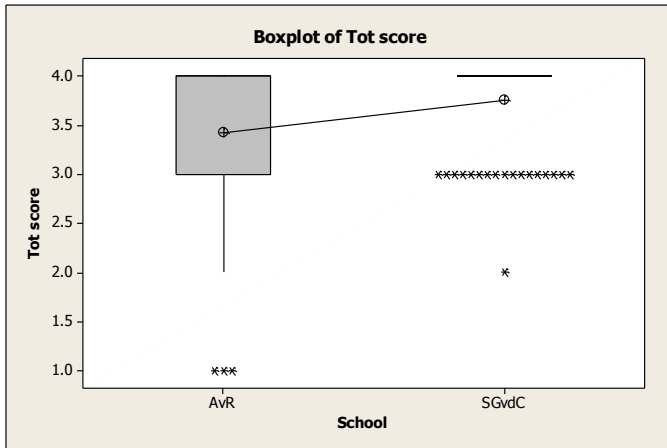

Boxplot of Tot score

Question 40
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School    N    Mean   StDev   SE Mean
AvR      67   3.418   0.801     0.098
```

```
SGvdC   78  3.756  0.461    0.052


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.338
95% CI for difference:  (-0.558, -0.119)
T-Test of difference = 0 (vs not =): T-Value = -3.05  P-Value = 0.003  DF = 101
```


Question 41
Two-Sample T-Test and CI: Tot score, School

```
Two-sample T for Tot score

School   N    Mean   StDev  SE Mean
AvR     63    2.98   1.07     0.13
SGvdC   51   3.333   0.887    0.12


Difference = mu (AvR) - mu (SGvdC)
Estimate for difference:  -0.349
95% CI for difference:  (-0.712, 0.014)
T-Test of difference = 0 (vs not =): T-Value = -1.91  P-Value = 0.059  DF = 111
```