

12.2_H

Original text

Because the laboratory techniques which were used to map DNA were complex and time-consuming, and depended on highly skilled laboratory staff, it was clear that without new technologies and techniques it would not be possible to achieve the stated objectives by 2005; so, as a first step, major investments were made in computer technology for data processing. This marked the beginning of a new scientific discipline of bioinformatics. By 1998, with less than half of the planned project time remaining, just over 6% of the genome had been mapped.

Student text

As Truong VG, Sandeep KN, Cartwright MF (2019) explains that without new technologies and techniques it would not be possible to achieve the stated objectives by 2005. Consequently, a large investment was made in technology, which was the beginning of bioinformatics. Yet, according to Truong VG, Sandeep KN, Cartwright MF (2019), by 1998, with less than half of the planned project time remaining, just over 6% of the genome had been mapped. Nevertheless, they had now developed technology to analyze DNA automatically. Because of this, there was an enormous increase in the speed with which the genome could be mapped.

12.2_H Model answers

Original text	Student text	Corrected student text	Comments
Because the laboratory techniques which were used to map DNA were complex and time-consuming, and depended on highly skilled laboratory staff, it was clear that without new technologies and techniques it would not be possible to achieve the stated objectives by 2005; ...	As Truong VG, Sandeep KN, Cartwright MF (2019) explains that without new technologies and techniques it would not be possible to achieve the stated objectives by 2005.	As Truong et al. ¹ explain, 'without new technologies and techniques it would not be possible to achieve the stated objectives by 2005' (p. 1776).	When using the Vancouver referencing format, a number is used to identify the reference in the reference list. Sometimes it is appropriate to refer to the authors and/or the date of the work even when using Vancouver. However, in these cases, it is unusual to include the authors' first names or initials. Rather than listing all the authors, <i>et al.</i> is used to show there is more than one author. All authors would be given in the reference list. <i>explains</i> becomes <i>explain</i>, since <i>Truong et al.</i> is plural. Use only one of: • <i>As Truong et al. explain ...</i> • <i>Truong et al. explain that ...</i> The remainder of the student text uses the exact words of the original text, so these need to be in quotation marks and followed by a page reference. Otherwise the student commits plagiarism.
... so, as a first step, major investments were made in computer technology for data processing. This marked the beginning of a new scientific discipline of bioinformatics.	Consequently, a large investment was made in technology, which was the beginning of bioinformatics.	Consequently, a large investment was made in technology. This was the start of bioinformatics as a scientific discipline.	The first part of the student text paraphrases the source, but the second part does not link well and does not provide enough information. Rewriting as a new sentence which changes the order and some of the words is a better option.

By 1998, with less than half of the planned project time remaining, just over 6% of the genome had been mapped.	Yet, according to Truong VG, Sandeep KN, Cartwright MF (2019), by 1998, with less than half of the planned project time remaining, just over 6% of the genome had been mapped.	In 1998, having already used more than half of the time planned for the project, 'just over 6% of the genome had been mapped' ¹ (p. 1776). or By 1998, having already used more than half of the time planned for the project, technicians still had over 93% of the genome left to map. ¹	This is a statement of fact, so there is no need to repeat the reference to the authors. Use a numbered citation to indicate the source, as per Vancouver style. Almost all of the student text is taken directly from the source and should either be paraphrased or quoted to avoid plagiarism. The first part of the sentence can be paraphrased, but the clause <i>just over 6% of the genome had been mapped</i> could be retained as a quotation in order to make clear that the writer is not approximating the source material. However, it needs a page reference. Alternatively, the whole sentence can be paraphrased.
Fortunately, by this time, a significant investment had been made in developing specialized electronic components which could directly analyze DNA without the need for human intervention.	Nevertheless, they had now developed technology to analyze DNA automatically.	Nevertheless, the project team had now developed technology to analyze DNA automatically. or Nevertheless, technology to analyze DNA automatically had now been developed.	This is quite a good paraphrase. However, it is not clear who <i>they</i> are. One possibility is to use <i>the project team</i> or a similar phrase; the other possibility is to make the sentence passive so that an agent is not needed.
Consequently, there was an enormous increase in the speed with which the genome could be mapped.	Because of this, there was an enormous increase in the speed with which the genome could be mapped.	Because of this, there was 'an enormous increase in the speed with which the genome could be mapped' ¹ (p. 1776). or Because of this, the rate at which the genome could be mapped increased significantly.	The use of <i>Because of this</i> instead of <i>Consequently</i> is effective. The remainder of the student text is a direct copy from the original and should either be quoted or paraphrased to avoid plagiarism.