DISCUSSION

Explanation of the findings

From the results it can be clearly seen that the participants performed significantly better on the visual test than the audio test. The descriptive data showed that participants in the visual test scored on average 16 however those in the audio test scored only 12 on average which highlights the clear differences between the groups. From the inferential data it can be seen that the results are significant at the 0.005 level which shows that these results are very significant and not just down to chance. This disproves the original hypothesis where it was predicted that participants would perform better on the audio test. This therefore suggests that visual encoding is the preferred method of encoding in short term memory rather than audio. However the original aim was achieved as the preferred method of encoding was found and as the results were significant at such strict levels it suggests that these results do actually mean something and are not just down to chance.

Relationship to background research

The results from this experiment have shown that visual encoding is preferred to audio encoding. This disproves the original hypothesis but does allow the aim of the experiment to be achieved as it does show a significant difference with visual being the preferred method of encoding. The original hypothesis for this experiment was based on research from two studies into encoding in short term memory by Conrad and Baddley. These studies found that acoustic encoding was preferred in short-term memory rather than visual. There are a number of reasons that the results found in this experiment could have been different from those found by Baddley and Conrad. The first major point is that the method of testing was very different. In the previous research the testing was based on free recall and then looked at the substitution errors to see where people made mistakes. In this study though a recognition test was used and so this may account for some of the difference. It may not be that acoustic encoding is not preferred in short-term memory but just that visual encoding is preferred when using recognition in short term memory. There is other research by Brandimonte which suggests that acoustic encoding is not always preferred and is sometimes an inferior method of encoding. Our research would support this idea that acoustic is not always the preferred method of encoding.

Limitations and Modifications

One of the biggest problems with this experiment was the sampling method. An opportunity sample was used as this was the easiest and quickest method of obtaining all the participants that were needed. The problem with this sort of sampling is that it does not take into account the whole of the target population as it only focuses on those who are available. For example much of the experiment took place during free periods and so it would make sense to assume that the people with the free periods will be doing the same subjects (otherwise their free periods would be at different times). This means that the majority of the sample could all be doing a subject such as art where memory is used in smaller amounts and so therefore these people have less practice at memorising things than the other students in the 6th form. This could then mean that the results we found were only typical of people doing art in the 6th form. In order to improve this a completely random sample could have been used as this takes into account everyone and so would be a fairer method of sampling. The problem with this method

is that it takes time to do and as there was a very limited time to collect data for this experiment it would not have been practical.

Another limitation of this experiment was treatments of each of the participants. Although standardised procedures were given to each participant to prevent experimenter bias the location in which they were tested was different every time. The results were collected from either the 6th form common room or the library and the variation in these locations may have affected the results for example the library is generally quieter than the common room so the noise levels could have had an influence. Also the fact that someone is in the library suggests that they will be working or researching where as those in the common room are more likely to have been relaxing. This could have affected the results as if person is trying to work then they will have other things on their mind where as the person who is relaxing will be able to concentrate solely on the experiment. In order to combat this the experiment could take place in a set room where there were no distractions.

Another limitation is that there was no way of ensuring that people were encoding the information in the way that the experimenters wanted them to. By presenting the information in either a visual or acoustic way it was hoped that this would encourage the encoding to be in the form that we wanted but this was not guaranteed. There is no way to guarantee that the information will be encoded in the way that you want it to be unless you tell the participant that you want them to encode the information a certain way. Even doing this will not ensure that they will as the encoding is supposed to a sub conscious action and so therefore is not controlled by the participant. The best that can be done is to encourage the participants to encode the information in a certain way by presenting the information in different forms.

Implications and Suggestions for further research

There are wider implications for this study especially for the 6th form students. This study shows that there is a clear difference in the ability to recall information in a visual or acoustic way. This could help with revision for exams as if people can represent their work visually or use visual reminders such as highlighting then they may be able to recall the work much more effectively. This may allow the students to achieve higher grades in their exams which will help them go on to higher education and in the rest of their life.

Further research could be done into this area to see if the background noise that was present in the common room does affect the recall ability of participants. This could be done by using two rooms but giving both sets of participants the same recall test. It would also be interesting to see if noise levels have a different affect on any different styles of encoding. Another piece of research into this area could be to look at the same aspect again but this time to test the same participants in each situation rather than have different participants in each group.

Conclusion

So in conclusion this study has shown that there is a preferred method of encoding when using recall as the testing method. Although the hypothesis was not correct the aim was still achieved as it was found that visual encoding is preferred to acoustic.