

Study Skills for Electronics

by George Welham

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STUDY SKILLS FOR ELECTRONICS – ASSIGNMENT

ACDA4021 – December 2024

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1 Presentation

As part of the assignment brief and participation in the lecture activity, I created a PowerPoint presentation containing basic information about myself, including my demographic, location, career, and hobbies. Extract images of the presentation can be found in Appendix 1.

1.1 Skills for Successful Presentations

Presentations can be a daunting experience for an inexperienced presenter, and if done poorly, they can ineffectively communicate the message or topic to the audience. Therefore, it is important to develop skills that aid in delivering a successful presentation, which will also help the presenter in the future when giving subsequent presentations. From Jemma Smith's web article for Prospects [1], the six key techniques to improve presentation are the following subheading.

1.1.1 Prepare Carefully

The presenter should be familiar with the content, topic area and material being presented and be able to deliver the presentation confidently. The content should be laid out logically and clearly. Visual elements (photos, videos and graphs) and text should be mixed throughout the presentation to accommodate different types of learners within the audience. The content of the presentation should be engaging and interesting to the audience. According to [2], Topics that relate to organisations or individuals bore audiences. It is suggested that it is better to talk about the idea, story or problem that the organisation is solving. If the presentation accepts questions, the presenter should be able to predict common questions and be prepared to answer or refer the audience to the answer.

1.1.2 Visual Aids

Visuals, including the slides themselves, should be used strategically and not filled with text; if a slide does contain text, it should be easy to read in an appropriate font and size. The visuals should complement the spoken content from the presenter and help to entertain the audience, as discussed in [2, p. 35]. Commonly, visual aids are in the form of a PowerPoint presentation or similar. However, they can also be physical demonstrations or paper handouts.

1.1.3 Consider Your Audience

The audience may vary in demographic or subject experience. It is important to know the audience's current level of understanding and pitch the content appropriately. For example, highly technical terminology or acronyms may not be appropriate without prior explanation.

1.1.4 Practice With a Friend

Practising with a friend or colleague allows for feedback on the presentation and rehearsing the spoken aspect of the presentation. This aids in the delivery by increasing the presenter's confidence, likely reducing the use of pauses in the delivery. Practising with a friend also allows the presenter to adjust the vocal delivery of the presentation like the tone, pace and speech rhythm, as discussed in [3, pp. 11-18]

1.1.5 Be Positive

The presenter should deliver the presentation positively and professionally, this increases engagement, enjoyment and interest with the audience.

1.1.6 Don't Rely on Technology

The presenter should know the content of the presentation if the visuals and slides were to fail. Mitigation, like having a backup USB storage or links to videos, can be used if technological issues arise unexpectedly.

Overuse of technology may also be disadvantageous if it fails to work successfully or is inappropriate for the audience. Interactive presentations may work effectively for some demographics, but they could distract other groups.

1.2 Evaluation of Personal Presentation

When creating the PowerPoint, a weakness identified was not covering meaningful topics that the audience would want to be covered to keep engagement. This was a concern of mine in the lead-up to the presentation's delivery.

Alternatively, as seen in Appendix 2, the main feedback was from the presentation's delivery. Although I was knowledgeable on the topic and knew the slides, I presented with a lack of confidence and used filler words.

Furthermore, on reflection, there was a clear distinction between slides that were either text or pictures. Next time, I will try to add both text and pictures to the same slide and move through the slides at a faster pace.

2 Required Skills for Higher Education

During higher education study, a mix of technical and academic skills will be taught and developed as part of the education. However, to complement study in higher education soft skills focused on studying and in preparation for tasks encountered in higher education are required. The following is a list of the primary skills required as listed in [4]; while other soft and transferable skills may be useful, the following are the most applicable to academic study.

2.1.1 Written Communication and Essay Writing

Academic essay and technical report writing is a different writing style compared to report styles found in industry. Academic writing contains a 3rd personal tone and requires accurate citation of sources. These properties can be assessed as part of the marking, so they are important to achieve a high grade and aid the reader by logically and robustly explaining the topic or view. As discussed in [5], written communication should also be grammatically correct, systematic, and concise. Appendix 3 is an example of a short ransomware report written in the academic writing style.

2.1.2 Verbal Communication

Group or project work and presentations may be required as part of higher education. Therefore, it is required that students can verbally articulate technical concepts and engage in conversations.

2.1.3 Understanding and Answering Exam Questions

Exams require students to work and complete tasks within strict time requirements. In preparation for exams, time management and good planning are required to learn and revise the complete syllabus. During exams, written answers need to be well-structured, persuasive and concise. Marks are normally awarded for the analysis of concepts, as well as for showing the examiner a complete and expert level of understanding of the topic. [6]

2.1.4 Time Management

In higher education, deadlines are imposed on reports, assignments and exams. To complete the work to a desired grade, students need to manage time in both topics covered through academic study and work-life balance. Students need to focus on studying topics within the set time, which has the most impact on the learning. [7]

2.2 Transferrable skills for employment

While Technical Skills will be required for employment, employers also look for 'soft skills'. [8] Lists soft skills can be described and summarised in sections 2.2.1 to 2.2.4 below:

2.2.1 Managing Yourself

Employees would benefit from having self-efficacy and independence towards tasks and objectives. Plan actions, take initiatives, being responsible and resilient. This includes independently updating relevant managers and customers, and notifying project management if problems arise.

2.2.2 Managing People

Employers may want to see an employee show leadership skills, be able to influence, negotiate and be persuasive in conversation. Show teamwork, delegate and communicate

clearly. Understand the emotions of yourself and colleagues to tactfully and respectfully resolve conflicts.

2.2.3 Managing Tasks and Projects

Employees may be expected to plan, organise and manage their own work independently of supervision. Set objectives, manage expectations, and provide realistic and truthful updates. Depending on the type of job, other key skills may be logical, methodical and systematic approaches to problem-solving.

2.2.4 Example Job Requirements

An Example in a job advertisement for a senior technical role in the civil service the job also asked for *“Your leadership style must be inspiring, confident and empowering. Working at every level of our organisation to break down silos, unite teams and create a culture that is trusting, collaborative, innovative, diverse and inclusive”* [9] This extract shows that within employment, skills encompassing teamwork and managing people are desired.

3 Self-evaluation and action planning

3.1 Strengths and Weaknesses

While in the lecture, I completed the 'Self Evaluation of Academic Skills' (see Appendix 4). This form highlighted that I was strong in some of the skills in the self-evaluation and weaker in others.

The following are my strongest academic skills from the skill evaluation

- I am able to make, store and find my notes
- I have good memory strategies
- I know how to use IT to help academic study

The following are my weakest academic skills from the skill evaluation

- Comparing different opinions and deciding what are the best grounds for deciding who is right
- Writing things in my own words
- Good time management skills and organisation of workload effectively
- Manage a range of writing skills appropriately

3.2 Personality test

3.2.1 Big Five Personality Test

The Big Five personality test measures extraversion, neuroticism, agreeableness, conscientiousness and openness to experience. as described in [10] these five are the most important in defining someone's personality.

Figure 1 shows the test results. I agree with the conclusion that can be drawn from the results. Before the personality test, I would have hypothesised that I am an introvert and a logical thinker. When comparing the results in Figure 1, these views are supported.

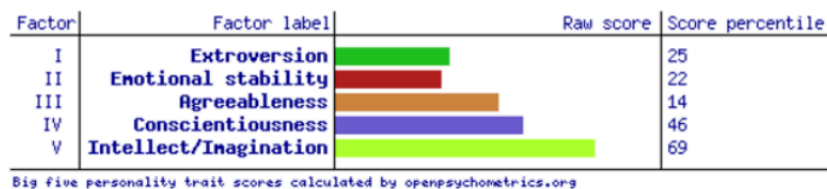


Figure 1 Screenshot my results from the 'Big Five Personality Test' from <https://openpsychometrics.org/>

3.2.2 Jungian/Myers-Briggs Personality Test

Unlike the personality test, the Jungian/Myers-Briggs Personality Test compares to 4 opposing personality types. The test is based from Jung's theory of psychological type, and has been adapted by many to test the pairs of personality types. They are as follows

- Introversion (I) vs. Extroversion (E)
- Sensing (S) vs. Intuition (N)
- Feeling (F) vs. Thinking (T)
- Judging (J) vs. Perceiving (P)

From the test's results, there is a possibility for 16 personality types. Written, for example, as INTJ.

Figure 2 shows the results of my test. My personality type is INTJ. Reference [11] describes the INTJ personality as an architect or tactician. Some advantageous personality traits of someone with an INTJ personality are rational, informed, independent, determined, curious and original. Within the self-evaluation conducted during my presentation, I identified that I was independent and fact-lead to the alternative of feeling-based, which my test results and INTJ personality support.

Weaknesses of an INJT personality as described in [11] are arrogant, dismissive of emotions, overly critical, combative, and socially clueless. Again, the test supports my reflection that I am overly critical and a perfectionist, as seen in a slide from my presentation.

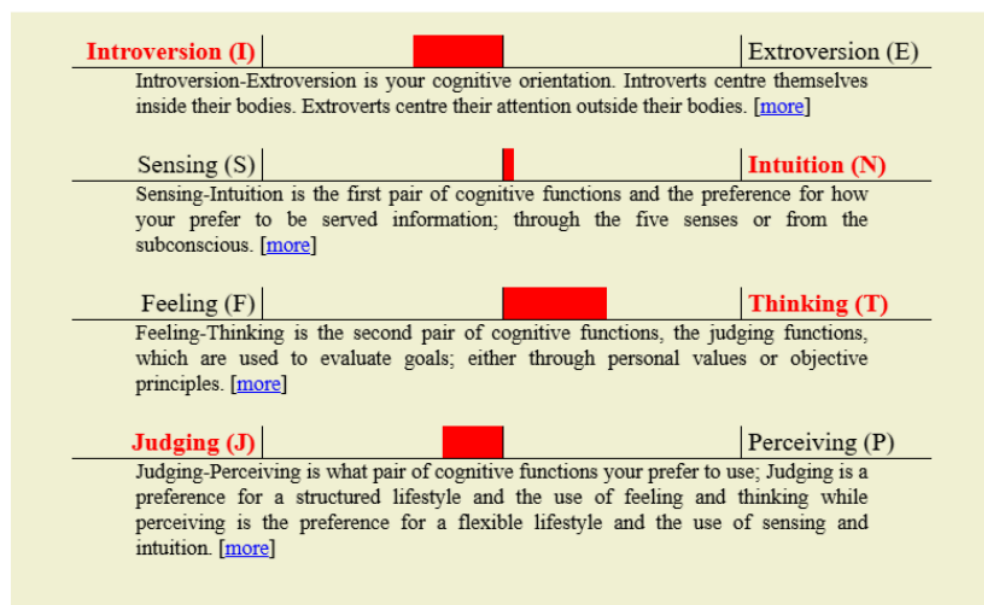


Figure 2 Screenshot of my results from the 'Jungian/Myers-Briggs' from <https://openpsychometrics.org/>

3.2.3 Career test

The results from the career test, seen in Figures 3 and 4, suggest a career in an engineering discipline. I agree with this result, as I currently work in a research and development role as an engineer.

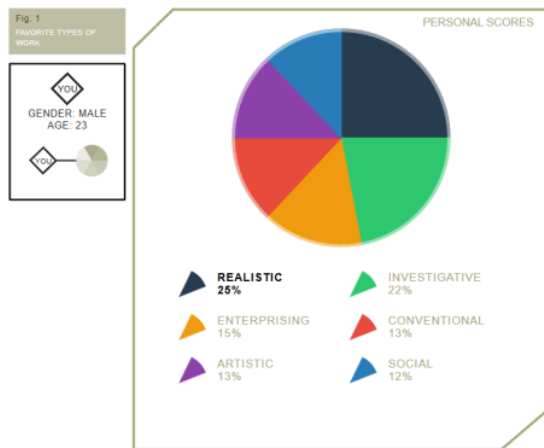


Figure 3 Cropped Screenshot of results from Carrer Test from 123test.com

Telecommunications engineering technician

Vocational school or associate's degree required

97% match

Telecommunications engineering technician deploy, maintain and monitor a telecommunication system that provides interactions between data and voice communications, such as telephone, video conferencing, computer, and voicemail systems. They are also involved in the design, manufacturing, construction, maintenance and repair of telecommunication systems. Telecommunications engineering technicians provide technical assistance in the research and development of telecommunication equipment.

essential skills

- install monitors for process control
- use session border controller
- manage system testing
- apply ICT system usage policies
- use scripting programming
- operate electronic measuring instruments
- calibrate electronic instruments
- integrate system components
- interpret technical texts

broader skills

- apply company policies
- deploy ICT systems
- interpret technical requirements
- maintain electronic equipment
- operate scientific measuring equipment
- instruct others

[Read less](#)

Figure 4 Cropped Screenshot of 'best match' result from career tests, 123test.com

3.3 SMART Goals

SMART is an acronym for specific, measurable, achievable, relevant and time-bound. As discussed in [12], the advantage of writing goals in this framework is that they are written clearly, concisely and without uncertainty about the deadline or threshold of the completion of the goal. It also allows someone else, for example, a line manager, to easily read, track and identify progress towards the goals.

3.3.1 My Personal SMART Goals

- I want to complete the additional available training for my role as an emergency ambulance crew member. To do this, I will develop further my skills by taking the

Certificate in Emergency Response Ambulance Driving (CERAD) course. This will allow me to participate in extended shifts as I can share the response driving. It will also enable me to work with a newly qualified ambulance crew. To do this, I will talk to the manager in my volunteer development review and will apply for the training when available. I wish to do the training this year around April when the course is running.

- Within work, I want to progress my career and responsibilities to meet the criteria for promotion to level 5. I can then submit my evidence of meeting the level 5 responsibilities and get the promotion approved. I will achieve this goal by continuing to work to exceed the level 4 requirements and review my progress toward level 5. I aim to achieve this by the end of 2025.
- Within my academic study, I want to pass my course and achieve an average grade of 2:1 over the next 4 years. To do this, I will engage the modules and topics of work and diligently work outside of university time to achieve the grades required. A 2:1 degree would allow me the option to continue studying later towards a master's degree. My apprenticeship and Degree are 4 years long. Therefore, I can expect to know the result in 4 years' time.
- For my apprenticeship, I want to get ahead of the required knowledge, skills and behaviours (KSB) on the job evidence, so I am in a comfortable position towards the end of the 4 years. I am to have the majority of the KSBs evidenced by the end of the 3rd year. To do this, I will start to gather the evidence now and aim to complete jobs in the workplace relevant to the evidence required.

4 Looking after my data

4.1 My Backup Strategy

My personal data is primarily stored in Microsoft OneDrive-enabled folders. These files are often created and edited on laptops that I own. OneDrive syncs all folders marked for backup or sync when internet access is available. The Data is then available from another computer with internet access or via the website application.

In addition, my desktop computer at home has two 2TB SSDs set in a RAID 1 configuration. Resulting in the data on the two drives being mirrored. The OneDrive application on this desktop PC is set to 'Always Keep on this device,' meaning the files are downloaded and stored locally, and new files are downloaded upon boot.

I also share irreplaceable data, such as family photos, with my parents. These Photos are backed up on a 1TB NAS, which also has a RAID 1 configuration. This NAS is not internet-connected and is in a different physical region of the country to the other storage devices.

My personal data follows the 3-2-1 rules. The first copy is located on my laptop, which is normally the device used to create and edit files. That file is then synced to OneDrive, allowing for a second copy hosted in the cloud. When I next use my Desktop computer at home, the files will sync and save to the drive. For irreplaceable data like family photos, there is a fourth copy entrusted to my family.

4.2 Ransomware Management

During a ransomware attack, an individual device, cloud service, or multiple devices could be affected. Table 1 shows the individual scenario, impact, and remedy to regain access to my data.

Devices or services affected	Impact	Action Plan and Remedy
University Laptop	The most up-to-date files could likely be affected. The file that caused the ransomware to be injected could also have been synced to OneDrive.	Use OneDrive's built-in Quarantine to isolate any recent and suspicious files, or use the rewind function to restore back 1,2,3,7,14, or 30 days. If still in doubt, Isolate internet access to the desktop computer and recover an old version of the data to a hard drive or clean device.
Phone	Some files locally, like images and screenshots, could be affected. The two-factor authenticator for Microsoft may not be available to sign into OneDrive from a non-trusted device.	I would need to sign into My Microsoft account on a trusted device like my desktop computer. I could then change the two-factor authenticator, wipe the phone, and reinstall the data from OneDrive.
OneDrive or Microsoft account	The Cloud backup and sync function would be unavailable.	Contact Microsoft support to start the process of regaining access to the OneDrive and Microsoft accounts. Isolate internet access to the desktop computer and laptops. Stop all sync with the OneDrive account. Recover an old version of

		the data and transfer it to a hard drive.
Desktop Computer	My non-cloud backup would be affected, leaving only two copies available.	Revoke OneDrive permission to this device using another trusted device. Wipe and format the hard drive and re-set the OneDrive Automatic 'Keep on this device setting.'

Table 1 Ransomware management plan for my backup solution

5 Time management and self-organisation

Since the start of my career and academic study five years ago, I have tested and developed strategies to aid in my time management and self-organisation, which are personalised to me. The following sections will discuss the various digital tools I have used continuously.

5.1 Calendar

I have 2 Calendars. These must be kept separate due to my workplace's privacy and security policies. The work calendar is on Outlook. It is often populated with work appointments and reminders. Rarely do I block half days or days out unless to focus on time-critical tasks or tasks that I cannot be disturbed.

My personal calendar is hosted on Google Calendar. This is shared with my partner to view each other's appointments and plan any conflicts. Google Calendar also interacts with Todoist, as explained in section 5.2.

5.2 Todoist

Todoist is a to-do list with extended features like reminders, notifications, and routines. It also interacts with Google Calendar and can auto-populate tasks if given a date field in Google Calendar. It is primarily a mobile application with a companion web-based application. It is available in a free-to-use model or a paid-for model with additional features.

I use Todoist to keep track of my to-do list and send push notifications of weekly or routine tasks that I would otherwise neglect. It's easy to use and supports voice command integration from Google Assistant, so I can add tasks hands-free while completing another activity. This enables me to plan my day ahead or unwind, saving time or improving my organisation.

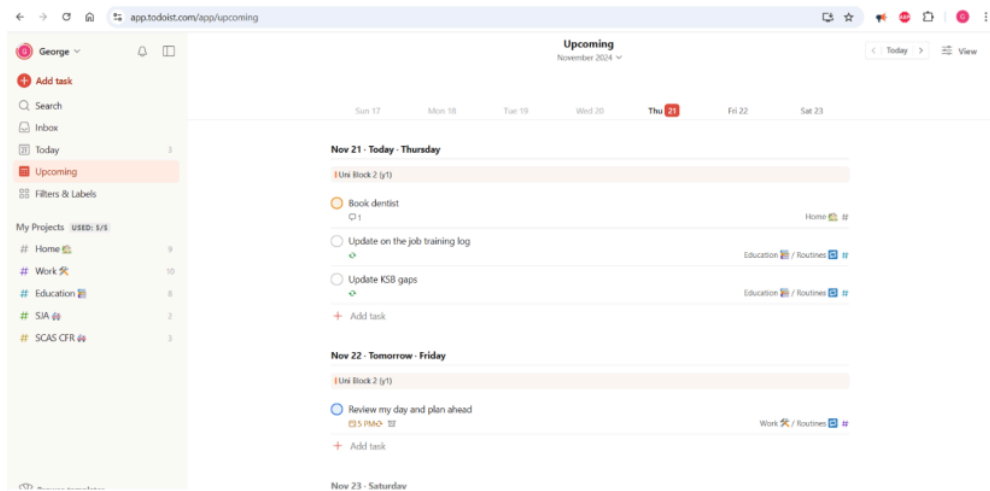


Figure 3 Screenshot of Todoist website application

5.3 Obsidian

Obsidian is a note-taking application; however, it supports plugins and modifications, which allows it to be modified to best suit the user's needs. Obsidian, as well as having a basic word processor, supports images, videos and hyperlinking.

I use Obsidian to keep finished notes, structured information and thought processes for long-term use. I originally started writing information in a notebook dedicated to a subject. However, once I was finished with the current subject, I found myself often losing the physical notebook or mixing the notebook with another subject. Due to my work's policy, I have separate Obsidian Vaults for both my work and personal life.

Obsidian uses a markdown (.md) file format, which can be opened with other applications if the Obsidian application is no longer available. Furthermore, while Obsidian offers a paid-for cloud-based service, the free-to-use version saves all data to a folder. My Vaults are stored on OneDrive and synced with all my computers.

Obsidian benefits me by allowing me to visualise all notes in a Zettelkasten diagram, as seen in Figure 7. This allows notes and topics to interconnect and thoughts that would otherwise not be categorised as alike. I also have templates for different kinds of notes. This reduces the friction of starting to write a note or thought. Obsidian's lightweight format, compared to other word processors like Microsoft Word or Microsoft OneNote, allows me to easily make another note and know it will be automatically saved to my OneDrive.



Figure 4 Cropped Screenshot of the Zettelkasten Diagram generated within my personal Obsidian

5.4 General File Structure

Files and folders that do not fit within Todoist, Obsidian, or my calendar are organised in folders on my OneDrive. These files are, therefore, available anywhere with an internet connection. OneDrive also forms part of my backup strategy, as described in section 4.

5.5 Personal Development Plan

At work, we follow a bi-annual formal Check-in and impact review. As part of this process, we set long-term goals to improve personal performance within the career progression policy. The 'My Impact' process focuses on the following key areas:

- Capability
- Delivery
- Leadership
- Teamwork
- Development

I review areas of my work that have contributed towards these focussed areas. By the end of the meeting, some new goals are discussed and set to be achieved by the next check-in. Due to security policies at my workplace, I cannot evidence this.

6 Conclusion

In conclusion, this report examined critical soft skills required for higher education at university. This includes skills which are transferable to employment post-graduation, presentation skills, secure information storage and backup, and action planning. These skills apply to all students independent of the course being undertaken. The main benefit, once these skills and techniques have been learnt and applied, will aid the student in studies and attaining a higher grade of degree. Past education, these techniques improve employability and skills within the workplace.

7 References

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8 Appendices

8.1 Appendix 1 – Extract from presentation

Locations

- I grew up in Rural Essex
- Moved to Wiltshire when I was 18 to start an apprenticeship
- Moved back to Essex during COVID (Rent was cheaper)
- Moved to Hampshire in 2021 (although between 2022 and 2023 spent a lot of time Kent for work)

10/9/2021

PRESENTATION TITLE

3

Work (what I can talk about...)

I work for DSTL, which is an executive agency of the MOD
Here are some 'fun' facts... (from the 23/24 FY)

- 5,347 employees [1]
- £1,102 million operating income [1]
- 167 intellectual property submissions [1]

19/11/2024

[1] DSTL, Defence Science and Technology Laboratory Annual Report and Accounts 2023-2024, Gov.uk/DSTL, accessed 18/11/2024

4

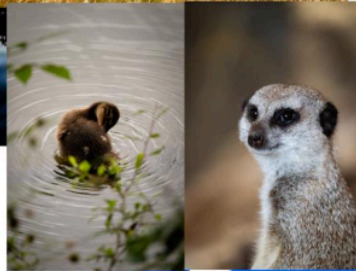
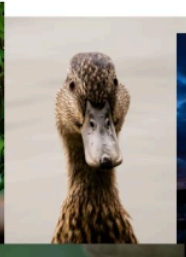
Work (what I can talk about...)



19/11/2024

5

Other hobbies Ish...



19/11/24

8.2 Appendix 2 – Feedback from the presentation

STUDENT FEEDBACK								
4. Practical Application and Deployment This is the part that assesses the quality of the powerpoint material. Here you are marked on the legibility of the text, the quality of any graphics etc. Marked as a percentage. (i.e. out of 100 as per the table on the reverse side of this)								
5. Skills for Professional Practice This is the part that assesses the quality of the actual delivery. How professional was it. Was the delivery clear and legible. Were there spelling mistakes, did it conform to the guidelines? How close was it to the 5 min target etc.								
Name of student who Presented: <u>GEORGE</u>								
Common Assessment Criteria Applied	% weighting	% (out of 100)						
4. Practical Application and Deployment Deployment of methods, materials, tools and techniques; application of concepts; formulation of innovative and creative solutions to solve problems.	50	75						
Nice large text - easy to read from the back of the room. Simple but effective slides, however would have benefited from the inclusion of images/pictures to keep the audience attention etc. (Some were included later - good job!).								
5. Skills for Professional Practice Attributes in professional practice: individual and collaborative working; deployment of appropriate media; presentation and organisation.	50	72						
Confident, professional delivery in general. a couple of times, pace of speech was a bit fast. - speak slower. said 'um' quite a few times. Good eye contact with audience. Time was 6.20								
Assignment Mark (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #d3d3d3;"> <th colspan="2" style="text-align: left; padding: 2px;">Late Submission Penalties (tick if appropriate)</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; padding: 2px;">Up to one-week late</td> <td style="width: 50%; padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">Over one week late</td> <td style="padding: 2px;"></td> </tr> </tbody> </table>			Late Submission Penalties (tick if appropriate)		Up to one-week late		Over one week late	
Late Submission Penalties (tick if appropriate)								
Up to one-week late								
Over one week late								

STUDENT FEEDBACK

4. Practical Application and Deployment

This is the part that assesses the quality of the powerpoint material. Here you are marked on the legibility of the text, the quality of any graphics etc. Marked as a percentage. (i.e. out of 100 as per the table on the reverse side of this)

5. Skills for Professional Practice

This is the part that assesses the quality of the actual delivery. How professional was it. Was the delivery clear and legible. Were there spelling mistakes, did it conform to the guidelines? How close was it to the 5 min target etc.

Name of student who Presented: **GEORGE**

Common Assessment Criteria Applied	% weighting	% (out of 100)												
4. Practical Application and Deployment Deployment of methods, materials, tools and techniques; application of concepts; formulation of innovative and creative solutions to solve problems.	50	70% 35												
<i>Nice presentation.</i>														
5. Skills for Professional Practice Attributes in professional practice: individual and collaborative working; deployment of appropriate media; presentation and organisation.	50	70% 35												
<i>Very good piece.</i> <i>Nice order.</i>														
<table border="1"> <thead> <tr> <th rowspan="3">Assignment Mark (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.)</th> <th colspan="2">Late Submission Penalties (tick if appropriate)</th> <th rowspan="3">%</th> </tr> <tr> <th>Up to one-week late</th> <th></th> </tr> <tr> <th>Over one week late</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Assignment Mark (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.)	Late Submission Penalties (tick if appropriate)		%	Up to one-week late		Over one week late					
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	Over one week late													

8.3 Appendix 3 – Ransomware Report



RANSOMEWARE

Study Skills

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Introduction to Ransomware

Ransomware is defined as 'a type of malware which prevents you from accessing your device and the data stored on it' [1]

Earliest variant of ransomware date back to late 1980 [2]. The Verizon Data Breach Investigation Report, as discussed on Varonis's CryptoWall post [3] reports that 40% of all reported malware incident are ransomware incidents.

An example of Ransomware is the 2014 CryptoWall and its later variants. Since its initial release, CryptoWall has appeared again as CryptoWall 2.0 and CryptoWall 3.0.

The following report will discuss CryptoWall and common strategies to reduce spread and impact.

CryptoWall

CryptoWall is a ransomware trojan that infects computers, networks and removable drives. Once infected, CryptoWall encrypt the files on these devices. [4]

CryptoWall 3 was the most technologically advanced and is estimated to have caused US \$325 Million in damages [5].

Between mid-March and August 24, 2014, nearly 625,000 systems were infected with CryptoWall (Version 1). [6]

How CryptoWall Repopulates

CryptoWall can be distributed by a range of communication methods, including malicious email attachments, exploit kits, drive-by downloads and malicious adverts. Additionally, it is often installed by other malware. [4]

How CryptoWall Functions

Once a link on a file or email, the CryptoWall ransomware is downloaded from a domain controlled by the ransomware author or hacker.

Once downloaded and activated, CryptoWall starts encrypting the computer's files and folders. It also disables any restore function common in Windows operating systems. The encryption used has changed with different generations. Older generations used RSA-2048. [6]

Once the full file system has been encrypted, a warning appears on the victim's screen requiring payment of a cryptocurrency to regain access to the file system. The warning also displays a

threatening countdown till the files are destroyed. As seen in Figure 1 (Source: Dell SecureWorks)



Figure 1 CryptoWall End User Warning (Source: Dell SecureWorks) [6]

How to prevent Ransomware attacks

Ransomware can be prevented with the following steps:

- Maintaining the computers' Software version, antivirus and other network security products
- For larger networks, it is recommended that standard user accounts on the networks are given the least privileges. [4]
- CryptoWall is most often triggered by phishing email. Its best practice not to click on links or open suspicious emails. [3]

Generally, to mitigate against all cyber security threats, an organisation should follow the '10 steps to cyber security'.

These are as follows, as recommended by the National Cyber Security Centre [7]

- Understand the cyber risk and implement suitable mitigation to the risks identified
- Engage and train yourself and member of the organisation regarding cybers security. The NCSC encourage senior leaders of large organisation to set an appropriate tone regarding cyber security.
- Understand your system and any vulnerabilities relating to them.
- Architecture which is easy and simple to configure. This allows the services to be kept up to date, not fall into disrepair, and allows for easier monitoring of malicious activity.
- Vulnerability management, supporting and protecting the systems and services through their lifecycle.

- Identity and access management. Implementing policies to reduce the level of access to only what is needed. Reducing identity theft by implementing Multi-factor authentication and dedicated administrative accounts.
- Data security when in transit or at rest. This includes encryption of the data and secure backups which would withstand ransomware or other attacks.
- Logging and monitoring. Enabling a system that allows for the monitoring of access, file movement and modification to aid in detecting and investigating incidents.
- Incident management. Have a plan to respond to incidents, reducing the impact of the incident and allowing the individual or organisation a process to learn and be better prepared for future event.
- Supply chain security. Using trusted and reliable products and services. Buying products from reputable manufacturers which are not likely to have large vulnerabilities or be malicious. Using services which have an appropriate cyber security emphasis and policies for to meet the needs of the individual or organisation.

Conclusion

Since CryptoWall was first released, modern antivirus [have](#) advanced to now able to detect and isolate CryptoWall. However, other ransomware still poses a danger to both personal and corporate computers and internet-connected devices.

The report examined the basic steps recommended to reduce the probability of a ransomware attack and the mitigation that can be taken to reduce the impact if an attack happens. These recommendations should be implemented as best practices where applicable.

References

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- [3] Varonis, "CryptoWall," 9 May 2022. [Online]. Available: <https://www.varonis.com/blog/cryptowall>. [Accessed 9 November 2024].
- [4] National Health Service Digital, "Cryptowall Ransomware," February 2020. [Online]. Available: <https://digital.nhs.uk/cyber-alerts/2018/cc-1959>. [Accessed 24 November 2024].
- [5] Cyber Threat Alliance, "Lucrative Ransomware Attacks: Cryptowall Version 3 Threat," 2018. [Online]. Available: <https://www.cyberthreatalliance.org/wp-content/uploads/2018/02/cryptowall-report.pdf>. [Accessed 24 November 2024].
- [6] Dell Secureworks, "Cryptowall Ransomware," 27 August 2014. [Online]. Available: <https://www.secureworks.com/research/cryptowall-ransomware>. [Accessed 25 November 2024].
- [7] National Cyber Security Centre, "10 Steps to Cyber Security," 11 May 2021. [Online]. Available: <https://www.ncsc.gov.uk/collection/10-steps>. [Accessed 24 November 2024].

8.4 Appendix 4 - Self-Evaluation of Academic Skills

Self Evaluation of Academic Skills

Thinking about yourself, read and mark each statement out of 5, with 5 being 'Totally Agree' and 1 being 'Totally Disagree'. If a statement doesn't apply to you, leave it blank

Skill					
	5	4	3	2	1
I have the confidence to try new things and express my ideas		X			
I am self motivated and will persevere with difficult tasks			X		
I am organised and can meet set deadlines		X			
I am able to find information from different resources easily		X			
I can read complicated texts and understand the general meaning			X		
I am able to select what is relevant and what is irrelevant in text			X		
I can compare different opinions and decide what are the best grounds for deciding who is right				X	
I can write things in my own words				x	
I am able to reflect and evaluate my own work		X			
I have good strategies for starting a new task/assignment			X		
I have good time management skills and can organise my workload effectively				X	
I am able to make, store and find my notes	X				
I am able to manage a range of writing skills appropriately				X	
I am able to think critically and analytically, and evaluate arguments		X			

I have good memory strategies	X				
I know how to use IT to help academic study	X				
I am confident at preparing and delivering oral presentations			X		

Study skills – G.Rees-Evans
Self_Evaluation_of_Academic_Skills

Study Skills for Electronics

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

77 /100

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GRADING FORM: GJ_2019

GEORGE WELHAM

386

ENGAGEMENT WITH LITERATURE



A good range of very relevant sources, well referenced and implemented in IEEE format

75

KNOWLEDGE AND UNDERSTANDING

 Solid K&U demonstrated in all areas

78

COGNITIVE AND INTELLECTUAL

 Very good reasoning and logic demonstrated in most areas

78

PRACTICAL APPLICATION

 Exceptional timekeeping and productivity apps demonstrated.
Could have been a bit more formal in laying down the implementation of the SMART goals, but the core info is good.

75

TRANSFERABLE SKILLS

 Very well laid out and presented.

80