

GCSE Learning for Life and Work

Teacher and Student Guidance

Exemplification of Assessment Criteria

GCSE Learning for Life and Work

Exemplification of Assessment Criteria

Starting Point - (Example of the title issued by CCEA)

Investigate the impact of new technologies on employment in Northern Ireland

Part A: Planning: 800 words

Total marks available: 24

Exemplification of Research Questions

Note what is meant by 'new technologies' or 'employment in Northern Ireland' are areas which should have been taught beforehand.

NOTE: The questions should focus on 'the **impact** of employment in Northern Ireland.'

- Q1. What are the new technologies that are relevant to businesses in Northern Ireland? *(Pre taught and therefore not an appropriate question.)*
- Q2. What kinds of new jobs and businesses have been created because of new technologies? *(Pre taught and therefore not an appropriate question.)*
- Q3. How have new technologies and the demands of businesses using them impacted upon school? *(Not linked to the task of impact on employment in Northern Ireland, therefore not appropriate.)*
- Q4. What does a young person growing up in Northern Ireland know about these changes in technology? *(Not linked to the task of impact on employment in Northern Ireland, therefore not appropriate.)*
- Q5. How have the new technologies affected employment opportunities? *(Appropriate)*
- Q6. What jobs have been lost due to new technologies? *(Appropriate)*
- Q7. What jobs have been created due to new technologies? *(Appropriate)*
- Q8. What skills do I need to develop? *(Needs to be developed to relate to employment opportunities involving technology to be appropriate.)*
- Q9. As a result of the new technologies, what are the changing patterns of employment? *(Appropriate)*
- Q 10. What subjects should I be studying in school to be prepared for the use of the new

technologies in the workplace? *(Not linked to the task of impact on employment in Northern Ireland, therefore not appropriate.)*

Elaboration of the Assessment Criteria

The mark band awarded will not only be determined by the number of questions but will also be determined by the quality of them.

Mark Band 1: **One** research question which may or may not be appropriate.

Mark Band 2: **Two** research questions which may or may not be appropriate.

Mark Band 3: **Three** appropriate research questions.

Mark Band 4: At least four **appropriate** research questions.

Popular methods are justified below but there are other methods that could be used.

Exemplification of Methods and justification.

Mark Band 1: States the method and includes justification for the use of the method.

Mark Band 2: States the method with inclusion of a specific source. Justifies the use of the method and is specific about one piece of information the method could provide.

Mark Band 3: States the method with the inclusion of a specific source and the information the candidate is attempting to find out. Justifies the use of the method and is specific about two pieces of information the method could provide.

Mark Band 4: States the method with the inclusion of a specific source including the information the candidate is attempting to find and identifies how this information is extracted. Use of method is justified and is specific about pieces of information the method could provide, giving details on how it relates back to the task.

The use of a questionnaire

Mark Band 1: I will use a questionnaire as you can get the views of lots of people.

Mark Band 2: I will use a questionnaire as you can get the views of lots of people who are in employment because they may have experienced change in the workplace.

Mark Band 3: I will use a questionnaire with employees who have experience in using new technologies so that I can find out about the changes in their work practices. This will give me first-hand information which I can use in my report.

Mark Band 4: I will use a questionnaire with employees, for example in manufacturing, who have had experience of how the new technologies affected their work practices and staff development. This will give me first-hand information which I can use in my report to compare with my other findings about the impact of new technologies on employment.

Reading

Mark Band 1: Read a textbook because I can read it in class.

Mark Band 2: Read an LLW textbook by McAleer, McAllister and McDonnell. I will use the textbook because I can read it in class, and it contains a section on Employability.

Mark Band 3: Read an LLW textbook by McAleer, McAllister and McDonnell to see if new technologies are covered in the Employability Section. I will use the textbook because I can read it in class, and it contains a section on Employability which includes the topic 'New Technologies'.

Mark Band 4: Read an LLW textbook by McAleer, McAllister and McDonnell to see if new technologies are covered in the Employability Section. I can write the key points from this section into my notebook to use for my report. I will use the textbook because I can read it in class, and it contains a section on Employability which includes the topic 'New Technologies'. This relates to the task as there is a relevant case study which will allow me to answer some of my key questions. (Candidate will insert relevant question/s at this point.)

Conducting an interview

Mark Band 1: I will conduct an interview with a Careers teacher as they work in the school.

Mark Band 2: I will conduct an interview with the Head of Careers as they work in the school and will know about changes in the Labour market.

Mark Band 3: I will conduct an interview with the Head of Careers as they work in the school and will know about changes in the labour market as they have been trained on the skills required for the work force. I will ask the careers teacher questions about the changes in the Labour Market due to the changes caused by new technologies.

Mark Band 4: Conduct an interview with the Head of Careers *<insert name>* and ask questions about monitoring changes associated with the new technologies and the impact on the labour market. I will conduct this interview with the Head of Careers as they work in the school and will know about changes associated with new technologies and their impact upon the labour market, and they have been trained in the skills required for the work force. This also relates to my task, and it will help me answer my key questions on changing employment patterns because of new technologies.

Web Search

Mark Band 1: I will do a web search as it is an easy method to access information.

Mark Band 2: I will carry out a web search and put the keywords into a search engine as these key words will help me access information in answer to my questions.

Mark Band 3: I will carry out a web search and put in the keywords into a search engine such as "new technologies" and "employment". This will enable me to find a range of websites with information about technologies and employment.

Mark Band 4: I will carry out a web search and put keywords such as “impact of new technologies” and “employment in NI affected by new technologies” into a search engine such as Google. This will help me find relevant information which I can copy and paste for future use when producing my report about the impact of the new technologies on employment in NI.

Elaboration of the Assessment Criteria for identifying methods and their justification. *The mark band awarded will not only be determined by the number of research methods but will also be determined by the quality of the descriptions of them.*

Mark Band 1: Provides **one** research method with a **basic** justification.

Mark Band 2: Provides **two** research methods with **adequate** justification.

Mark Band 3: Provides **three appropriate** research methods and a **competent** justification.

Mark Band 4: Provides at least **three appropriate** research methods with **excellent** justification of at least **three** research methods.

Exemplification of Mark Band 2 Research Plan

| Research Focus: Investigate the impact of new technologies on employment | | | | |
|--|---|--|---------------|--|
| Source | Target | Action: Type of research | Deadlines | Record of Progress |
| Year 12 students who have undertaken work placement | Aim to make a questionnaire. | Come up with questions and agree questions with my class. | 11th October | I came up with some questions. We discussed the questions and decided on 5 questions to ask. We sent out the survey. |
| | Aim to use the questionnaire to get information. | Send out questions and get results. | 15th October | The results from survey monkey were downloaded and I saved them on my USB pen to use in my presentation. |
| World Wide Web | Aim to find websites related to new technologies. | Use a search engine with a key word. | 14th November | I used a search engine and put in the key word 'new technologies'. |
| | Aim to find information about employment from them. | Select, Copy and paste relevant websites into a word document and save | 14th November | From the websites, I choose information copy into my word document. |

Exemplification of Mark Band 4 Research Plan

| Research Focus: Investigate the impact of new technologies on employment | | | |
|--|---|--|---|
| Source | Target | Action: Type of research | Deadlines |
| Year 12 Students who have undertaken work placement | Aim to have a questionnaire to distribute to the year 12 students to obtain information about the impact of new technologies on employment. | <ul style="list-style-type: none"> - Individually come up with at least 3 potential questions to ask year 12 students about their awareness of new technologies on their work experience. - As a class we will get into groups and come up with the 5 best questions which we could ask year 12 students about their awareness of new technologies on their work experience. | <p>11th of October</p> <p>12th of October</p> |
| | | | <p>Record of Progress</p> <ul style="list-style-type: none"> - Our teacher asked us to come up with at least 3 questions for homework that we could ask year 12. I came up with 4 and wrote them in my note book. This was achievable and I met the target. - The teacher had picked the groups before we came into the room and the classroom was set up before we arrived. We discussed the best questions to put forward to the group. One of my questions was voted for which I was happy about, one was reworded and the other two were rejected. This was completed in class on the 12th of October. |

| Source | Target | Action: Type of research | Deadlines | Record of Progress |
|--------|--------|--|---|---|
| | | <ul style="list-style-type: none"> - One student from our group will feedback our questions to the teacher. - As a class we will vote on the best 8 questions which will tease out the answers which could help answer our research questions. | <p>12th of October</p> <p>12th of October</p> | <ul style="list-style-type: none"> - John got up from our group and as the question was read out, the teacher typed it and displayed it on the white board. Each group took their turn. We had 20 questions by the end of class on the 12th of October. - Unfortunately, we ran out of time on the 12th of October so we did not get to vote on the 12th as planned. We instead completed this on the 13th. The teacher took each of the 20 questions in turn asked us who preferred the question. If we put our hand up, she ticked the questions. We were only allowed to vote 3 times. The 8 most favourite questions were used. |

| Source | Target | Action: Type of research | Deadlines | Record of Progress |
|--------|--------|--|---|--|
| | | <ul style="list-style-type: none"> - One student will type up the questions and put them on to survey monkey - The link will be sent to the teacher who will be able to email the link to all of year 12. - Give two weeks for the results to come in. - The teacher will put the results on shared documents so we can access the results when we need them for our report. | <p>By the 15th of October</p> <p>By the 16th of October</p> <p>31st of October</p> <p>2nd of November</p> | <ul style="list-style-type: none"> - Marian agreed to type up the questions on survey money as she already had an account. She had this done on the 14th of October and was early for the deadline. - Marian emailed the link to the teacher straight away and the teacher had this done by the 14th October. - We waited for the results to come in. Before Halloween the teacher said that the results were slow at coming in so she got it announced at year 12 assembly. - When I logged on in class on the 2nd of November the results were accessible on shared documents. I saved them on my USB pen just in case. I will use these in my report. |

| Source | Target | Action: Type of research | Deadlines | Record of Progress |
|--|--|---|------------------|---|
| Learning for Life and Work Textbook. (McAleer et al. 2016) | I aim to identify sections of the Learning for Life and Work Text book which could be used to illustrate how changes in technologies impact on employment. | <ul style="list-style-type: none"> - I will borrow a Learning for life and work text book in class. - I will skim read the Employability section, particularly the section on new technologies and make a note of any relevant information. | 12th of November | <ul style="list-style-type: none"> - I asked my teacher if I could have a loan of a text book. She gave me permission. - It took me 7 minutes to identify the relevant paragraphs on the 12th of November. |
| World Wide Web | I aim to find websites which would give me information about the impact of new technologies on employment. | <ul style="list-style-type: none"> - I will keep these notes for when I need them for my report when I could use quotes. - I will go on to a search engine and enter the following key words 'new technologies in the workplace' and search variations of these key words to find the best results. | 12th of November | <ul style="list-style-type: none"> - I put them into my Learning for Life and Work section of my folder. - My teacher had booked the computer room for period 6 on the 14th of November. I opened the search engine and I typed in the keywords. I had to make a few attempts and I found the searching of the keywords 'technologies on employment' got me the best results. |

| Source | Target | Action: Type of research | Deadlines | Record of Progress |
|---------|---|--|------------------|---|
| | | <ul style="list-style-type: none"> - Read a selection of websites which appear to be useful and copy and paste relevant information along with the URL to a word document and save it. | 14th of November | <ul style="list-style-type: none"> - I knew that we only had one period to do this task so I had to be quick. I had to go through three pages of search engine results to find 4 really useful articles. I copied the URL's and useful quotes from them into a word document. As I was quick, I had my world wide web research done on the 14th of November. |
| Teacher | I aim to find out though a teacher presentation how new technologies has impacted on how the teacher carries out their job. | <ul style="list-style-type: none"> - As a class we will have to decide what teacher to approach to get information on how technologies has impacted the way they carry out their job. | 16th of November | <ul style="list-style-type: none"> - In class we came up with 4 teachers we could approach. Diane said that it would be best to pick someone in the job a long time so they would be most likely to see the most changes. We then had a class vote and we decided on Mrs Browne. |
| | | <ul style="list-style-type: none"> - Ask the teacher we decided upon if they would be willing to speak to our class when they are free, to discuss the impact of technologies on their job. | 18th of November | <ul style="list-style-type: none"> - Our teacher asked Mrs Browne to speak to our class. The next time she was free and we had class was on the 21st of November |

| Source | Target | Action: Type of research | Deadlines | Record of Progress |
|--------|--------|--|------------------|---|
| | | <ul style="list-style-type: none"> - The teacher will describe to our class how her job has changed as a result of new technologies in the workplace. | 20th of November | <p>Mrs Browne was not free at the same time we had class until the 21st of November. We therefore did not make this deadline.</p> <p>Mrs Browne described how her role changed. She gave us lots of good information. She said that she used to use chalk and then progressed on to Over Head Projector, flip charts and eventually Interactive White Boards.</p> |
| | | <ul style="list-style-type: none"> - I will listen to the teacher and take notes and ask any questions I may have at the end. | 20th of November | <p>The talk was very informative. I made notes about the changes Mrs Browne described. At the end I asked her if she envisaged any future changes in her job due to changes in technologies. Again this deadline was not met until the next day due to the aforementioned scheduling issues.</p> |

Elaboration of the Assessment Criteria

The mark band awarded will not only be determined by the number of actions but will also be determined by their quality.

Note deadlines may change during the carrying out of the actions

Mark Band 1: One source with one target, one action and one deadline.

Mark Band 2: **Two** sources each with **one** target, and at least **one** source linked to **two** actions, **two** and **two** deadlines.

Mark Band 3: **Three** sources (including **one** primary) each with **one** target and **one** deadline, and with at least **one** source linked to three actions and **three** deadlines.

Mark Band 4: **Four** sources (including **one** primary) each with **one** target and **one** deadline, and with at least **one** source linked to at least **four** actions and **four** deadlines.

Exemplification of Knowledge, Understanding and Skills

Mark Band 1: I aim to find out about new technologies in the workplace. I aim to develop my communication skills.

(if only one of the above is stated then 1 mark can be awarded, reference to both this should be awarded 2 marks)

Mark Band 2: I aim to find out about new technologies in the workplace and its impact on employment.

I aim to develop my communication skills particularly my ability to communicate my ideas to others.

Mark Band 3: I aim to find out about new technologies in the workplace and its impact on employment. I would like to gain an understanding of what way new technologies have impacted employment trends. I intend to gain this knowledge and develop this understanding through independent research on the world wide web using websites of companies which use new technologies. I aim to develop my ability to communicate with others when collaboratively coming up with questions about new technologies to ask our school's ICT teacher in the interview.

Mark Band 4: I aim to find out about new technologies in the workplace and its impact on employment. I would like to gain an understanding of what way new technologies have impacted employment trends. I intend to gain this knowledge and develop this understanding through using the World Wide Web to find websites related to the impact of technology on employment. I aim to develop my ability to communicate with others when collaboratively coming up with questions for our schools ICT teacher about new technologies and their impact on employers and their work force. I would also like to develop my ability to manage information, particularly when analysing and selecting specific information about new technology and the impact on employers and employees working practices from sources as company websites.

Elaboration of the Assessment Criteria

The mark band awarded will not only be determined by the number of elements of knowledge, understanding and skill but will also be determined by the quality of the explanation of them.

Mark Band 1: Gives one element of knowledge, understanding and/or one skill.

Mark Band 2: Explains one element of knowledge, understanding and one skill.

Mark Band 3: Clearly explains one or two elements of knowledge, understanding and one or two skills (making at least four elements).

Mark Band 4: Explains in detail two or three elements of knowledge, understanding and two or three skills (making at least five elements i.e. two elements of knowledge + three skills or three elements of knowledge + two skills).

Source 1

Rise of the robots: What advances mean for workers?

It's about the size and shape of a photocopier. Emitting a gentle whirring noise, it travels across the warehouse floor while two arms raise or lower themselves on scissor lifts, ready for the next task. Each arm has a camera on its knuckle. The left one eases a cardboard box forward on the shelf, the right reaches in and extracts a bottle. Like many new robots, it's from Japan. Hitachi showcased it in 2015 and hopes to be selling it by 2020.

It's not the only robot that can pick a bottle off a shelf - but it's as close as robots have yet come to performing this seemingly simple task as speedily and dextrously as a good old-fashioned human. One day, robots like this might replace warehouse workers altogether. In Amazon depots, Kiva robots scurry around, not picking things off shelves, but carrying the shelves to humans for them to select things. In this way, Kiva robots can improve efficiency up to fourfold.

Robots and humans work side-by-side in factories, too. Factories have had robots since 1961, when General Motors installed the first Unimate, a one-armed automaton that was used for tasks like welding.

But until recently, robots were strictly segregated from human workers - partly to protect the humans, and partly to stop them confusing the robots, whose working conditions had to be strictly controlled. With some new robots, that's no longer necessary. Take Rethink Robotics' Baxter.

'Reshoring' trend

Baxter can generally avoid bumping into humans or falling over if humans bump into it. Cartoon eyes indicate to human co-workers where it's about to move. Historically, industrial robots needed specialist programming, but Baxter can learn new tasks from its co-workers. The world's robot population is expanding quickly - sales of industrial robots are growing by around 13 per cent a year, meaning the robot "birth rate" is almost doubling every five years. There has long been a trend to "offshore" manufacturing to cheaper workers in emerging markets. Now, robots are part of the "reshoring" trend that is returning production to established centres. They do more and more things - they're lettuce-pickers, bartenders, hospital porters.

But they're still not doing as much as we'd once expected. In 1962 - a year after the Unimate was introduced - the American cartoon *The Jetsons* imagined Rosie, a robot maid doing all the household chores. That prospect still seems remote. The progress that has happened is partly thanks to improved robot hardware, including better and cheaper sensors - essentially improving a robot's eyes, the touch of its fingertips, and its balance.

But it's also about software: robots are getting better brains. And it's about time, too. Machine thinking is another area where initial high expectations encountered early disappointments.

Attempts to invent artificial intelligence are generally dated to 1956, and a summer

workshop at Dartmouth College for scientists with a pioneering interest in “machines that use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves”. Then, machines with human-like intelligence were thought to be about 20 years away.

(<http://www.bbc.co.uk/news/business-39296096>)

Source 2

Interview with Teacher Mrs. Browne (ICT Coordinator):

How have new technologies impacted your preparation for lessons?

It goes without saying that the introduction of new technologies in schools have had an impact on teaching. While technology must always be an extension of teaching, and something that enhances but does not replace, there are some benefits for schools wanting to simplify teacher’s busy schedules. Lesson preparation is an area which technology can provide a substantial level of support. Software, such as Promethean’s Class Flow allows teachers to plan interactive, multimedia-rich lessons and create assessments and assignments that can be delivered across a range of technologies for use in and out of the classroom.

How have new technologies impacted your assessment of students?

Using technology for assessment can take on many forms, but overall technology can enhance assessment by providing schools with the means to design flexible assessment criteria that supports a wide range of student’s skills and competences. In this instance SIMS tracking provides teachers with the means to determine how well a class is understanding a topic and the progress being made.

What has had the biggest impact on you as a teacher?

The most notable use of technology is that it no longer limits lesson time to the traditional four walls of the classroom, creating a true learning continuum between home and school. Students can use technology to meet, collaborate and create content virtually. Technology helps students to research subjects, share ideas and learn specific skills.

While textbooks still have a place in the classroom, the reality is that students are much more likely to be found using a laptop or tablet or even a smartphone to support their studies by researching on the Internet. Powered by software and apps and presented on the latest touchscreen displays, lessons are delivered in a much more engaging manner. Homework and assignments are also readily available as downloadable material, meaning that the whole education experience from classwork through to homework is much more interactive than the classroom of ten years ago.

Source 3

Questionnaire results from 100 students who have just finished work experience.

| | Question | Response | |
|---|--|---|------------------------------------|
| 1 | Did you witness employers using new technologies whilst on work placement? | Yes No | 91 9 |
| | If yes, what new technologies were being utilised by the employers? | AI Use of apps Robotics Machine Learning Virtual reality Other | 6 29 40 12 6 3 4 |
| 2 | Did you have any opportunity to work with new technologies when on work placement? | Yes No | 85 |
| 3 | Did you have any opportunity to develop your skill set with regards to new technologies in school before your placement? | Yes No | 62 38 |
| 4 | Before your placement were you aware of the range of new technologies currently used within the workplace? | Yes No | 84 16 |
| 5 | As a result of your work placement, are you now more aware of the changes that new technologies are making to employment patterns in NI? | Strongly Agree Agree Disagree Strongly Disagree | 11 67 15 7 |
| 6 | Do you feel that you have enough experience and knowledge to efficiently use and adapt to changes in technology in future employment? | Yes No Not sure | 81 4 15 |

Source 4

Excerpt from a paper produced by Frau Technik (Regional Director for Deutsch Cars)

Reasons for changes in employment patterns.

Advances in technology- In Northern Ireland the jobs offered, and the skills required by employers are constantly impacted upon by the changes in technology. For example, there have been reductions in staff through the introduction of machinery and computerisation.

Availability of skilled workers- In Northern Ireland there is an opportunity to create more technology-based jobs because of the growing service sector and especially in tourism and hospitality. Students need to take advantage of courses where they can learn these new skills, so that Northern Ireland can produce a workforce fit to enter employment where technological skills are the priority for employers.

Cost of the labour force- because of globalisation, many companies based in Northern Ireland have decided to have their goods produced abroad because the workforce abroad is cheaper than that in Northern Ireland. This will result in many people in Northern Ireland losing their jobs and having to retrain so that they can make themselves attractive to employers and especially ensuring that they have the correct technology skills to meet the demands of the competitive world market.

The quantity and variety of information gathered from sources should be reflected when completing the record of progress column in the research plan.

Exemplification of descriptions, with reasons, about the quality of information based on the sources and methods of collection.

For Learning for Life and work, the following words are defined as follows:

| | |
|------------------|---|
| Reliable: | Good quality information from a trusted source. |
| Accurate: | Correct due to be thoroughly researched and correct. |
| Valid: | Information relevant to the task which can be backed up in fact or thorough a sound reasoned argument. |
| Bias: | Information which is one sided and may be prejudicial. |
| Agenda: | Information with particular focus which includes a persuasive aim for doing something or promoting a particular line of thinking. |

Mark Band 1: *(Source 1)* The article on 'Rise of the Robots' is **reliable** as it is from the BBC. **or** *(Source 3)* The questionnaire from students is **accurate** as we used Survey Monkey.

Mark Band 2: *(Source 1)* The article on 'Rise of the Robots' is **reliable** as it is from the BBC which is a trusted source who employs researchers of a high quality.

(Source 4) The information from Frau Technique could be **biased** as the information is onesided and relates to her company only.

Mark Band 3: *(Source 1)* The information form the BBC is **accurate** because it must be checked before going to press.

(Source 2) The information from the teacher may have an agenda as she is using her own knowledge and experience to express her personal views about the use of technology in the classroom.

(Source 4) The information presented by Frau Technik is **valid** as it relates to our task of finding out about how technology is having an impact upon employment in her company.

Mark Band 4: *(Source 1)* The information form the BBC is **accurate** because it must be checked before going to press as the company would be liable to misinformation and may face legal challenges.

(Source 2) The information from the teacher may have an **agenda** as she is using her own knowledge and experience to express her personal views about the use of technology in the classroom. She may wish to promote its use more widely in our school.

(Source 3) The questionnaire from students may be biased due to the way the questions have been phrased and due to the small cohort which has been surveyed.

(Source 4) The information presented by Frau Technik is valid as it relates to our task of finding out about how technology is having an impact upon employment in her company and how it impacts upon working practices.

Part C: Communicating Findings: 1400 words

Total marks available: 30

Exemplification of Introduction

Mark Band 2: In my report I intend to focus on the new technologies that are relevant to businesses in Northern Ireland and the kinds of new jobs and businesses that have been created as a result.

Mark Band 2: I am doing this because I am a young person growing up in Northern Ireland and I want to find out how the new technologies may impact on employment opportunities.

Mark Band 4: In my report I intend to focus on the new technologies that are relevant to businesses in Northern Ireland and the kinds of new jobs and businesses that have been created as a result. I will look at how robotics is changing work patterns. I will display my findings from a study of the car industry. I will highlight how receptive my peers are to the changes in technology. I will illustrate how the new technologies are impacting on learning and teaching.

Mark Band 4: I am doing this because I am a young person growing up in Northern Ireland and I want to find out how the new technologies may impact on employment opportunities. I also want to know where opportunities are arising because of the new technologies. I also want to be aware of the skills that I need to develop and to be able to make informed choices with regards to my career pathway.

Exemplification of the use of Research Findings

| | | |
|--|----------|----|
| Do you feel that you have enough experience and knowledge to efficiently use and adapt to changes in technology? | Yes | 81 |
| | No | 4 |
| | Not sure | 15 |

Source Question 6 from Questionnaire

Mark Band 1: From the survey that I completed I was pleased that 81 of the pupils felt that they had the knowledge to adapt.

Software, such as Promethean's Class Flow allows teachers to plan interactive, multimediarich lessons and create assessments and assignments that can be delivered across a range of technologies for use in and out of the classroom. **Source Interview with Teacher Mrs. Browne (ICT Coordinator)**

Mark Band 3: This software will require teachers to be trained in its use so employment for trainers. The technologies for the students to engage in the lessons may be only available in schools. The speeds of broadband may impact on the students' access to the lessons. There will be employment for technicians in schools and hardware engineers including sales reps.

Exemplification of Research Evaluation

| Method | Strength | Weakness | Area of Improvement |
|------------------|--|--|--|
| Questionnaire | We had sufficient responses from the questionnaires. | We did not have sufficient questions focussing on the technology in employment. | To have more questions focussing on technology. |
| Web Search | We were able to gather information very quickly and it was very up to date information. | There was information overload and I found it difficult to identify websites specific to the task. | To refine the research by more effective use of keywords. |
| Visiting Speaker | The visiting speaker was an expert and was able to provide us with information to help us answer our task. | The speaker did not always stay on topic and gave some redundant information. | Brief the guest speaker and give them questions in advance. |
| Textbook | The textbook has been written to support our course which is at my level. | As soon as the textbook is published, the information and examples are dated. | Use a wider range of textbooks as opposed to just using one. |

Mark Band 1: One method worked across each column. Identify one area for improvement.

Mark Band 2: Two methods worked across each column. Identify two areas for improvement.

Mark Band 3: Three methods worked across each column to include **primary and secondary research**. Identify three key areas for improvement.

Mark Band 4: Four methods worked across each column to include **primary and secondary research**. Candidates are expected to **prioritise three plus key areas for improvement** which is likely to involve ranking of methods with reasons provided.

The detail of descriptions should reflect the Mark Band.

Conclusions

- Summarises the weaknesses in their research and explains how these limit their findings and conclusions.
- Summarises their main conclusions with supporting reasons.

Part D: Self-Evaluation: 400 words

Total marks available: 16

There are two sections to Part D

Section 1: Exemplification of evaluating the knowledge, understanding and skills that they have developed.

Section 2: Exemplification of evaluating their performance in their research approach and in the work itself, suggesting areas for improvement.

Section 1:

The knowledge and skills identified for development in Part A are in italics.

I aim to find out about new technologies in the workplace. I aim to develop my communication skills.

Mark Band 1: I found some websites related to new technologies in the workplace. I developed my communication skills by talking to others about the task.

I aim to find out about new technologies in the workplace and its impact on employment. I aim to develop my communication skills particularly my ability to communicate my ideas to others.

Mark Band 2: I found some websites about new technologies in the workplace and got some information about its impact on employment.

When I worked in the group I was able to give my opinion and respond to the views of others.

I aim to find out about new technologies in the workplace and its impact on employment. I would like to gain an understanding of what way new technologies have impacted employment trends. I intend to gain this knowledge and develop this understanding through independent research on the world wide web using websites of companies which use new technologies. I aim to develop my ability to communicate with others when collaboratively coming up with questions about new technologies to ask our school's ICT teacher in the interview.

Mark Band 3: Through research using questionnaires, World Wide Web and interviews I was able to gain a better understanding of how the new technologies impact on employment trends.

When I worked in the group I was able to make a contribution by putting forward questions and discussing questions put forward by others in order to select questions relating to the impact of technologies on employment.

I aim to find out about new technologies in the workplace and its impact on employment. I would like to gain an understanding of what way new technologies have impacted employment trends. I intend to gain this knowledge and develop this understanding through using the World Wide Web to find websites related to the impact of technology on employment. I aim to develop my ability to communicate with others when collaboratively coming up with questions for our schools ICT teacher about new technologies and their impact on employers and their work force. I would also like to develop my ability to manage information, particularly when analysing and selecting specific information about new technology and the impact on employers and employees working practices from sources as company websites.

Mark Band 4: Through research using the results from the year 12 questionnaires and the World Wide Web searches using keywords such as 'new technologies and employment' enhanced my knowledge and understanding of the impact of range of new technologies. An interview with our teacher Mrs Browne, gave me first-hand information about her how daily work routine has changed dramatically due to new technologies in the workplace. Through these three methods of research I was able to gain a better understanding of how new technologies have impacted the work place.

When I worked in the group I was able to make a contribution by putting forward questions and discussing other questions relating to new technologies in the workplace. The outcome of this was the selection of the questions used in the final questionnaire. I used my managing information skills to collate the information from my research and then to analyse it in order to select which bits would go into my final report.

Section 2: Exemplification of evaluating their performance in their research approach and in the work itself, suggesting areas for improvement.

The evaluation of the research approach differs from Part C in that it is not an evaluation of the method used but instead is an evaluation of the student's role in using the method.

Mark Band 1: I am happy with the way I used the sources to get my information. and/or I wasn't good at selecting information from these sources. I could have said more about the information I used.

Mark Band 2: I am happy that I was able to gather information for my task during the interview with Mrs Browne.

I was pleased that the keywords that I used when undertaking web searches produced useful information.

I wasn't good at interpreting information from the questionnaire.

I wasn't good at laying out my report.

I could have improved my report by saying more about the information that I presented. I could also improve my report by using headings and bullet points.

Mark Band 3: I was happy with the interview with Mrs Browne as a method of gathering information about the task. This was because we recorded her responses and I was able to listen to them over again.

I was pleased with the keywords because when I used the keyword 'employment' and the keyword 'technology' together, I was able to access a number of websites relevant to the task.

I wasn't good at interpreting information from the questionnaire because I found it difficult to relate the percentages to the employment and technology task.

I wasn't good at laying out my report as I found it difficult sequencing the research so that each section followed on from the one before.

I could have improved my report by making more observations and conclusions about the information I presented in my report.

I could also improve my report if I had planned an appropriate structure and contents in advance.

Mark Band 4: I was happy with the interview with Mrs Browne as a method of gathering information about the task this was because we recorded her responses and I was able to listen to them over again. I was pleased that I and others had taken the necessary time to plan questions for Mrs Browne that focussed on the task in relation to employment and technology.

I was pleased with the keywords because when I used the keyword 'employment' and the keyword 'technology' together, I was able to access a number of websites relevant to the task. I was then able to refine my search and bring up localised examples and websites by adding search words such as 'Bombardier' and 'Northern Ireland'.

I was satisfied that I was able to meet the deadlines in the research plan. This meant I was able to gather the information in a timely fashion and select from it the most relevant information for my report. For example I was able to complete my web search within the lesson set aside for this part of the research.

I wasn't good at interpreting information from the questionnaire because I found it difficult to relate the percentages to the employment and technology task as some of the questions we agreed on as a class did not necessarily help provide the information for the task.

I wasn't good at laying out my report as I found it difficult sequencing the research so that each section followed on from the one before. I found that I tended to group my research by source as opposed to selecting bits of information to illustrate particular key points in the report. For example I put all the information from my web search in one section rather than selecting and using relevant information from it throughout the entire report.

I found it very difficult to work with others and share information and ideas. I was very aware that not everyone contributed fully and therefore I didn't want to share with them. For example, I found a really good article on how robotics affect employment. If I had shared this with my group I could have probably further developed some of the points in my report.

I could also improve my report if I had planned an appropriate structure and contents in advance. Had I done this, it would have been easier for me to select from my research the information required to ensure that my report was presented in a coherent manner, flowing from section to section and thus getting across to the reader that the new technologies are having an impact on employment.

I could have improved my report by making more observations and conclusions about the information I presented in my report. Through doing this I could have better related the impact of the new technologies on employment.

