

“How my personal enterprise competencies can be developed during my degree to facilitate an innovative bioscience career plan”

Introduction

In essence, an entrepreneur (the individual), engages in entrepreneurship (the process) to create an enterprise (the result). This cycle continues as the entrepreneur seeks new opportunities for innovation (the idea) and growth within the enterprise (as illustrated in [Fig 1](#)) ([Damanpour 2017](#); [McKinsey 2022](#); [Prince et al. 2021](#)). However, the relationship between innovation, enterprise, and graduate employability is multifaceted and interconnected because the nexus of innovation, enterprise, and graduate employability creates a positive feedback loop ([Rae 2007](#)). Thus, developing innovation and entrepreneurial thinking results in higher chances of employment and contributes to economic prosperity and societal progress.

Thus, EntreComp is a flexible framework created by the [European Commission in 2019](#), aims to elucidate the concept of an entrepreneurial mindset. It offers individuals a detailed understanding of the knowledge, skills, and attitudes necessary for entrepreneurship, enabling them to generate financial, cultural, or social value for others. The framework's structure and analysis are delineated in [Table 1](#) and [Table 2](#).

Purpose of EntreComp:

- Defines entrepreneurship as a transversal competence. It goes beyond mere business ventures and encompasses the ability to act upon opportunities and ideas ([Bacigalupo et al. 2016](#); [Bouronikos 2023](#); [Morselli, Gorenc 2022](#)).
- Identifies the elements that make someone entrepreneurial, it provides clear guidance for personal development.
- Can used as a roadmap to recognize strengths and areas for improvement.

Aims of this report:	
•	To investigate how my EntreComp competencies can contribute to global value (“innovation”)
•	To investigate how my competencies can be used to develop my employability postgraduation

Table 1. Shows the structure of the Entrepreneurship Competence Framework “EntreComp”

Structure of the EntreComp Framework			
Aspect	Description	Example	References
Ideas and Opportunities	Focuses on recognizing and seizing entrepreneurial opportunities	involving creativity, problem-solving, and the ability to identify potential value.	(Bacigalupo et al. 2016 ; McCallum et al. 2018 ; Publications Office of the European Union 2017)
Resources	Mobilises resources to create value (financial, social, or cultural)	both tangible (e.g., funding, materials, and technology) and intangible (e.g., networks and partnerships).	(Bacigalupo et al. 2016 ; McCallum et al. 2018 ; Publications Office of the European Union 2017)
Into Action	Encourages practical implementation of entrepreneurial ideas.	Taking risks, maintaining resilience, and having the capacity to execute well-defined plans.	(Bacigalupo et al. 2016 ; McCallum et al. 2018 ; Publications Office of the European Union 2017)

Table 2. Analyses how the Entrecomp framework utilises the Entrecomp progression model to nurture an individual's entrepreneurship skills pathway

In the Entrecomp progression model, each competence thread is associated with learning outcomes mapped across eight progression levels. Therefore, at the foundation level, learners should gradually reduce external support. Then progress through intermediate, advanced, and expert levels, where autonomous work is encouraged to transform ideas into action with growing influence. Adapted from ([European Commission et al. 2019](#); [McCallum et al. 2018](#)).

Entrecomp progression model			
8 Progression levels map 4 stages of development:			
FOUNDATION- Being dependent on others	INTERMEDIATE- Being independent	ADVANCED- Taking accountability	EXPERT- Pushing transformation, innovation, and growth
Level 1. Discover	Level 3. Experiment	Level 5. Improve	Level 7. Expand
Needing direct supervision from mentors, peers, parents, etc.	Relying on yourself and together with peers.	Having some guidance and together with others.	Being responsible for contributing to complicated developments in a particular field.
At Level 1, individuals explore their unique attributes, tap into their untapped potential, delve into areas of interest, and pursue personal aspirations. Additionally, they identify diverse challenges and unmet needs that can be addressed through creative solutions, all while nurturing the growth of their abilities and mindsets.	At level 3 the primary focus is on using critical thinking and experimenting to create value, for instance, through practical entrepreneurial experiences.	At Level 5, individuals enhance their skills to translate ideas into action, assume greater responsibility for value creation, and acquire knowledge related to entrepreneurship.	At Level 7, individuals develop the competencies required to handle challenging situations and effectively manage dynamic environments characterized by high uncertainty.
Level 2. Explore	Level 4. Dare	Level 6. Reinforce	Level 8. Transform
Maintained autonomy with limited support.	Taking and sharing certain duties with their peers.	Taking responsibility for responsibility for their actions and working with others.	Contributing significantly to the advancement of a particular field.
At level 2, individuals are more inclined to focus on exploring different approaches to problems, concentrating on diversity, and developing social skills and attitudes.	Level 4 focuses on the implementation of these creative ideas into real-life situations by taking responsibility for their actions.	At level 6, individuals concentrate on working with others, using their knowledge to generate value for others and dealing with challenges.	At level 8 the focus is on emerging challenges in different scenarios by fostering new knowledge, through research, repertoire, change, and innovation capabilities to achieve results and transformation.
What is the purpose of the EntreComp progression model?			
The progression model depicts how learning outcomes are connected to a learner's growing autonomy, and it underscores that true proficiency arises from the learner's ability to handle increasingly complex challenges by outlining the stages or levels of development in a particular area.			

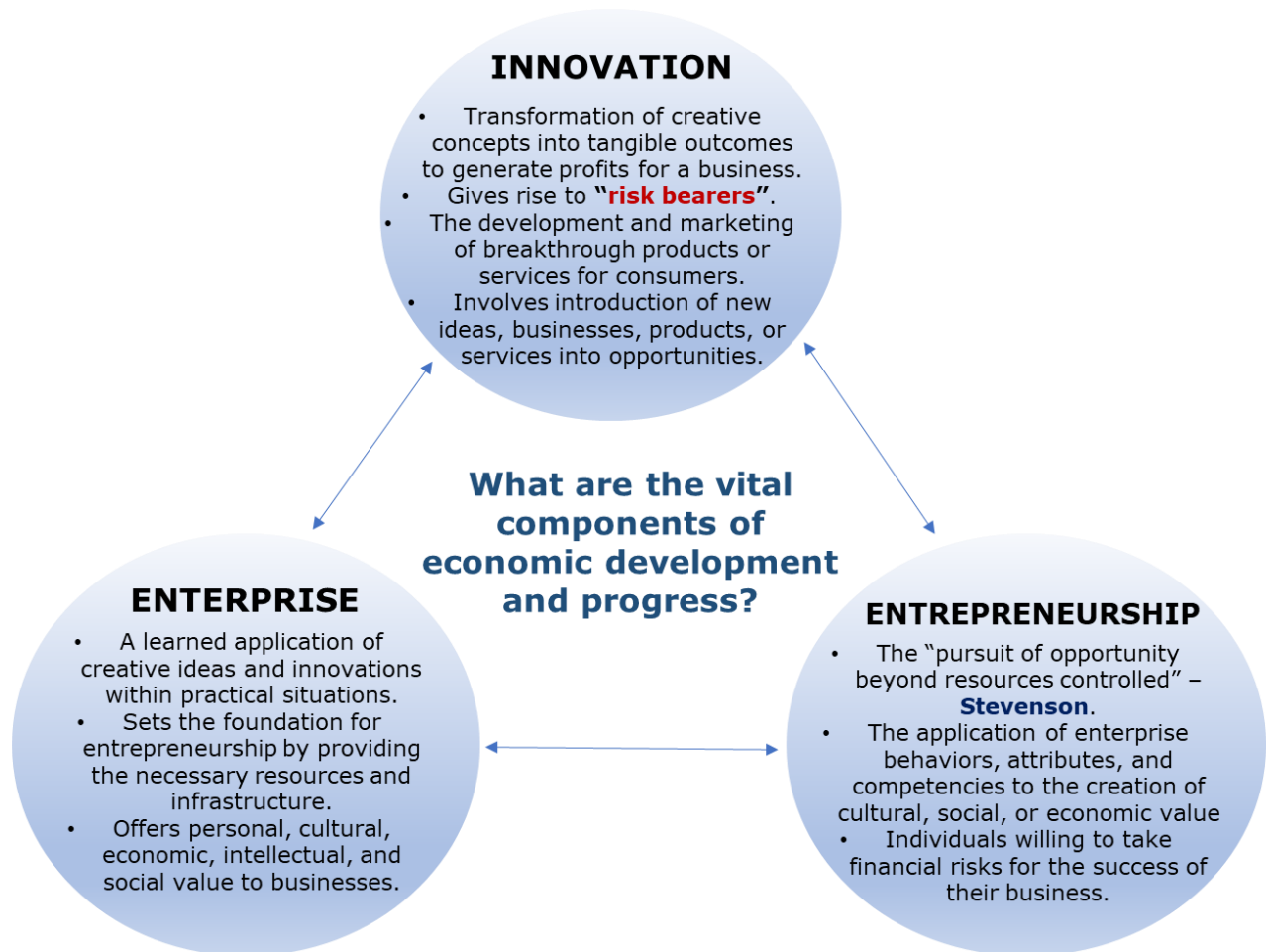


Fig 1- Shows the definitions of innovation, enterprise, and entrepreneurship and their associated examples. Adapted from ([Damanpour 2017](#); [Johnson 2001](#); [McKinsey 2022](#); [Prince et al., 2021](#); [Stanley 2022](#)).

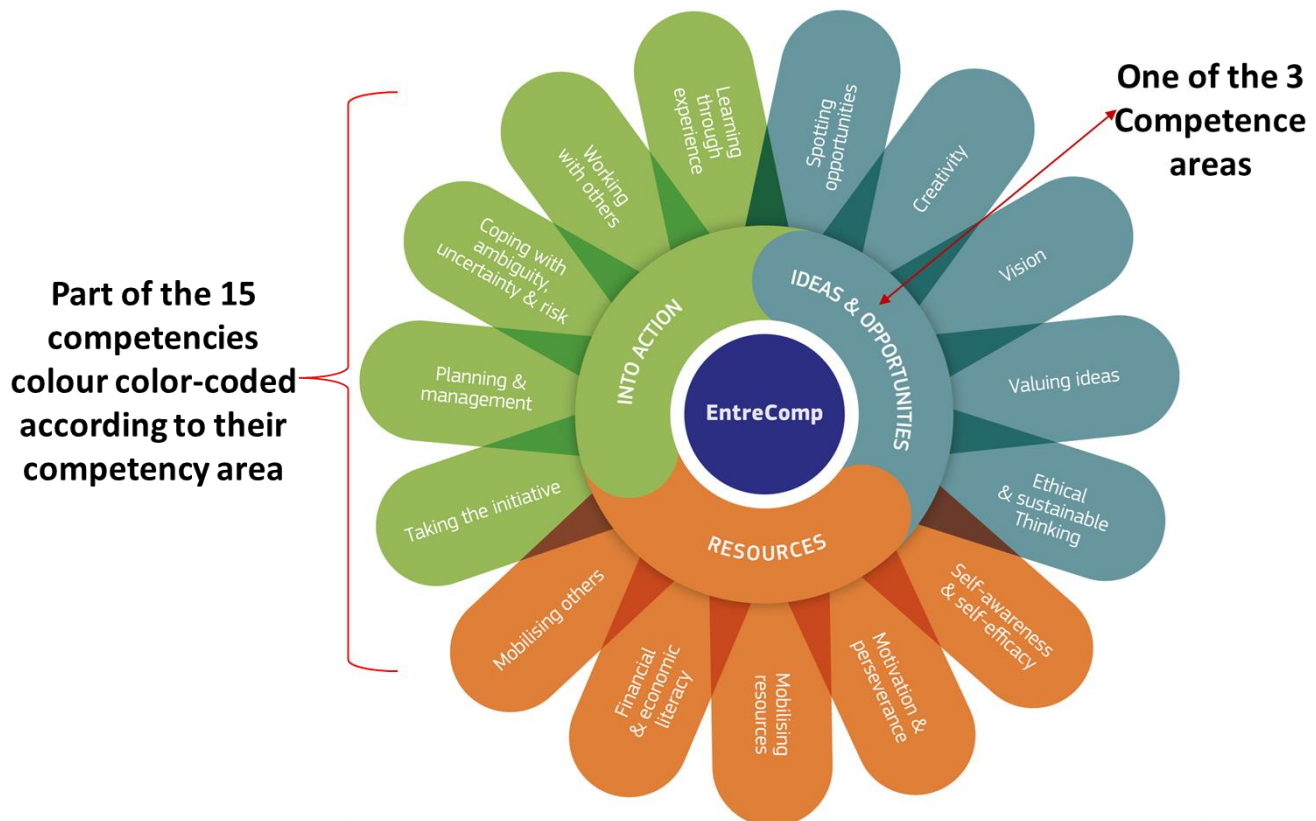


Fig 2- The 15 competencies in the Entrecomp wheel derived from the 3 competence areas. The EntreComp wheel provides an overview of a variety of distinct yet interrelated competencies. These competencies encourage the development of entrepreneurial skills and positive attitudes that can be utilized as a framework while creating a new activity or as a model for adaptation in learning, and projects or to aid in graduate employability. Adapted from ([Publications Office of the European Union 2017](#)).



Fig 3- Demonstrates all 17 UN Sustainable Development Goals (SDGs). Thus, The UN 2030 Agenda Created a Framework for Solving Important Local and Global Problems which resulted in the development of these 17 goals—adapted from [United Nations 2023](#).

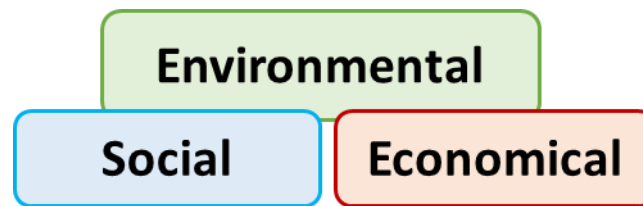


Fig 4. The UN 2030 agenda relies on the 3 Dimensions of Sustainable Development. For sustainable development to be achieved, it is essential to harmonize three core elements: economic growth, social inclusion, and environmental protection. Adapted from ([United Nations 2023](#)).

Discuss how bioscience graduate enterprise competencies could contribute to global value creation relating to the UN 2030 Agenda

The United Nations (UN) has strategically emphasized opportunities for global value creation through the UN 2030 Agenda for Sustainable Development by addressing global challenges such as zero hunger, gender inequality, and climate change, the UN fosters stability, resilience, and prosperity for all nations, ultimately striving for peace without war ([Fig 3](#)) (United Nations 2023).

Table 3. Shows an analysis of how bio scientists are creating solutions relevant to the UN Sustainable Development Goals (SDGs)

Below is a list of companies that demonstrate how their mission in society is relevant to the SDGs including their industry type.

Company name	Aims & Objectives	Industry Type	References
Colorifix: Founded in Norwich, Norfolk, United Kingdom	Their objective is to transform industrial dyeing into a sustainable(eco-friendly) source through holistic sustainability to protect the lives of others.	Industrial Biotechnology	(Colorifix Ltd. 2016)
BioNTech: Developed by scientists from the University of Mainz	Committed to enforcing good health & well-being worldwide by developing mRNA-based cancer immunotherapies/vaccines to fight all types of diseases, including cancer by mobilizing the immune system.	Medical Biotechnology	(BioNTech 1997)
Graphcore: spinout from the University of Bristol	Developed accelerators for AI and machine learning, particularly the Intelligence Processing Unit (IPU) technology to advance AI technology to improve the quality of life.	Medical Technology Industry, specifically digital health/ medical devices	(Graphcore Ltd 2016)

Table 4. Classifies each of the three companies in [Table 3](#) into their association to which UN SDG and UN 2030 Agenda Value Dimension

Table 4 outlines which UN SDGs and the 3 Dimensions of Sustainable Development Colorifix, BioNTech, and Graphcore are associated with based on their mission, using [Fig 3](#).

Company name	UN SDG	UN 2030 Agenda Dimension Value
Colorifix	SDG 3, SDG 8, SDG 9, SDG 11, SDG 12, SDG 16	Economic, environmental, and social
BioNTech	SDG 3, SDG 8, SDG 9, SDG 13, SDG 17	Economic, Environmental
Graphcore	SDG 3, SDG 7, SDG 9, SDG 17	Social, economic, and environment

Table 5. Shows separate lists of bioscience career roles that link to my chosen core values, and how these two factors are associated with one SDG value (each column is colour-coded to represent a separate category unrelated to the rest)

Table 5 connects my graduate role with core values and one type of 17 SDG values in [Fig 3](#). My choice is shown in [Fig 5](#).

Specific bioscience role	My core values	SDGs that resonate with me
Biological Forensic Scientist	Strong oral & written communication skills	Good health & Wellbeing
Biomedical scientist	Adaptability	Decent Work & Economic Growth
Clinical scientist, immunology	problem-solving skills/intuitive thinking	Partnerships for the Goals
Microbiologist	leadership qualities	Industry, Innovation, and Infrastructure

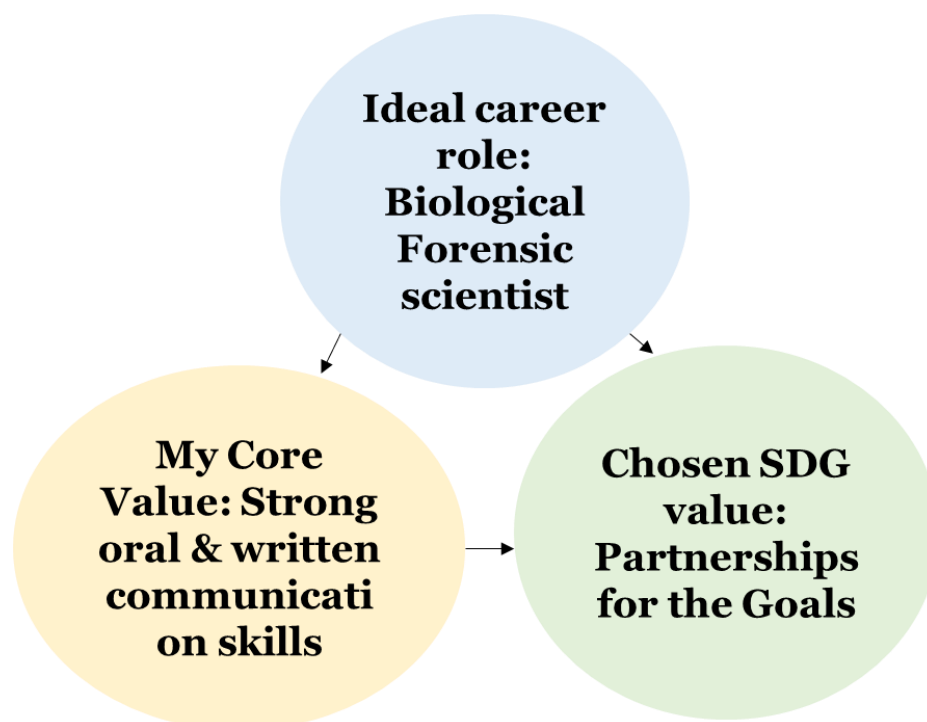


Fig 5. Shows a link between my chosen career, my core value, and an associated SDG that supports both factors.

Table 6. Shows the three EntreComp competencies that stand out as particularly important when pursuing a bioscience career role as a recent graduate student

[Table 5](#) presents a subjective view of the top three EntreComp competencies needed for a bioscience role, with examples of their applications. Table 6 explains why these competencies are essential in the job adverts shown in [Fig 6A](#), [Fig 6B](#), and [Fig 6C](#).

EntreComp competencies	Link to Bioscience position and why it's important
Self-awareness and Self-efficacy (Fig 6A)- Promoting introspection on goals & aspirations in both long/short terms by identifying strengths/weaknesses through cultivation methods (e.g., journaling or practicing mindfulness techniques). Also, holding a firm belief in oneself after temporary setbacks/ failures (McCallum et al. 2018).	Self-efficacy refers to believing that you can influence the course of events, despite uncertainty, setbacks, and failure. This is crucial in a research environment where experiments often involve trial and error, and the ability to persevere through challenges is key. In essence, self-efficacy is “ doing ” whereas, self-awareness is “ seeing ”.
Planning and Management (Fig 6B)- Involves breaking down goals, priorities, and action plans into manageable tasks using innovative methods to achieve them, and to adapt to changing environments (McCallum et al. 2018).	This competency involves an ability to adapt plans/ strategies to unexpected challenges or changes in direction, allocation of resources whereby keen attention to detail is required to avoid mistakes, and effective time management & organisation where multiple tasks and deadlines need to be juggled simultaneously (European Commission 2016; London 2024; McCallum et al. 2018).
Taking the Initiative (Fig 6C)- Initiating process that produces value through either taking risks due to greater rewards, being proactive & persistent, or driving change rather than reacting to it (McCallum et al. 2018).	This competency demonstrates strong leadership, influence, and accountability in achieving successful results. Through proactive problem-solving whereby taking the initiative to identify opportunities/challenges and ways to solve them. Seeking out learning opportunities and continuously improving your skills and knowledge by networking and evolving (hcpc health and care professions Council 2023; Psychology 2023).

A.

University of Cambridge

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University of Cambridge

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Research Assistant (Fixed Term)

Salary:
£29,605 to £33,966

Contract:
Fixed Term until 30 September 2024

Location:
Cambridge

Department:
Genetics

Responsible to:
Professor Richard Durbin

Working Pattern:
Full time, or 80% of full time (4 days per week)

Applications are invited for an experienced Research Assistant, to start as soon as possible on a fixed term basis until 30 September 2024. The role holder will be working in the group of Professor Richard Durbin in the Department of Genetics on studies into genetic diversity and species boundaries.

The successful applicant will be supporting research on Malawi cichlid and Yponomeuta moth projects by carrying out DNA and RNA extractions and making libraries for Illumina sequencing. They will also work on the generation of genome assemblies for representative individuals using long read sequencing, therefore experience of extracting good quality high molecular weight DNA is essential. Additionally, the role holder will support the development of protocols for new species, adding to established protocols for nanopore sequencing. There will also be the opportunity to work on a second project, supporting the development of a robust protocol for aquatic environmental DNA sample analysis, and transfer of this to collaborators in Malawi.

The responsibilities of the role include:

- high-throughput DNA and RNA extractions and library preparation for Illumina sequencing
- high molecular weight DNA extraction, library preparation and sequencing using ONT devices.
- Metabarcoding work: reference library creation for Malawi non-cichlid fish species, eDNA extraction, eDNA library preparation.
- Data and sample management for genetics work
- Assist with teaching/workshops to share protocols with collaborators.
- Contribute to the provision of datasets, preparation of reports and outreach material.
- Design and execute laboratory experiments in a reliable and timely manner under the supervision of senior research staff.
- Provide detailed descriptions of experiments and support with the analysis of data and suggesting next steps.
- Identify technical issues as they occur and troubleshoot.

This position can be offered on a full-time basis, or for 80% of full time (4 days per week).

For informal enquiries about the role please contact Professor Richard Durbin rd109@cam.ac.uk or Bettina Fischer bef22@cam.ac.uk

The closing date for applications is midnight on Wednesday 13th March and we will be looking to interview as quickly as possible after this date.

Person Specification

Criteria	Essential	Desirable
Education/Qualifications		
Educated to first degree level in a relevant biological subject.	✓	
Experience		
Practical laboratory experience in molecular genetics including genomic DNA extractions and library making for sequencing, with demonstrated ability to trouble shoot issues as they arise	✓	
Experience in the design, development and optimisation of molecular biological techniques using difficult or non-traditional sample types, specifically with at least one of insect or fish tissue material.		✓
Experience with high-throughput DNA sequencing (NGS)		✓
Knowledge and Skills		
Knowledge of process improvement and experimental design, including QA/QC pertaining to molecular biology	✓	
Excellent communication skills (written and oral)	✓	
Strong organisational skills, with demonstrable success in working to deadlines and with numerous priorities.	✓	
Ability to work effectively both independently, without supervision, and as part of a dynamic, multi-disciplinary team.	✓	
Be a self-directed, forward and creative thinker with a proactive and 'can-do' attitude.		✓

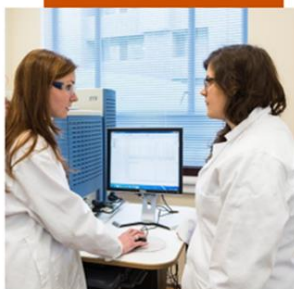


Fig 6A. Shows a screenshot of a Job advert with the position of a Research Assistant (Fixed Term) for the University of Cambridge, working within the Department of Genetics. Adapted from (University of Cambridge 2024). The text surrounded by a red box indicates the specific skill required by the job role that corresponds to one of my chosen EntreComp competencies displayed in Table 6 (self-awareness and self-efficacy).

B.

Job description

We are seeking a highly motivated Research Assistant (RA) to join a Wellcome Early Career Award-funded project focusing on RNA dysregulation in autism spectrum disorders (ASD). The work will be performed in Dr. Laura Andrae's lab under the guidance of Dr. Flora Lee at the Centre of Developmental Neurobiology, King's College London. The Centre for Developmental Neurobiology and MRC Centre for Neurodevelopmental Disorders are world-leading centres in the field of developmental neuroscience and brain disorders, situated in central London.

The post holder will support experimental work towards advancing our understanding of disturbed synaptic RNA localization and local translation in neuronal models of ASD risk gene haploinsufficiency. Key responsibilities including:

- Conducting experimental work to identify mechanisms underlying synaptic RNA abnormalities.
- Performing primary neuronal cultures, immunolabeling, and confocal imaging of synapse phenotypes.
- Contribute to transcriptomic sequencing analyses to decipher regulatory signatures and molecular pathways.

Candidates should have a degree in biological sciences or similar and previous work experience in a research laboratory. Interest in interdisciplinary research across RNA biology and neurobiology, clear oral and written communication skills, desire to learn new techniques, good time-management and accurate record keeping in a dynamic environment are essential. Knowledge of basic molecular biology is essential. Experience in mouse primary neuronal cell culture is desirable. Prior experience in omics analysis, sequencing and/or RNA-protein biochemistry is desirable.

This post will be offered on a full-time, fixed term contract for 12 months.

Skills, knowledge, and experience

Essential criteria

1. A degree in biological sciences or a related field.
2. Previous experience working in a research laboratory.
3. Strong interest in interdisciplinary research across neurobiology and RNA biology.
4. Excellent oral and written communication skills.
5. Eagerness to learn new techniques.
6. Ability to work in a dynamic and collaborative environment with excellent time-management and organization.
7. Accurate record-keeping and attention to detail.
8. Knowledge of basic molecular biology

Desirable criteria

1. Experience with cell culture, in particular mouse primary neuronal cultures.
2. Experience with Illumina and long-read sequencing or omics analysis.
3. Experience with protein/RNA biochemistry.
4. Experience with quantitative statistical analysis of large datasets.
5. Experience with confocal imaging or similar and use of imaging analysis software.

Fig 6B. Shows a screenshot of a Job advert with the position of a Research Assistant at the Centre for Developmental Neurobiology at Kings College London. Adapted from ([London 2024](#)). The red box that surrounds a specific text in the advert indicates a specific skill in the job advert that is essentially for that job. This skill corresponds to one of my chosen EntreComp competencies displayed in [Table 6](#) (Planning and Management).

C.

Trainee Clinical Scientist (Band 6)

Recruitment Profile - This is a summary of the Job Description and Person Specification



Blood and Transplant

<p>About the Role</p> <p>In this role you will be:</p> <ul style="list-style-type: none"> Undertaking a formal training programme to achieve registration with the Health Professions Council as a Clinical Scientist in a specialised field relevant to Transplantation/Transfusion. Working under the guidance of a Consultant Clinical Scientist and/or other HPC registered scientific staff. Performing a wide range of increasingly advanced healthcare science clinical, technical, and scientific activities as training progresses. Participating in the interpretation and validation of test results of the department to achieve independent practitioner status. Participating in the provision of services to support matching patients and donors for transplantation and specialised transfusions. <p>You will be required to train and work on a rotational basis in all areas of the department.</p> <p>You will be required to provide cover during operational emergencies.</p>	<p>Organisation Structure</p> <pre> graph TD HD[Head of Department] --> DHD[Deputy Head of Department] HD --> LO[Laboratory Operations] DHD --> SH[Section Head] SH --> CST[Clinical Scientist-Trainee] </pre>
<p>About Us</p> <p>Our three core principles are critical to our service, guiding everything we do and inspiring us to be the best.</p> <ul style="list-style-type: none"> We care about our donors, their families, the patients we serve, and our people. We are expert at meeting the needs of those who use our service and those who operate it. We provide quality products, services and experiences for donors, patients and colleagues. 	
<p>About You - This section details the personal attributes we require for this role. You will need to demonstrate these throughout the recruitment process</p>	
<p>Behaviours and Values</p> <ul style="list-style-type: none"> Communicating – Friendly and approachable, able to relate to staff, donors and patients from all backgrounds, promoting NHSBT positively. Collaborating – Know the importance of your own behaviour and body language when communicating and working with others. Leading – Professional in matters of confidentiality, security, integrity, honesty, performance, attendance, and appearance Customer focused – Demonstrate and promote high standards of quality customer care to both internal and external customers. Performing – Able to use and act on feedback from others on your performance and behaviour to increase your own self-awareness. Innovating – Consider, suggest and be open to alternative ways of working to make continuous improvements 	<p>Skills and Abilities</p> <ul style="list-style-type: none"> Good time management skills with proven ability to prioritise conflicting demands, working to tight deadlines and pressures. Ability to foster good working relationships with work colleagues at all levels and external service users. Ability to impart your specialist knowledge to peers, trainees, and visitors in a constructive and meaningful way. Ability to identify, resolve and refer on day to day laboratory issues. Demonstrate strong leadership, influence, and accountability for achievement of results. Recognise when change is required and demonstrates personal ownership for pursuing, communicating, and implementing change, whilst minimising impact on others
<p>Experience and Knowledge</p> <ul style="list-style-type: none"> Broad knowledge of a relevant biological science. Experience of working in a laboratory environment. Evidence of involvement in Research and Development Projects. Experience of working with information technology using Microsoft Office packages (Outlook, Word, Excel, Teams and PowerPoint). 	<p>Qualifications and Training</p> <ul style="list-style-type: none"> BSc in Biological Sciences or relevant equivalent experience. Demonstrates commitment to own continued professional development (CPD). Undertaking a recognised post graduate training programme in H&I e.g. BSHI Diploma and close to obtaining HCPC registration as a Clinical Scientist (e.g. in final year of STP course, working towards ACS portfolio or other route

Fig 6C. Shows a screenshot of a Job advert with the position of Trainee Clinical Scientist (Band 6) within the NHS H&I tooting department. Adapted from (NHS Blood and Transplant 2024). The red box that surrounds a specific text in the advert indicates a specific skill in the job advert that is essentially for that job. This skill corresponds to one of my chosen EntreComp competencies displayed in Table 6 (Taking the Initiative).

Evaluation of My Current Enterprise Competency Levels using a Professional management plan to develop them

Based on the EntreComp self-assessment quiz, I am proficient in spotting opportunities and have a clear vision of the ideas and opportunities competence area (refer to [Table 2](#)). My level according to the quiz suggests I'm at the advanced level of competency, as shown in Table 7.

Table 7. Evaluation of my two personal EntreComp competencies

EntreComp Enterprise Competency	Competency level	Evidence using "STAR"
Spotting Opportunities- "I'm able to use my own knowledge and understanding of the situation to devise innovative strategies or contribute positively".	Advanced	<p>SITUATION: At 18-20 years old, while working at Greggs, I struggled to learn pastry names and appearances during my probation. Due to staff shortages, I received minimal training and had to serve customers without knowing the pastries. This led to numerous mistakes and nervousness, resulting in frequent reprimands and daily tears after shifts.</p> <p>TASK: I had to serve customers according to the name of the pastry, or hot drink, or introduce meal deals based on the products of their choice.</p> <p>ACTION: I began sketching pastries with their ingredients and names in a small notebook, and frequently tested myself using flashcards and short quizzes so that I could learn on the job. All of which were carried out during the second year of my undergraduate degree.</p> <p>RESULT: I mastered the pastries, hot drinks, and meal deals, exceeding my targets with joy.</p>
Vision- "I can identify the main changes needed to achieve my vision by creating detailed roadmaps including anticipated challenges based on my vision for creating value".	Advanced/ Expert	<p>SITUATION: After graduating with a BSc in Biomedical Science, I found myself unsure of my direction, how to reach my goals, and which career role to pursue, leading to a halt in my progress causing a rush of negative emotions.</p> <p>TASK: With only a few months left until September, I was anxious about deciding my next steps and destination.</p> <p>ACTION: Thus, I consulted a university career advisor, who guided me to relevant job sites with various opportunities related to my degree and grade including their requirements for the job roles, salaries, and pathways. Then I created vision boards highlighting the priorities, and challenges I would encounter, and a solution to dissolve them.</p> <p>RESULT: I formulated several ideas and backup plans for my desired field, noted them in a notebook, and sought advice from peers, family, and tutors. This process guided me to pursue a master's degree in molecular microbiology.</p>

Therefore, in [Table 7](#), being at an advanced level in the EntreComp progression model can significantly enhance your employability as a research assistant within the Department of Genetics ([Fig 6A](#)). As the research is also at an advanced level, this suggests I can develop the responsibility to transform my ideas into actions while conforming to the requirements of the job. Table 8 below will give me an idea of how I can increase my competencies after graduation using a project management plan ([Bacigalupo et al. 2016](#); [London 2024](#); [Rae 2007](#)).

Table 8. My Project Management plan aims to increase my Self-awareness and Self-efficacy competence before graduation using SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals represented in a Gantt chart

This year, my objective is to enhance my proficiency in the EntreComp competency “Spotting Opportunities” so that I can identify and seize opportunities in an environment to create value and prepare for employment.

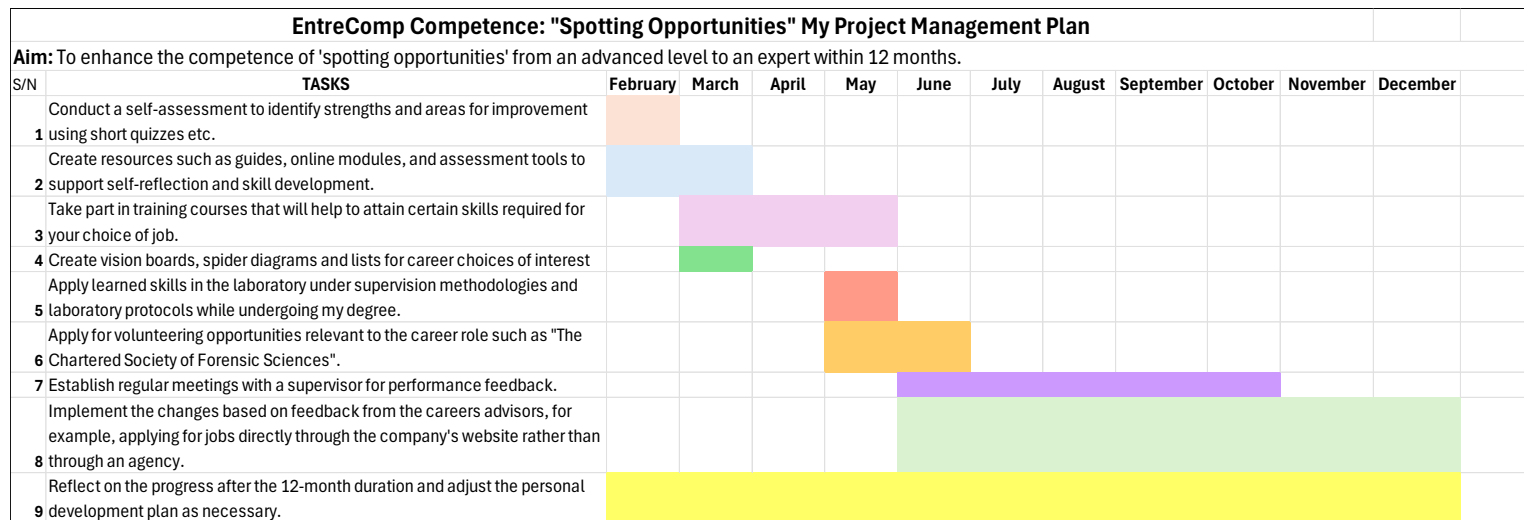


Fig 7. My project management plan used to track my progress using a Gantt chart.

Reflection

Fig 8 reflects what I've learned from this case study, my improvements for the future, and which of my enterprise competency skills can be utilized to advance my career prospects.

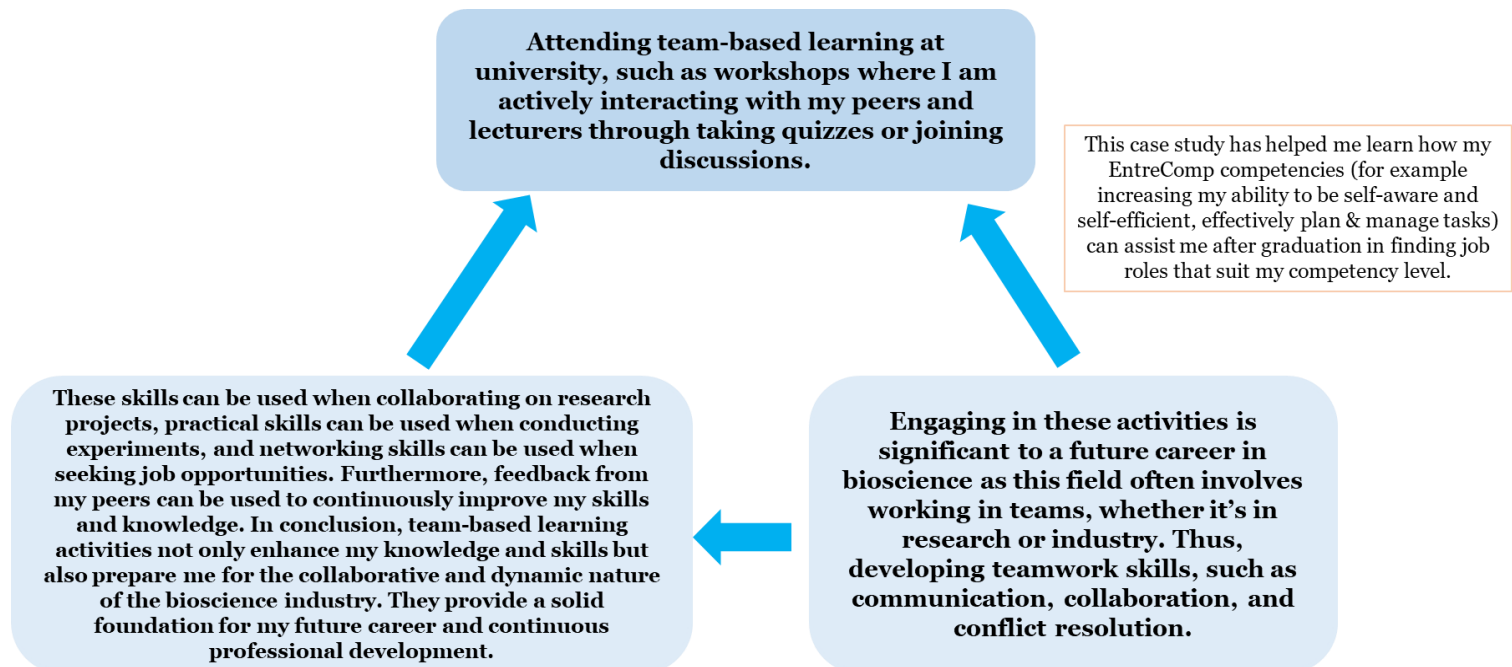


Fig 8. Reflection graph using Driscoll's Model of Reflection. Adapted from ([Nursing Answers 2018](#)).

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NTU Student No.:		Submission Date		Grade Date:	
Module Code:	BIOL40022	Module Name:	Business and Enterprise	Module Leader:	Dr Jody Winter
Assessment Type and Title:	Case Study - Assignment 1 – 30%	Assessor:			
		Assessor Grade:			
Learning Outcomes Assessed:	<p>Knowledge</p> <p>K1. Describe entrepreneurship and explain the essential ingredients required for a business start-up</p> <p>K2. Explain the concept of innovation and be able to evaluate and select ideas with commercial potential</p> <p>Skills</p> <p>S2. Analyse, evaluate and interpret data</p> <p>S3. Make ethical and sustainable judgements</p>	<p>Feedback Comments:</p> <p>(strengths and areas for improvement with respect to the learning outcomes)</p>			

Criterion	Exceptional Distinction	Distinction HIGH/MID/LOW	Commendation HIGH/MID/LOW	PASS HIGH/MID/LOW	Marginal Fail	FAIL MID/LOW	ZERO
1: An introduction to the case study using credible reference sources to justify your statements (25%)							
DEFINE: the terms “enterprise”, “entrepreneurship” and “innovation” to show your understanding of the module learning	Terms defined with reference to the most recent and comprehensive sources in the field	Additionally include independently found definitions and/ or citations	Additionally, citations included for each definition	Quoted or paraphrased module definitions for all three terms are included to demonstrate your knowledge	Three definitions are attempted but only vaguely relate to Required Module Materials.	Definitions are included but do not demonstrate knowledge of the module learning	No information relevant to assessment brief is included
ANALYSE the link between enterprise, innovation and graduate employability (explain career context)	Link is critically evaluated using the most recent and comprehensive sources in the field	A convincing link is made between all three elements using at least two relevant, recent sources	A convincing link is made between all three elements using at least one relevant reference source	A link is made between all three elements with basic explanations	A link is stated, between at least two elements but reasoning is vague	One or more links may be stated but no appropriate explanation is given	No information relevant to assessment brief is included
SUMMARISE the purpose and structure of the Entrecomp Framework	Additional resources or insights are used to accurately link the purpose and structure of the framework to the current case study	Additionally, the range of competencies is illustrated and related accurately to the remaining text	A convincing explanation of the framework and its purpose is provided, using at least one relevant source.	A basic explanation of the framework and its purpose is provided,	Basic explanation of only one of Framework purpose or structure is provided	Explanation of one of Framework purpose or structure is provided but it is inaccurate or insufficient	No information relevant to assessment brief is included
ANALYSE how the Entrecomp Framework can be used as a method to assess enterprise competencies	Additionally, critical analysis of assessment methods and/ or additional, relevant references are provided	Additionally, includes an example of each competency level & describes quantitative/ qualitative aspects of the assessment	Competency levels are defined, and an assessment method is described	Basic description of competency levels and their application is included	Competency levels or an assessment method are mentioned but description is inadequate	Competency levels or an assessment method are mentioned but not explained	No information relevant to assessment brief is included
CREATE the aim(s) of your case study	2-3 aims are concisely articulated that fully relate to the remaining text	2-3 aims are concisely and precisely articulated using brief reference to approaches used to achieve them	One aim is concisely and precisely articulated using brief reference to an approach used to achieve it	One brief aim or area of focus is included to inform a reader in a bioscience profession the	Some attempt is made to articulate an aim but it relates poorly to the title and remaining text	An aim is provided but it is not relevant to the title and remaining text	No information relevant to assessment brief is included

				emphasis of your remaining text			
Criterion	Exceptional Distinction	Distinction HIGH/MID/LOW	Commendation HIGH/MID/LOW	PASS HIGH/MID/LOW	Marginal Fail	FAIL MID/LOW	ZERO
2: Discuss how bioscience graduate enterprise competencies could contribute to global value creation (i.e. innovation) relating to the UN 2030 Agenda (25%)							
EXPLAIN: how the UN has focussed opportunities for global value creation through the UN 2030 Agenda	Additionally, critical evaluation is used to develop explanations	Additionally includes an expanded explanation	Additionally includes at least 1-2 relevant citations	UN, the 2030 Agenda and the UN SDGs are introduced with a basic explanation of relevance to value creation	Agenda or SDGs are mentioned but in limited detail and relationship with focussing value creation is vague	Insufficient knowledge of the UN Agenda is evidenced and /or there is no relationship to value creation	No information relevant to assessment brief is included
ANALYSE: how bioscientists are creating solutions relevant to the UN s (SDGs)	Additionally, links are made using additional, independently found resources, and independently considered reasoning	Additionally, link is illustrated by a framework used in the module additional resources	Additionally, link is illustrated by a framework used in the module essential learning together with some reasoning	A link is made between achieving the UNSDGs and specified bioscientist enterprise competencies together with some basic reasoning	A link is stated, between limited competencies and the SDGs but this may be poorly defined, or reasoning is vague	One or more competencies may be mentioned but there may be no link with the SDGs or no appropriate explanation is give	No information relevant to assessment brief is included
CLASSIFY: each of three recent Bioscience innovation into their association with at least one UN SDG and 2030 Agenda Value Dimension	Additionally, information is professionally formatted in a table or diagram	Three recent bioscience innovation examples are provided with appropriate SDG and Agenda Dimensions using primary paper sources	Three appropriately cited and recent bioscience innovation examples are provided with appropriate SDG and Agenda Dimensions	Three bioscience innovation examples are provided with appropriate SDG and Agenda Dimensions	One of: identification of 3 recent innovations, a related SDG or a related Agenda Dimension is missing	Two of: identification of 3 recent innovations, a related SDG, or a related Agenda Dimension is missing	No information relevant to assessment brief is included
CREATE: a link between one or more of your personal values, one UN SDG and a specific bioscience career role	Additionally, critical reasoning connects to connect your stated values to the SDG and career, using relevant citations	Additionally, convincing reasoning connects your stated values to the SDG and career	Additionally, appropriate reasoning connects your stated values to the SDG or chosen career	1-2 of your personal values are identified and aligned to one SDG and a relevant career	A link is stated, between at least two elements but reasoning is vague	One or more links may be stated but no appropriate explanation is given	No information relevant to assessment brief is included

EVALUATE: which three Entrecomp Competencies you consider to be most important to begin your chosen bioscience career role post-graduation	An insightful case is made for prioritising 3 competencies through exceptional independent research on the specific career role	3 well-justified Entrecomp competencies are described with reference to the to Entrecomp Framework using relevant citations	3 Entrecomp competencies are mentioned with convincing relation to a chosen career	2-3 Entrecomp competencies are mentioned & attempt is made to relate them to a chosen career-although the rationale for each may be absent	2-3 enterprise competencies are mentioned but they are either not part of the Entrecomp Framework or poorly related to a career role	1 enterprise competency is mentioned but it is either not part of the Entrecomp Framework or the relation to a chosen career is not made/convincing	No information relevant to assessment brief is included
Criterion	Exceptional Distinction	Distinction HIGH/MID/LOW	Commendation HIGH/MID/LOW	PASS HIGH/MID/LOW	Marginal Fail	FAIL MID/LOW	ZERO
3. A Self-Evaluation of Your Current Enterprise Competency Levels and a Professional Plan to Develop Them							
EVALUATE: your current levels in two Entrecomp competencies via the Module Quiz	Additionally, STAR technique is used to create convincing and comprehensive analysis	Additionally, independently found definitions or explanations, and citations are included.	Additionally, a definition is provided for the competency levels. 1 relevant citation is included	2 Entrecomp competencies from Quiz are assessed appropriately with relevant evidence	One competency is assessed appropriately with relevant evidence	Assessment is not substantiated by evidence example, or competencies assessed are not in quiz	No information relevant to assessment brief is included
SUMMARISE: your competency assessment data in a table that is referred to in the text	Professionally formatted table provides all required elements within and in text.	Table provides most elements required to summarise data and is correctly referred to/ explained in text.	Table provides several elements and is referred to in text using appropriate nomenclature.	Table provides some data/ information elements a reader needs to understand your study	Provides minimal elements with some errors. Either not referred to in text or missing nomenclature	Insufficient elements and accurate information and may not be in a table.	No information relevant to assessment brief is included
ANALYSE: your own data in terms of how it could influence your employability in the career you chose in Part 2	Additionally, statement includes clear understanding of the chosen role through researching 2 or more recent information sources	Additionally, statement demonstrates a critical analysis using citations	Additionally, statement includes a relevant citation evidencing your research into the needs of your chosen role	Some relevant relationship made between your current levels in 2 chosen competencies & entry level needs of your chosen career role	Some connection is made between your data & chosen career path, but it is either vague or does not demonstrate sufficient insight into the role.	Insufficient connection is made between your data and a specific career path or evidence of understanding both elements is insufficient.	No information relevant to assessment brief is included
CREATE: a Project Management plan including an Aim, Objective and Tasks to increase ONE of your	Professionally presented Gannt chart has precisely articulated aim, objective and a range of achievable,	Additionally, all elements demonstrate very good understanding and use of these terms from the	Additionally, at least 3 relevant tasks are included with a Gannt chart timeline of when they will start and finish. Presented	Plan includes an aim, an objective and at least 2 relevant tasks that could help increase	Plan omits one of the items listed for a pass grade or one item is not related to increasing the	Plan omits two if the items required for a pass grade or two items included demonstrate little understanding of how to	No information relevant to assessment brief is included

chosen competencies before graduation	ambitious tasks, timelines & resources	module learning. Tasks show initiative & independent research.	as a Gantt chart which is referred to in the text.	competency in one Entrecomp area	level of a specific competency	increase the level of a specific competency	
REFLECT on what you have learned about your enterprise competencies from individual <u>and</u> teamwork. Conclude by relating to case study title	Provides exceptional reflection using an accepted model and evidence of independent research in relating the learning, value creation and career	Additionally, reasons provided will indicate a very good depth of reflection and an analytical critique of how the development plan relates to value & the chosen career.	Additionally, provides appropriate reasons explaining the two statements required for a pass grade	One example of learning about personal competencies from individual and teamwork are included. Concludes with attempt to relate learning to title.	One of the two items required for a pass grade is omitted	One of the two items required for a pass grade is omitted and the other fails to make sufficient links between required concepts and information	No information relevant to assessment brief is included

Criterion	Exceptional Distinction	Distinction HIGH/MID/LOW	Commendation HIGH/MID/LOW	PASS HIGH/MID/LOW	Marginal Fail	FAIL MID/LOW	ZERO
4. A professionally presented document demonstrating your use of the writing features highlighted within the module							
STRUCTURE: Use elements including a title, subheadings, bullet points and/ or numbered lists to structure report	Submission is creatively and professionally structured with no inconsistencies	Submission is professionally structured with only minor inconsistencies in formatting	Several elements of structure are included in the case study and their formatting is mostly consistent	Some basic elements of structure are included in parts of the case study and there is some consistency in their formatting	Only limited basic elements of structure are included and several are not formatted consistently	Inadequate attempt is made to include professional structural elements in the submission	No information relevant to assessment brief is included
ILLUSTRATE: Use images, tables and figures with appropriate legends as required to illustrate your report and add information without exceeding word count.	Multiple original illustrations have been included with professional titles/ legends, relationships to the text and citations	At least one additional original illustration has been included with a mostly appropriate title/legend, relationship to the text and citation	At least one additional copied original illustration has been included with an adequate title/legend, relationship to the text and citation	At least one relevant, additional copied illustration has been included with original titles/legends but relationship to text could be clearer OR citation is absent	At least one additional copied illustration included with copied titles/legends Limited relationship to text OR citation is absent or relevance to case study topic is limited	At least one additional copied illustration included but at least two of the following apply: titles/legends or relationship to text are omitted or citation is absent, or irrelevant	No information relevant to assessment brief is included

ASSESS: submission for spelling and grammar errors and correct as necessary	no errors	1 error uncorrected	2 errors uncorrected	3 errors uncorrected	4 errors uncorrected	5-10 errors uncorrected	11+ errors uncorrected
REFERENCE: All sources of information included both in text and in a reference list using the Harvard System	Additionally, Points are supported by some independently researched, relevant resources that are correctly cited and referenced according to the Harvard System	Additionally, Points supported by some relevant references used in the module optional resources that are mostly cited and referenced according to the Harvard System	Points supported by some valid references used in the module resources, most are cited and referenced according to the Harvard System	Points supported by some valid references from module. Citations and referencing contain some errors and may not use Harvard System	Some points are supported by valid references, but these are mostly not cited or referenced correctly	Insufficient use of relevant references to acknowledge information sources. Citations/ references are absent or formatted with little consistency	No information relevant to assessment brief is included
ADD: Word count to document and ensure it is no more than 750 words with permitted exclusions	Word count added and no more than 750 words	Word count added and no more than 775 words	Word count added and no more than 800 words	Word count added and no more than 825 words	Word count added and no more than 850 words	Word count added and no more than 875 words	Word count is 876 words or more or no word count is included

Each assessment is awarded a mark according to the scale given above. The final mark is determined by how well the criteria have been met overall and not the sum of the individual aspects of the work.