

Academic & Employability Skills

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Terms of reference

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1. Personal Overview

Motto: "You can't go back and change the beginning, but you can start where you are and change the ending." (C.S Lewis).

1.1. Strengths

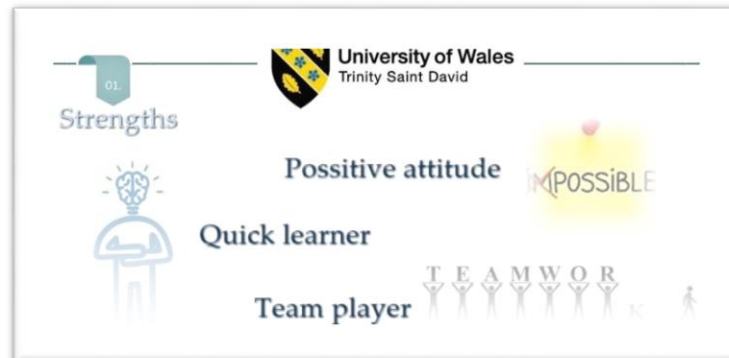


Figure 1 PowerPoint presentation - strengths page

In terms of strengths, I could describe myself as having a positive attitude. Most of the time and in different circumstances during my life, I believe everything is possible even if it takes a lot of effort to achieve it. Also being a quick learner is another strength, as I take advantages of my visual memory.

1.2. Weaknesses



Figure 2 PowerPoint presentation - weaknesses

In the opposite, sometimes I need to figure out how to deal with my lack of confidence, especially when there is a huge amount of ambiguity around.

1.3. Goals

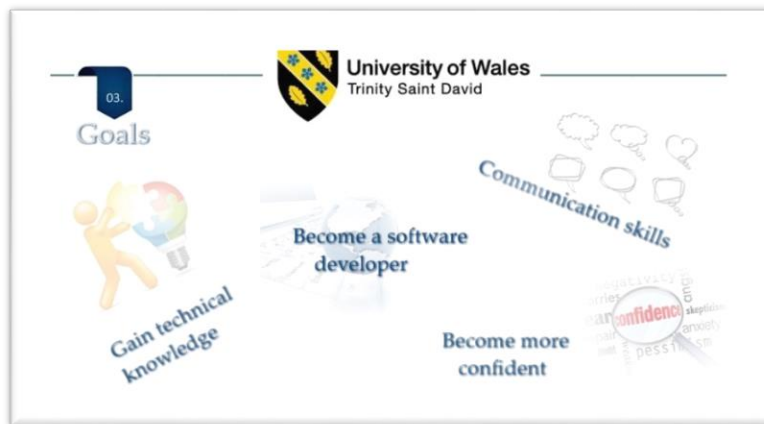


Figure 3 PowerPoint presentation - goals page

In the next period, my goals are oriented in two directions: one is to gain enough technical knowledge that will help me to become a successful software developer, and the second one is related to the need of improving some soft skills like communication, which, I truly believe, depends of the level of confidence I could have.

1.4. Hobbies

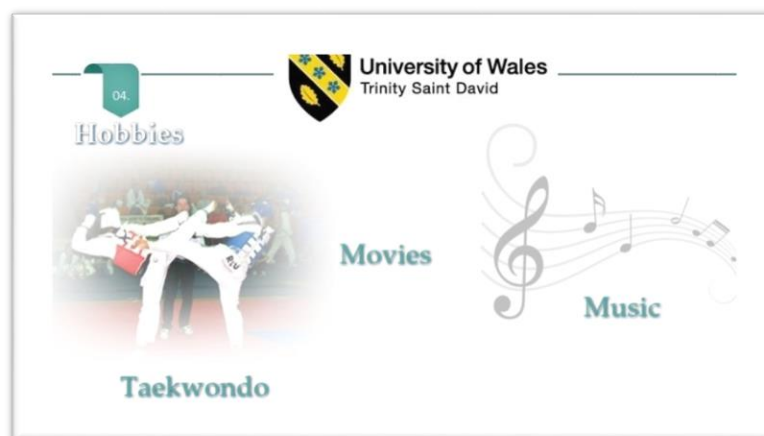


Figure 4 PowerPoint presentation - hobbies page

For completing the picture, I would mention about the passion for sport that I have. I practiced Taekwondo for more than 10 years, period that helped me to improve the concentration and discipline and admit “Mens sana in corpore sano” (Juvenal 10.356-64)

2. Skills Education

There are multitudes of skills that could be necessary in order to develop a performant learning and professional work style. On a high-level overview, it can be classified in two main categories: HE learning skills and employability skills, but behind the scene, these are interconnected. For meeting the employability, requirements a good foundation must be consolidate during the study years. This way the Higher Education Learning skills become crucial.

Categories of skills:

2.1. Higher Education Learning Skills

2.1.1. Organizing and planning study

Being organized can save a lot of time and effort. This is more than a skill, it is a capability that can make the difference and can easily be applied into a professional environment.

There are rules for following in order to develop it as a habit:

➤ Take good quality class notes

“In order to succeed in a class, it is often necessary to take good notes. A professor’s lecture often provides you with key information for the course. Staying organized while taking notes is just as important as note taking itself because if you have good notes to study from you will be more likely to do well. There are several strategies which will help you stay organized and take good notes.”

➤ Set prioritizes

Planning the study is essential. For obtaining better results, a prioritization is needed. This step is correlated with another very important skill - **time management**, that can be also considered as a employability required skill.

This step includes the creation of a to-do list for a day, a week etc. and the assignation of priority points, which will result in a chart that can offer a better overview of the study situation:

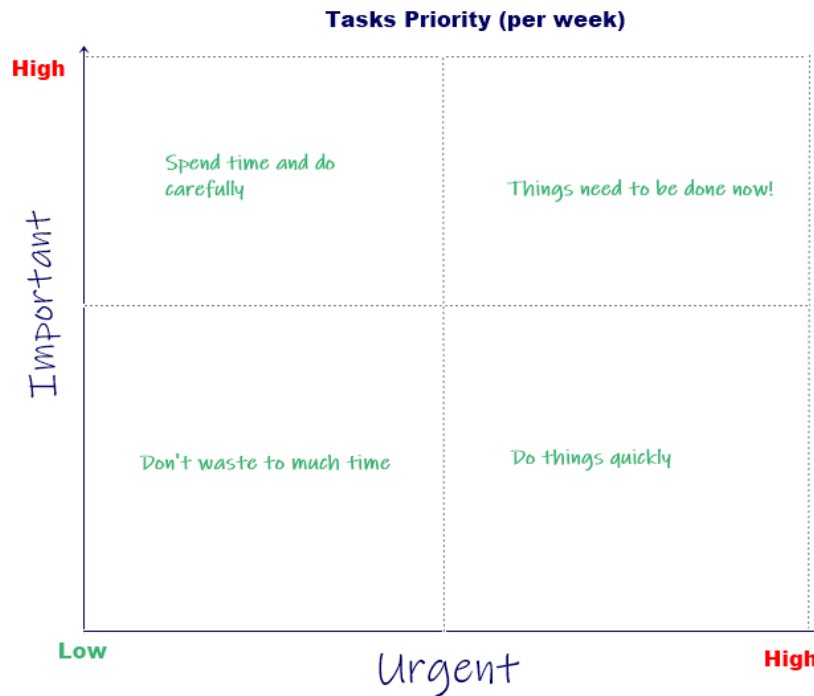


Figure 5 Tasks Priority chart

➤ **Choose a suitable location for studying**

“A lot of time can be wasted by distractions. There are many quiet, comfortable study areas on campus, including the library. Designating a location for studying will help you keep your mind focused on studying”

➤ **Review the work and progress**

“This is one of the best ways to study for a test, especially if you have taken good notes in class. Execute some activities that will help you recall the information.”

2.1.2. Memory

“Memory is a collection of systems for the storage and recall of information (personal experiences, emotions, facts, procedures, skills and habits)”. (Memory in mind and culture, 2009)

In 1968, Richard Atkinson and Richard Shiffrin define a memory model described as: “different types of memory (from **sensory** to **short-term** to **long-term** memory), each with their own particular mode of operation, but all cooperate in the process of memorization, and can be seen as three necessary steps in forming a lasting memory”. (Memory in mind and culture, 2009)

➤ **Sensory memory**

“The incoming information first enters the sensory memory. Sensory memory has a large capacity. However, it is of very short duration (less than a second).” (Science of memory, 2007)

➤ **Short-term memory**

“Information that is attended to enters the second memory store called the short-term memory (STM), which holds small amount of information for a brief period of time (30 seconds or less).” (How the mind forgets and remembers, 2001)

➤ **Long-term memory**

“Materials that survive the capacity and duration limitations of the STM finally enter the long-term memory (LTM) which has a vast capacity. It has been shown that once any information enters the long-term memory store it is never forgotten”. (How the mind forgets and remembers, 2001)

As a helpful tip for improving the memory study skill is to “**Keep your memory fresh** - If you wait to review the information until the night before your test, you will have forgotten a great deal of the material and will have to study longer. Reviewing the information on a regular basis after you have learned it will decrease your study time and help you remember material much more easily.” (Memory in mind and culture, 2009)

2.1.3. Research skills

The term *research* could be defined as “way of thinking: examining critically the various aspects of the required work; understanding and formulating guiding principles that govern a particular procedure; develop and test new theories.” (Research Skill Development, 2009) Simplifying these aspects “research is a process for collecting, analyzing and interpreting information to answer questions.” (Becoming Critical: Education, Knowledge and Action Research, 1986)

In order to obtain a good quality, the person that executes it should meet several research’s characteristics:

➤ **Controlled**

“There are many factors that could affect an outcome. A particular event is seldom the result of a one-to-one relationship. Some relationships are more complex than others are. Most outcomes are a sequel to the interplay of a multiplicity of relationships and interacting factors. In a study of cause-and-effect relationships, it is important to be able to link the effect(s) with the cause(s) and vice versa”. (Ethics in research, 1993)

➤ **Rigorous**

“Refers to the ability to be scrupulous in ensuring that the procedures followed to find answers to questions are relevant, appropriate and justified.” (Ethics in research, 1993)

➤ **Valid and verifiable**

“This concept implies that whatever you conclude on the basis of your findings is correct and can be verified by you and others.” (Ethics in research, 1993)

➤ **Critical**

“Critical scrutiny of the procedures used and the methods employed is crucial to a research enquiry. The process of investigation must be foolproof and free from any drawbacks. The process adopted and the procedures used must be able to withstand critical scrutiny.” (Ethics in research, 1993)

2.2. Employability Skills

2.2.1. Critical thinking

“Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.” Simplifying “Critical thinking is just deliberately and systematically processing information so that you can make better decisions and generally understand things better.”

2.2.2. Working with others

Teamwork is define “as a cooperative process that allows ordinary people to achieve extraordinary results. A team has a common goal or purpose where team members can develop effective, mutual relationships to achieve team goals. Teamwork relies upon individuals working together in a cooperative environment to achieve common team goals through sharing knowledge and skills. Successful teamwork relies upon synergism existing between all team members creating an environment where they are all willing to contribute and participate in order to promote and nurture a positive, effective team environment.” (Successful teamwork, 2002)

Characteristics of members for a successful team:

➤ **Commitment**

“Team members are committed to the success of the team and their shared goals for the project. Successful teams are motivated, engaged and aim to achieve at the highest level.” (Successful teamwork, 2002)

➤ **Interdependence**

“Team members need to create an environment where together they can contribute far more than as individuals. A positive interdependent team environment brings out the best in each person enabling the team to achieve their goals at a far superior level.” (Successful teamwork, 2002)

➤ **Communication and feedback**

“Actively listening to the concerns and needs of team members and valuing their contribution and expressing this helps to create an effective work environment. Team members should be willing to give and receive constructive criticism and provide authentic feedback.” (Successful teamwork, 2002)

2.3. Self-evaluation

After having a deep understanding of a large range of required skills, I could admit that the main target is to identify better and correctly the strengths and weaknesses and try to apply most of them in a daily routine until it will become a habit.

Making an analysis, I noticed there are differences between what I considered about myself and what the [results](#) of several skills tests are. Skills like making decisions and leadership needs an improvement and additional attention. On the other side, even if I consider the communication as being a weakness, based on the results, my actions in different circumstances seem to be according with desired ones.

In conclusion, for meeting the required skills in a HE learning or work environment a lot of effort and work are need and a proper long-term plan could include:

- Understand why and what material is study / work is done
- Find a suitable and efficient style of study / work
- Pay attention to verbal and non-verbal behavior
- Think before act
- Be honest and assume any possible limitations
- Make a realistic plan – follow and review it
- Focus on quality
- Make a continuous analysis on your skills (strengths, weaknesses, mistakes, success, failures etc.)

3. Personal development planning

“Personal development planning enables individuals to take charge of their own learning. Learning becomes a proactive as well as reactive process, designed and prioritized to support immediate development needs as well as longer term ambitions” (AUA Postgraduate Certificate in Professional Practice (Higher Education Administration and Management (OUVA))

Based on the results obtained at Section 3.3 – Self-evaluation and a detailed introspection, there is a set of goals defined and split into two main categories, depending on the completion-desired period:

3.1. Short-term goals

- Pass university's exams
- Keep being consistent and focus on getting information from courses
- Have a better understanding of “computer world” (Have a better high-level overview about software development life cycle, history and need of programming languages etc.).

3.2. Long-term goals

- Improve skills need in professional life (being able to express my knowledge, following best practices in a daily work environment, being more organized, etc.)
- Gain technical knowledge to develop an end-to-end application

3.3. Action plan

Covering the period:

From	17.07.2019		To	17.07.2020	
<i>What do I want/need to learn?</i>	<i>What will I do to achieve this?</i>	<i>What resources / support will I need?</i>	<i>What will my success criteria be?</i>	<i>Target dates completion</i>	
Pass university's exams	Study constantly and prepare using university's courses and additional resources recommended.	University's courses and additional resources recommended for a deep understanding	All exams passed and a total average of 85%.	01.03.2020	

Have a better understanding of "computer world"	Watching short videos (20-30min) from dev talks, conferences etc. about specific topics.	Online resources (Youtube, Stanford university site etc.)	I should be able to explain easily keywords (ex: methodology – agile, waterfall, source code, source versioning etc.) on a high-level understanding.	31.12.2019
Improve skills - being organized	Pay daily attention on structure, name, and content in order to be relevant for the desire target. Review again the work before it is considered done.		I should have a workspace easy to search and understand by a person without knowledge about its content. (Ex: directory structure, practice files to have a self-explanatory name)	17.07.2020
Implement an end-to-end "TODO List" CRUD (create-read-update-delete) web application	Make tutorials in order to learn the concept (C#, SQL Server, HTML, CSS). Create simple proof of concept projects. Implement an application for executing basic operations like add an item into a list, update and delete it and display the list into an html page.	Online resources for tutorials using programming learning platforms (Udemy, Coursera, Pluralsight etc.)	I should be able to implement all the specified functionality of a "TODO List" web application.	17.07.2020

4. Application

4.1. Data backup strategies

Backup represents a process of keeping a copy of the data with the scope of recovery in case of lost, partial or total destroy of the original version.

A basic example of data backup strategy is constantly saving the changes in a word document (it avoid losing the data in case of a system freezing or reboot) and also saving the document with different names (ex: academic_skills_report_v0 or academic_skills_report_01092019 – using a version number or timestamp) when work is in progress for multiple periods of time.

This strategy can be extended and more complex and secure strategies can be applied using:

- Hardware Appliances - this strategy includes the usage of external storage devices like USB Disks or External Hard Disk. It has the advantage to be easily recovered in case of a crash of the system where the data was initially stored.
- Software Solutions - this strategy includes the installation of software solutions that handles the backup process. An example of backup software solution is BackupPC, an open source solution that provides flexibility of performing multiple backups at once and is not using a large disk I/O storage.
- Cloud Solutions - this technique is known as BaaS (backup-as-a-service) provided by vendors (Amazon Web Services). The service provider remotely administrates it.

4.2. Time management and organization

“Time management refers to the way that you organize and plan how long you spend on specific activities. It may seem counter-intuitive to dedicate precious time to learning about time management, instead of using it to get on with your work, but the benefits are enormous: **greater productivity and efficiency** - a better professional reputation, less stress, increased opportunities for advancement, greater opportunities to achieve important life and career goals.

Failing to manage your time effectively can have some very undesirable consequences: missed deadlines, inefficient workflow, poor work quality, a poor professional reputation and a stalled career, higher stress levels.” (Getting Things Done: The Art of Stress-Free Productivity, 2019)

Several aspects can be consider essentials. One of them refers to “deadlines”. As described in “10 Steps to Create Your Professional Development Plan” video, deadlines comes in scene after an identification of tasks/actions that need to be completed and the resources that can be used for it. Deadlines use to organize better the execution plan and it should be realistic even if there will be a slightly difference between the original estimation and the final execution period. Another important aspect is “tracking”, which is in concordance with “revision”. For knowing if the deadline will be meet, a progress tracking is mandatory. For example if the task is to submit in one week, an assessment which contains 6

sections then first step is to estimate the complexity and the effort of each section, the dependency between them to avoid completing a section after another dependent section. Given this scenario, a track of the progress, checking how many sections are completed due to date and identifying in this way possible delays, is recommended.

Improve the time management skills and productivity is not consider an easy duty. It requires a lot of discipline, effort, experience describe through the failure situations, success situations, analyzing and understanding when and why the deadline was not meet, and how changing different actions could have changed the result. I am trying to pay attention on how I am planning the action, how I can assign realistic priorities and deadlines.

5. Conclusion and Evaluation

In order to complete a long-term goal from the professional development plan, I created a Bitbucket profile for tracking the written source code for proof of concept that use HTML and CSS. Additionally I completed a FreeCodeCamp tutorial. These will help me to be able to create an end-to-end web based application.

Bitbucket profile

Repositories	Description	Builds	Last updated
 FreeCodeCamp Anghel Sandra - 2019-08-05			
 HTML Anghel Sandra - 2019-07-22			
 CSS Anghel Sandra - 2019-07-17			

Figure 6 Bitbucket profile

I also watched videos about different topics like computer science (<https://youtu.be/z-OxzIC6pic>, <https://www.ted.com/topics/computers>), “Uncle” Bob Martin videos (<https://youtu.be/ecIWPzGEbFc>), agile methodology (<https://youtu.be/Y92DoljtYTk>), body language (<https://youtu.be/VhNG2Z0VFe4>) and I created a LinkedIn profile.

LinkedIn profile

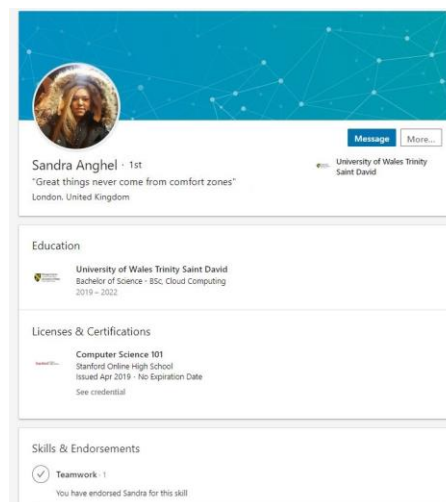


Figure 7 LinkedIn profile

6. References

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7. Appendices

Self-Evaluation Quiz - Section 3.3

ADDRESS [HTTPS://ANDREWWALSH.CO/QUIZ-SOFT-SKILLS/](https://andrewwalsh.co/quiz-soft-skills/)

RESULT – SOFT SKILLS

COMMUNICATION SKILLS	Might Need Improvement
TIME MANAGEMENT	Might Need Improvement
PERSONAL MASTERY	Work required
PROBLEM SOLVING	Might Need Improvement
DECISION MAKING	Work required
LEADERSHIP SKILLS	Work required

ADDRESS [HTTP://WWW.EDUCATIONPLANNER.ORG/STUDENTS/SELF-ASSESSMENTS/LEARNING-STYLE-QUIZ.SHTML](http://www.educationplanner.org/students/self-assessments/learning-styles-quiz.shtml)

RESULT – LEARNING STYLE

AUDITORY	25%
VISUAL	40%
TACTILE	35%

ADDRESS [HTTPS://WWW.OXFORDCOLLEGE.AC/LEARNING-TYPE-QUIZ-2/](https://www.oxfordcollege.ac/learning-type-quiz-2/)

RESULT – LEARNING STYLE

Reflector

Reflectors like to observe from many different perspectives. They collect data, both first hand and from others, and prefer to think about it thoroughly before coming to any conclusion. The thorough collection and analysis of data about experiences is what counts, so they tend to postpone definitive conclusions for as long as possible. They are thoughtful people who would like to consider all possible angles and implications before making a move. They prefer to take a back seat in meetings and discussions. They enjoy observing other people in action. They listen to others and get the drift of the discussion before making their own points. They tend to adopt a low profile and have a slightly distant, tolerant, unruffled air about them. When they act it is part of a large picture which includes the past as well as the present and others' observations as well as their own.

Strengths of a Reflector

- Careful
- Thorough and methodical
- Thoughtful
- Good at listening to others and assimilating information
- Rarely jump to conclusions