



Scottish Baccalaureate in Social Sciences

Exemplar 2 - “How can ICT be used to promote learning and memory by scheduling the spacing of revision sessions?”

Grade C

Social Sciences: Interdisciplinary Project

Proposal

Candidate name	Gemma Young								
SCN	9	8	7	6	5	4	3	2	1
Centre name	Newville Academy								
Assessor name	Derek Kynaston								
Project title	How can ICT be used to promote learning and memory by scheduling the spacing of revision sessions.								
Project outline <i>(what it is you want to do and how will you go about it)</i>	<p>I will research the effect of timing on revision, to see what revision schedule works best to memorise information. I believe that the advance of smartphones means that there could be an app which would give students reminders about when to revise. I will present my findings to younger pupils. This will be of use in both education and the workplace.</p>								
Reasons for choosing this project <i>(eg personal interest, future plans, links to other subjects you are studying/ have studied)</i>	<p>I hope to study business, and memory is relevant in order for employees to retain instructions. I am also interested in how new technology such as apps are marketed, especially to younger people. The project will have direct relevance to this. I use computers and phones regularly, so I have a good understanding of the internet and apps.</p>								
The broad contexts this project will cover are	<p><input type="checkbox"/> Citizenship <input type="checkbox"/> Enterprise <input type="checkbox"/> Employability</p> <p><input type="checkbox"/> Economic development <input type="checkbox"/> Sustainable development</p>								
Learning environments I will access are	<p>I plan to contact the Department of Psychology at the University of Strathclyde to obtain information on human memory. I will also carry out research using the Internet. I will run a survey online to find out about pupils' revision methods, and conduct a lab experiment with the support of teaching staff. I will search for smartphone apps online.</p>								
How I will use my knowledge of Social Sciences	<p>My studies of memory as part of Higher Psychology will be useful preparation. My knowledge of business will be useful in spotting the market of a revision app. My understanding of computer studies from Standard Grade will help me to understand apps and how to search on app stores on the internet.</p>								

The skills I will develop and/or improve in the course of this project are:

(carry out a short analysis of your current strengths and weaknesses in the skills areas below and how you think your project will allow you to develop and/or improve these skills)

- *application of subject knowledge and understanding*

I am reasonably good at the application of subject knowledge and understanding. The application of psychology (memory) to learning is part of this project, so I should be able to improve my skills in this area.

- *research skills – analysis and evaluation*

I feel that my research skills are good. I know how to use the internet and search in the index and contents page of a book. I will ask the school library and psychology department staff to help me find suitable books and websites.

- *interpersonal skills – negotiation and collaboration*

I think I am good at developing relationships and talking with others of my own age, and I will develop my ability to organise a group when I conduct the lab experiment.

- *planning: time, resource and information management*

I am generally quite realistic about timescales, but I sometimes forget to do important tasks, so I will write a timeline with help from my teacher.

- *independent learning – autonomy and challenge in own learning*

I can work independently, and I enjoy looking through psychology textbooks quietly by myself. Independent learning is something that will be useful to develop for university and for my future career in business.

- *problem solving – critical thinking: logical and creative approaches*

I believe my project is largely logical rather than creative, in that I will follow a logical process of doing a research experiment and then reaching a conclusion. I will critically look at the results of the experiment.

- *presentation skills*

As part of the project, I will present my findings to pupils in the year below me at school, in the hope that a better understanding of memory will help them in their exams. I will use a powerpoint incorporating a short film.

- *self evaluation – recognition of own skills development and future areas for development*

I sometimes find it hard to concentrate on long research articles, so I will look to school

staff to help me find short articles or summarise them for me. I am good at working with others, but I will need to be even better at this when I pursue my future career in business, so running an experiment and giving a talk will be helpful practice. To help with my self-evaluation I hope for feedback from my school teachers.

Assessor feedback to candidate

This is a big improvement on your first attempt at the proposal – it is logical, and clearly has a practical application. It is a good idea to run a memory experiment, though I am concerned that conducting both a survey and a lab experiment may be too time-consuming and could provide so much information that it becomes difficult for you to present it succinctly in a powerpoint. It would be best to focus on one or the other. I also think that creating a film based on your findings is too ambitious, and you should run a simple slideshow.

You have thought well about how you can draw on your different subjects and the project combines your interest in psychology with business and ICT. Perhaps you could take this further, by analysing how an app could be suitably marketed and distributed to pupils around the country and beyond?

It is a good idea to get in touch with the Psychology Department at Strathclyde – keep your email short and polite, and don't expect an immediate response.

Your analysis of the skills involved focuses mainly on your strengths, and I think you need to be realistic about the level of your research skills, for example – you are new to this and it may be difficult at times. However, you seem to understand what is expected and what you may gain through the project. Time management will be a big issue and you will need to consider how to organise yourself to meet the deadlines. As we have discussed, it will be important for you to conduct your background research soon, and not to let this process drag on.

Well done on an interesting project proposal.

Proposal approved		Further work required	
Candidate signature			Date
Assessor signature			Date

Social Sciences: Interdisciplinary Project

Plan

Candidate name	Gemma Young								
SCN									
Centre name	Newville Academy								
Assessor name	Derek Kynaston								
Project title	How can ICT be used to promote learning and memory by scheduling the spacing of revision sessions.								
Is this a group project? yes <input type="checkbox"/> no <input type="checkbox"/>									
If a group project my individual role or responsibilities will be:									
Timescales (<i>this should be a detailed timeline and any separate spreadsheets or charts should be included as evidence</i>)									
<u>September</u> Conduct background research Email university psychology department Search for revision apps									
<u>October</u> Prepare materials for the lab experiment Meet with the university academics									
<u>November</u> Start work on the slideshow presentation Think about what other ways apps/computers could be used for revision									
<u>December</u> Run the experiment and analyse the data Finalise the powerpoint									
<u>January</u> (nothing – prelim time)									
<u>February</u> Give presentation to other pupils Evaluate the project									

Planning (*how you are going to meet the agreed objectives of your project*)

I will use textbooks and research websites, with guidance from teachers/librarians about the most suitable ones to use. I will contact a local university by email, and arrange an appointment so that an expert in the area can explain more about how schedules might help our memory. I will conduct an experiment into memory to test this out, and investigate apps which can be used to organise learning. Then I will present findings to other pupils – perhaps to my year or the year below at assembly.

After advice from teachers, I have decided that doing a survey of learning strategies is not really necessary and would be too time-consuming.

Resources (*eg people, materials, places*)

My main resources will be the reading materials that I use for background research. I will also rely on fellow pupils to take part in my experiment. I will use the internet in school to find background research. I will use a laptop to prepare a presentation.

Research methods (*eg contacting companies, surveys, focus groups, experimentation*)

I will use the following research methods:

- Books and websites.
- Teachers and lecturers.
- Lab experiment.

Presentation

- **Who do I think will benefit from listening/reading/looking at my presentation of my project findings/product?**

The main people to benefit will be my fellow pupils, who can use the knowledge from my project to do better in their Higher exams.

- **What methods are appropriate to my audience(s)** (*eg demonstration, presentation software, websites, oral, report, piece of theatre, dvd, wiki/blog or any combination*)

A purely verbal presentation may be boring for school pupils, so I will use powerpoint, which will include a short film.

Dependencies (*what is required for your project to go ahead ie reliance on other people or resources, steps in plan that must be completed before starting the next step*)

Ideally I will discuss the theories with my teachers and with university staff before I run the lab experiment. The experiment needs to be conducted before I can do the presentation, because I l'm going to make graphs of the findings for the presentation.

Contingencies

Any anticipated problems

The background research may be complicated and hard to understand.

The university contact may not reply to my email.

The experiment doesn't show what I expect it to show.

Unable to find a suitable time to give the presentation to S5 at assembly.

My plans for overcoming the anticipated problems.

Ask for summaries from my teacher/the librarian.

Email again, phone, or go to the department to find them.

Don't spend much time talking about this in the presentation.

Give the talk after school, even if it means that only a small number will turn up.

Method for recording my skills development and future areas for improvement

I will use the progress log from the bacc support pack. I will keep a detailed log to record my progress during the project, recording my progress and ideas.

Assessor feedback to candidate

Your plan is coherent, and elaborates on your proposal in a logical way. It is a good idea to focus on the lab research rather than a survey, but you seem to still want to

make a video as well as a powerpoint – stick to one or the other.

Your resources are clear, but could be more detailed, and the dependencies don't cover all major aspects of the project – perhaps you could go back to the timeline and elaborate on it in places. I also think you should return to your earlier idea of identifying weekly targets, especially as you have previously identified time-management as being a problem area for you.

Rather than expect summaries of research from school staff, it would be good to see you use your initiative to identify appropriate background research – some articles are easier to understand than others, so be persistent!

The idea for the lab experiment makes sense, though you have not given much thought about how to run it. Consider how to eliminate confounding variables, how to select your sample of participants, and what data analysis techniques and graphs you will use. From an ethical point of view, you should write a standardised brief and debrief.

With some more thought on some details you should be able to successfully complete the planned project.

Plan approved		Further work required	
Candidate signature			Date
Assessor signature			Date

Social Sciences: Interdisciplinary Project

Presentation of Project Findings/Product

Candidate name	Gemma Young
SCN	
Centre name	Newville Academy
Assessor name	Derek Kynaston
Project title	How can ICT be used to promote learning and memory by scheduling the spacing of revision sessions.

How I presented my project findings *(describe in detail how you presented your project findings and explain the choices you have made with regard to your presentation method(s) and audience(s))*

I had hoped to give my presentation to S5 pupils, but because the head of year didn't reply to my email in time, I ended up giving the presentation to one of my school classes instead. This class included a mixture of S5 and S6 pupils, and was a good choice because all of them are just about to do their exams.

I used a powerpoint presentation to present a summary of my findings. This was chosen as a straightforward, easy to understand way of presenting the information. A video would have been too time-consuming to produce. I was able to use the graphs from my experiment, making the powerpoint quite visual.

The presentation described an app called SuperMemo which I had researched.

Assessor feedback to candidate

Well done on a carefully prepared presentation, which will have been useful for your classmates. Your explanations were a bit hesitant at times, which is understandable – in future it would be useful to rehearse a presentation beforehand.

It is a bit disappointing that you didn't show more independence in trying to arrange a talk to S5 – hopefully you have learned from this experience, and realise that one email may not be enough, and that you should pursue the options more actively, and in a reasonable timescale.

The section on ICT strategies was interesting – I wonder how many pupils will download the app you describe. I think it should have gone into a broader range of options, though.

Candidate signature

Date

Assessor signature

Date

Social Sciences: Interdisciplinary Project

Evaluation of project

Candidate name	Gemma Young								
SCN									
Centre name	Newville Academy								
Assessor name	Derek Kynaston								
Project title	How can ICT be used to promote learning and memory by scheduling the spacing of revision sessions?								
How successful has my project been overall? <i>(consider the strengths, weaknesses and learning points of your planning, implementation and findings/outcomes giving examples to support your comments)</i>									
<p>The aim of the project was to find out more about the how to schedule revision, and I discovered that learning is more successful when it takes place at increasing intervals (e.g. 1 hour, then 1 day, then 1 week, etc). Selecting information was hard due to the volume of available research on the area, and I feel that my librarian and teacher should have done more to simplify it for me.</p> <p>I emailed Dr Ebbinghaus of Strathclyde University. It would have been good if he had got back to me sooner, but my teacher suggested sending a second, slightly clearer email. This time he got back to me with one or two suggestions. It was great to hear from an academic who is an expert on the area.</p> <p>The lab experiment was a little bit disorganised due to the participants being quite immature, but the results supported the hypothesis – they showed that those who studied using ‘the spacing effect’ remembered more definitions, with an average of 14.1 compared to 12.4 items.</p> <p>I researched the available apps for memorising information, and found one which seemed to be useful and was also free. I described this in my presentation, which I think will have been helpful for young learners.</p> <p>The presentation was carried out as planned, and I can state that it was reasonably successful, although I had planned to speak to a larger group which would have been better. I hope that some will download and use the app, though most will probably stick to repeatedly reading their textbooks, which is known by psychologists not to work.</p>									
How effective were my communication methods throughout the project?									
<p>It was very important throughout the project to communicate effectively with staff in the school, in particular Mrs Baddeley of the psychology department. I tried to be polite. I also had to send several emails. These were well-written, but I realise now that I should have been more on top of sending emails soon enough to get a</p>									

response.

Speaking to my class made me nervous, but I think I spoke clearly. In future, it might be helpful to give a handout alongside the presentation.

Is there any aspect of my project that could be taken further? What might my next steps be?

If I'd had more time, I would have conducted a survey to find out about the study methods that pupils use. I would also have made the presentation more exciting by making a short film.

The project discovered that there are a very limited number of apps available. For someone with the necessary time and technical expertise, it would be useful to write a new study app.

Candidate signature	Date	
Assessor signature	Date	

Social Sciences: Interdisciplinary Project

Self evaluation of generic and cognitive skills development

Candidate name	Gemma Young								
SCN									
Centre name	Newville Academy								
Assessor name	Derek Kynaston								
Project title	How can ICT be used to promote learning and memory by scheduling the spacing of revision sessions?								

In evaluating your skills consider the skills analysis which you carried out at the Proposal stage and how you said you would develop and improve these skills. Now refer to your reflective diary/log/blog and feedback you have received and evaluate how you have developed and/or improved these skills through the work on your Interdisciplinary Project.

Application of subject knowledge and understanding

(Think about practical uses for the Social Sciences you have learned. How did you use your knowledge of Social Sciences effectively to help you carry out various aspects of your project and how it related to your chosen broad context(s)?)

I used my knowledge of memory to help me understand the research into the spacing effect, and my understanding of business and marketing was useful in realising that there is a demand for a revision app among school pupils.

Research skills – analysis and evaluation

(Think about the research process. How did you plan, carry out, analyse and evaluate your research? You should evaluate your research methodologies, tools, resources and contacts, data recording and referencing, reliability and usefulness of data.)

A major part of this project was the reading I did into memory. I used a number of sources including blogs and textbooks. I was given guidance from school staff as I went along. At times my note-taking was not ideal, as I found that I often lost the references to research and had to find the same sources again, but I have learned from this experience. The data I gathered was reliable, but I realise that the participants were limited to a small group of school pupils.

Interpersonal skills – negotiate and collaborate

(Think about how you considered other peoples' views/feedback, discussed issues of concern, reached a solution where needed, adjusted your approach in response to a situation/environment, showed positive self belief and had the confidence to offer and ask for support.)

The feedback of teachers was useful as it allowed me to identify what was going well and what mistakes I was making. I discussed research that I didn't understand with my psychology teacher, and frequently asked for things to be explained to me. This strategy will be useful in the future.

It required confidence to speak in front of a group of fellow pupils, and the experience has helped to improve my presentation skills.

Planning – time, resource and information management

(Think about your time management. How did you set targets, monitor/record progress, consider any probable barriers to achievement and take steps to minimise them?)

I was aware before the project that my time management is not always effective, and I found it hard to meet all of my monthly targets at the same time as doing UCAS, exams etc. It was also a bit frustrating when waiting for people to respond to my emails. I have certainly learned from this experience.

I initially wanted to speak to the university department in person, but when I realised that I was going to struggle to fit in a meeting, I decided that they could give me advice by email instead.

Independent learning – autonomy and challenge in own learning

(Think about how you used your skills to make things happen, took the initiative to establish links with other learning environments/opportunities and looked for challenges rather than taking the easy option.)

The background reading for this project was done independently. My teacher had advised me that I should complete this stage as early as possible, so I worked hard to prepare summaries of research.

I was also able to work independently by communicating by email, and I gave the presentation by myself. It was a challenging task, but I think it was worthwhile for the class to listen to.

Problem solving – creative approaches; critical thinking; logical approaches

(Think about your problem solving skills. How did you generate and explore ideas, use logical and creative approaches, analyse source materials in order to support findings, reflect on problems and possible contributory factors and think critically about possible actions/changes?)

Finding out about the background research and planning an experiment used a logical approach. Making the materials for the experiment was quite creative, and I decided to use definitions to test people's memory.

The logical extension of the spacing effect is to use your phone or computer to space out your revision, so I investigated and found an app which can help with doing that.

Presentation skills

(Think about how you presented your findings. Evaluate your presentation method(s), choice of audience(s), layout, structure, degree of formality and choice of content. Did your presentation include information/ideas/reflections with supporting detail in a logical order and reach a reasoned conclusion?)

In presenting the findings of my project, it was important to remember that my audience were school pupils and not able to fully understand every aspect of my research. Some of them were only in S5, as well. However, it was helpful that they were motivated to find out more about revision methods, and for that reason the material was very appropriate for the audience.

The information was presented in a logical order, with my own research followed by a suggestion for using ICT to improve revision. I spoke clearly and explained my conclusions.

Self evaluation – recognition of own skills development and future areas for development

(Think about how you have developed throughout your project. How did you deal with feedback, praise, setbacks and criticism and their impact on your own development of knowledge, skills and understanding? To what extent did you ask for feedback, learn from experiences and how will you use these to inform future progress?)

I asked for feedback on my background reading from my teacher, who pointed out some good ideas and helped me deal with obstacles such as not being able to understand some of the research.

Conducting a lab experiment with on pupils was a difficult task, and I was concerned that some people may not have taken it entirely seriously. In future the presentation of the instructions at the start could be improved, giving much more emphasis to how important the research was to my project and my education as a whole.

My thinking skills were developed, as I needed to draw logical conclusions from theory and background research, and also analyse the results of my experiment.

This section is not mandatory. It has been included to allow you the opportunity to undertake an overall reflection of your project.

Reflection on my experiences throughout this project *(eg things you feel you have achieved, things you have done that you feel particularly proud of, anything you would do differently were you to do something similar in future)*

Skills that I have used in this project that I would like to develop further *(eg using skills in even more challenging situations, more working on your own, more team working)*

Social Sciences: Interdisciplinary Project

Assessor Report

Candidate name Gemma Young_____

Candidate number _____

Centre Newville Academy

Project proposal	Tick as appropriate
Grade C criteria	
The title and aims of the project.	✓
Clear aims and reasoned arguments to support the relevance and practicability of the project.	✓
Identification of opportunities for:	✓
• own skills development	✓
• collaborative working	✓
• accessing less familiar learning environments	✓
• application of subject knowledge in a broad context	✓
• use of knowledge and skills across different disciplines	✓
• making connections between subject knowledge and the wider world	✓
Evidence of the ability to communicate clearly and concisely in advocating the proposal.	✓
Grade A criteria, includes all of above plus	
Well conceived proposal which sets creative and challenging goals which are at the same time realistic, achievable and practicable.	
Robust and carefully argued justification of the proposal.	
Substantial links and understanding of possible connections across disciplines contributing to the project.	
Comments	
The proposal is essentially coherent.	

Project plan	Tick as appropriate
Grade C criteria	
Development of clear project objectives in line with the project proposal.	✓
Relevant and detailed planning strands to enable the project to be implemented, monitored, presented and evaluated.	✓
Realistic timescales and achievable milestones for each stage of the project.	✓
Clear identification of resources needed, research methodologies to be used, opportunities for support and feedback.	✓
Grade A criteria, includes all of above plus	
Careful selection and effective use of research/investigation techniques.	
Anticipation of probable and possible factors which may impact on the project.	
Clear identification of dependencies or reliance on the success of other strands of work and of necessary adjustments to the plan.	
Outline the process for achieving own identified development needs.	
Comments	
Carefully planned, but analysis of contingencies was basic.	

Presentation of project findings/product	Tick as appropriate
Grade C criteria	
Evidence of effective and critical use of — resources, research methodologies, information and time management, prioritisation, problem solving approach to reach objectives, feedback, collaborative approaches, self monitoring.	✓
Application of specialist and interdisciplinary subject knowledge to establish meaningful connections within the broad context.	✓
Clear presentation of main findings/outcomes.	✓
Grade A criteria, includes all of above plus	
Critical thinking, analysis and reflection used at key stages in the project to construct rigorous arguments, draw convincing, well supported conclusions, identify and resolve issues.	
Skilful and creative use of resources, including people, information and learning context to progress the project.	
Accurate and deepening of understanding through application of subject knowledge in the chosen context, with meaningful connections well established.	✓
Comments	
Managed independently for the most part. You have clearly developed a deeper understanding of human memory.	

Evaluation of project	Tick as appropriate
Grade C criteria	
A critical and justified evaluation of all stages of the project process — planning, implementation and findings/outcomes in terms of strengths, weaknesses and learning points.	✓
Effective use of chosen communication method(s).	✓
Grade A criteria, includes all of above plus	
Incisive, well balanced evaluation of the project outcome against project aims, supported convincingly by well selected evidence.	
Careful choice and skilful use of communication and presentation methods(s).	
Comments	
Planning and evaluation was basic, but presentation well delivered.	

Self evaluation of generic/cognitive skills development	Tick as appropriate
Grade C criteria	
A critical evaluation of own skills development against the list of specified generic/cognitive skills.	✓
A reasoned evaluation of own strengths and key goals for development in the specified list of generic/cognitive skills, which takes account of feedback sought and evidenced from others throughout the project.	✓
Grade A criteria, includes all of above plus	
Insightful, balanced and well structured self evaluation of own development.	
Assertive and justified use of feedback from others in evaluation and identification of development areas.	
Comments	
Some good points were made.	

The overall grade will be:

- A indicative of a highly competent performance which meets the additional Grade A criteria and consistently demonstrated a high degree of autonomy, initiative and effective information management across the five pieces
- B indicative of a competent Grade C performance across the five pieces, but with some aspects of work meeting the criteria for highly competent performance (as outlined by the Grade A criteria)
- C indicative of a competent performance across the five pieces, with all aspects of the work meeting the criteria identified for Grade C performance

Overall Grade Awarded	C
Additional Comments/Overview <p>I believe that this project achieves 'C' standard overall. The pupils has worked independently for the most part, and planned an essentially logical and useful project. She struggled with the background reading, relying very heavily on staff. She didn't make particularly good use of the resources available to her: her communication, including emails to university staff, was disorganised and unclear. She did manage to run a worthwhile lab experiment on her own, and delivered a good presentation. The investigation of ICT solutions to revision could have shown considerably more depth and analysis, with better links to business/marketing as she originally planned. Her conclusions were good, and may be of genuine practical use to other pupils. She has made an attempt at evaluating her skills, but this could have been more detailed.</p>	

Assessor signature _____ **Date** _____

Internal verifier signature _____ **Date** _____