CW1 Reflective report

by William Cross

WB401 Investigating Work- Based Learning and Self-Review

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Word Count = 1568

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Introduction

[margin note: Very Good]

This report highlights the business strategy and structure of STFC (Science and Technologies Facilities Council), the key competencies required for the role of apprentice software developer and how it compares to the apprenticeship standard as well as the relevance of apprenticeships in STFC. A reflection will also be conducted on an issue within this organisation that could be improved, in this case it will be the daily stand-up meeting that are conducted within CEDA (Centre for Environmental Data Analysis). The report is split into 3 sections.

Main body

Organisation overview

UKRI (United Kingdom Research and Development) is the organisation directly below the government Department for Science, Innovation and Technology which oversees the country's research. The goal of UKRI is to improve the seven research councils below it (including STFC) to become more attractive to private research. It aims to achieve this by implementing a six-objective strategy:

- Making the UK the top destination for talented people and teams.

- Securing the UK's research position with outstanding institutions, infrastructures, sectors and clusters across the breadth of the country.

- Advancing the frontiers of human knowledge to seize opportunities from emerging research trends.

- Delivering the government's vision for the UK as an innovation nation.

- Focusing the UK's world-class science and innovation to target global and national challenges.

[margin note: Check formatting]

- Make UKRI the most efficient, effective and agile organisation it can be.
(Leyser, O. Mackenzie, A, 2022)).

Part of this strategy is to have talent continue to join the organisation "Apprentices in particular are vital to ensuring a pipeline of incoming talent to the STEM sector and ensures that we have a fit for purpose workforce" (see Appendix 1). The structure of UKRI includes seven research councils including STFC with RAL Space (Rutherford Appleton Laboratory) *[margin note: sp]* under it and CEDA under that, with CEDA being the focus of this report. *[margin note: 2]*
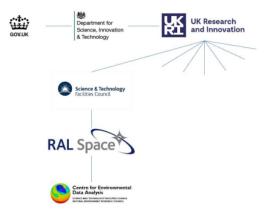
Figure 1: A brief visual representation of the organisation position of CEDA in relation to other entities.

Role and competencies

The role I have in the organisation is titled "Apprentice software developer". When asked about the key competencies required for my role a co-worker who is a software engineer replied with a list of skills "problem solving, programming with python, command line proficiency, git" (see Appendix 2). These are the key skills required for software development which are learnt either before or during the apprenticeship. A few key competencies include communicating with all types of people (technical and non-technical background), the ability to work well in a team and to work well independently and know when to ask for help (Chipperfield, 2023). The apprenticeship standard also has similar required competencies, for example in the Digital and Technology Solutions Professional Level 6 apprenticeship (the one I am doing), the standards are "Reliable, objective and capable of both independent and team working." And "Interacts professionally with people from technical and non-technical backgrounds. Presents data and conclusions in an evidently truthful, concise and appropriate manner." The more specific aspects of this includes creating effective programs, testing and reviewing code and analysing code (Institute for Apprenticeships and Technical Education, 2019).

The relevance of the apprenticeship standard to my role is that it is what I need to be able to complete the jobs I am given, for example I need to be able to talk to other developers in order to get new tasks and information on those tasks so that I can work on them either independently or as a team. Therefore, the standard is essential to my role as without the skills on it I would not be able to do my job. The apprenticeship standard is important to the organisation as training people to work in STEM (Science Technology Engineering and Maths) aligns with their business strategy to support the full range of talent required to grow the UK's talent base and ensure the UK is a magnet for global research and development (UK Research and Innovation (UKRI), 2022).

3

Workplace improvement reflection

An issue I have picked up on while working for CEDA is the daily stand-up meeting we do and how they are organised. They last around fifteen minutes every day from ten o'clock and during that time we give a brief description of what we are going to be doing during the day. This is the same every day except on Tuesdays when that meeting is extended to being thirty minutes and we go into breakout rooms after the first part is over and we share interesting pieces of code we might have. This sounds quite useful until you realise that talking about what you will do today is not very helpful and can only be interesting to some people who know what the others are talking about meaning new starters are completely in the dark. However, for the first few days after someone just joined the team, we would give slightly more detail, but it does not last very long and once people move on to a new project, they will not know what they are talking about again. The meeting being then also does not give very much time to get into the flow of working from when you start, I find that I am working smoothly and then I realise that I have a meeting, this breaks up the momentum of the work and is not very useful. A Software Engineer co-worker along with others also think that something should change regarding the daily stand-up "I think it has a tendency to not be very useful if everyone just shows up and says the bare minimum about what they are working on, as opposed to what their problems/roadblocks have been" (see Appendix 3). This does not happen because the meetings are so frequent that they try to get their part done fast and people tend to talk about their roadblocks either on super-code Tuesday or in a slack chat because its more convenient for them as they can get on with other work while they wait for a response. This daily stand-up closely adheres to the scrum meeting structure (what they did yesterday, what they are doing today and are there and impediments in the way) (Mountain Goat Software, n.d.). However, the team does not stick to this and only gives brief descriptions as the team is quite large so it can take time to complete and as such most people tend to ignore the final point unless it was important, or we would go over the allotted fifteen minutes.

Using the Gibbs reflection model (Gibbs, 1998), I can give a good example of a stand-up that I attended on the 31st of July 2023. (**Description**) It started as a normal stand-up where we each gave a brief description of what we were working on, there were more of us than usual that day so it took longer and then a few people started to discuss an event that was coming up and how they should prepare, the meeting ended up lasting twice as long as it normally does, it ended when those people said they would take the meeting and complete it elsewhere. (**Feelings**) I was feeling a bit impatient because I knew the event was unlikely to affect me and I wanted to get back to work, other people might have felt the same as me (for example, new starters), (**Evaluation**) but others needed to hear it and may have been grateful that they could contribute to the discussions. It was unfortunate that it took a long time for the meeting to be over but for the people involved it was very useful to hear. (**Analysis**) While the discussion with the whole staff was useful as people could contribute if they had something to say however if a person had nothing to say and was not going to be affected by the event then they had to sit there and just listen. (**Conclusion**) This all helping to solve the problem is useful and should be done more often however most of the stand-ups are not helpful to anyone. (**Action plan**) What we should have done is to get the people who would not be affected by the event or did not have anything to share to leave the meeting sooner than it did happen, meaning someone needed to speak up and say that the meeting should disperse.

Instead of having a meeting every day that disrupts the workflow and does not achieve very much, they could be replaced by one larger meeting every Monday or Friday morning that discusses what people were struggling with during the past week and get help by going into breakout rooms to help each other and then spend the rest of the day if necessary to fix your own errors after the meeting concludes. This would remove the many workflow breaks during the week and would significantly improve the usefulness of the meetings. When asked about the changes the same co-worker agreed that having a roadblock meeting every Monday could be a good alternative (see Appendix 4)

Conclusion

In conclusion, the current daily stand-up meetings should be replaced with a larger meeting at the end of the week to highlight what people struggled on and so that colleagues could help them find a solution for them to implement during the day. This would remove the workflow breaks during the week due to the stand-up and would be more useful to staff than the current stand-ups.

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Appendix

Appendix 1 – email from Louisa Chipperfield (Chipperfield, 2023)

Hi Will – this is fairly general. Is that useful to you at all?

Louisa

STFC are key to UK science and technology research and innovation. We require highly trained technical experts to support and enable the variety of work taking place. Apprentices in particular are vital to ensuring a pipeline of incoming talent to the STEM sector and ensures that we have a fit for purpose workforce who are in place to contribute to the challenges that society and industry are working on and passing on vital skills and knowledge from more experienced STEM professionals. Apprentices need to master the relevant technical skills and understanding of their role as well as develop the softer skills and behaviours that allow them to collaborate with those from non-technical areas who are playing their part.

Appendix 2 – slack message from Jack Leland (Leland, 2023):

jack.leland 3:55 PM
problem solving, programming with python, command line
proficiency, git

> I think it has a tendency to not be very useful if everyone
> just shows up and says the bare minimum about what
> they're working on, as opposed to what their
> problems/roadblocks have been

to go but I like the idea of having
a roadblocks meeting on a
Monday

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CW1 Reflective report

| Exclude quotes | Off | Exclude matches | Off |
| Exclude bibliography | Off | | |

CW1 Reflective report

FINAL GRADE

58 /100

GENERAL COMMENTS

I have added inline
feedback on your submission. Look for the blue
speech bubbles which include
additional comments where relevant. You can also
download a marked copy of your
work by using the "Download > Current View"
option (this is what you need to
upload to Aptem).

Overall, a good
effort with some opportunities for improvement as
highlighted by the feedback.

Mark breakdown
below:

Introduction and/or Theoretical Background

26/40 (B)

A description of organizational/theoretical
background with some
demonstration of the strategic relevance of the
apprenticeship standard. Overall
aims & objectives of the report clearly stated.

Critical Application

22/40 (C)

Some theoretical underpinning. Uses a small
range of sources
with some attempt at critical application. Good
attempt at reflection
using Gibbs.

Written Communication

10/20 (C)

- Work demonstrates a good ability to communicate information and ideas in a manner suited to a professional context.

- Appropriate formatting

- Some issues with spelling, grammar, and punctuation

- An attempt at Harvard Referencing with room for some improvement – see inline feedback on your submission.

TOTAL: 58% (C)

💬 Comment 1

Make sure you put the assignment identifier on your cover sheet as well i.e. "CW1"

QM Very Good

QM Check formatting

Check the formatting and submission requirements.
Additional Comment

Double brackets at end is incorrect

Also, missing an "and" between the 2 authors' names

QM sp
Spelling error:

💬 Comment 2

I couldn't see you defining what "CEDA" is in the body of your report (although it is in Figure 1)

💬 Comment 3

This is great that you reached out to a co-worker about this.

Was there anything more formal that outlines your role and its key competencies? e.g., a job spec

QM Good

QM Awk.
Awkward:
The expression or construction is cumbersome or difficult to read. Consider rewriting.

QM Good

QM Format appropriately
Use referencing and formatting tools to suit the context of the task. Review the expectations for this assignment to be sure that the format, citations, and references are properly presented.
Additional Comment

I would simplify this to (UKRI, 2022)

Avoiding using brackets within brackets if you can

QM Write academically
When writing a scientific essay, you must write in a way that is professional and free of emotion. Create a serious, academic style when providing your claim, evidence, and reasoning about this scientific topic.

💬 Comment 4

This sounds rather subjective (based on opinion) rather than objective fact.

QM ¶
New paragraph:
When a paragraph gets too long your reasoning may appear jumbled and confused.

Paragraphs are the steps that allow your reader to make progress through your paper. Without enough steps, the argument becomes difficult to follow. Usually there are subtle shifts of emphasis within a long paragraph that can become a paragraph break. Try to figure out what your paragraph's main point is so that your reader doesn't have to.

Comment 5

Isn't hearing what others are working on each day help them out of "the dark"?

No ","
Unnecessary comma:
Commas have a wide variety of uses: setting off introductory phrases, separating items in lists, separating adjectives, enclosing appositives, and preceding coordinating conjunctions that are used to join two complete thoughts. However, commas should not be used alone to join two complete thoughts or to unnecessarily break apart long sentences. Careful comma usage is necessary to avoid confusing your readers.
Additional Comment

This would ideally be a new sentence

Comment 6

How large? Scrum has things to say about maximum team size.

sp
Spelling error:

Additional Comment

any

Comment 7

An interesting situation. It seems like the potentially beneficial part of the daily standup is removed.

Vague
Unclear:
When making a point in one of your body paragraphs, one of the most common mistakes is to not offer enough details. A paragraph without much detail will seem vague and sketchy. A paper is always strengthened when your claims are as specific as possible, The more detailed evidence you offer, the more reference points your reader will have. Remember that you are communicating your argument to a reader who has only your description to go by. Someone who reads your essay will not automatically know what you mean to express, so you have to supply details, to show the reader what you mean, not just tell him or her.
Additional Comment

How many?

QM **Good reflection**

QM **del**
Delete:

Additional Comment

You started the sentence with "While" so you don't need the "however" here and replace with a comma

QM **Awk.**
Awkward:
The expression or construction is cumbersome or difficult to read. Consider rewriting.

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Comment 8

These don't need to be references if you are including them as screenshot evidence in your appendices.

Comment 9

as above, not needed as references

QM **Consider sources**
Evaluate the credibility, relevance, and range of sources.
Additional Comment

Was there an original policy document that Louisa got this from, for example?

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Comment 10

It would have been beneficial to see the context of these messages i.e. what were these messages in response to?