

Assignment 1: Innovation & Research

03 June 2025 12:12

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Changemakers: Assignment 1 - Innovation & Research

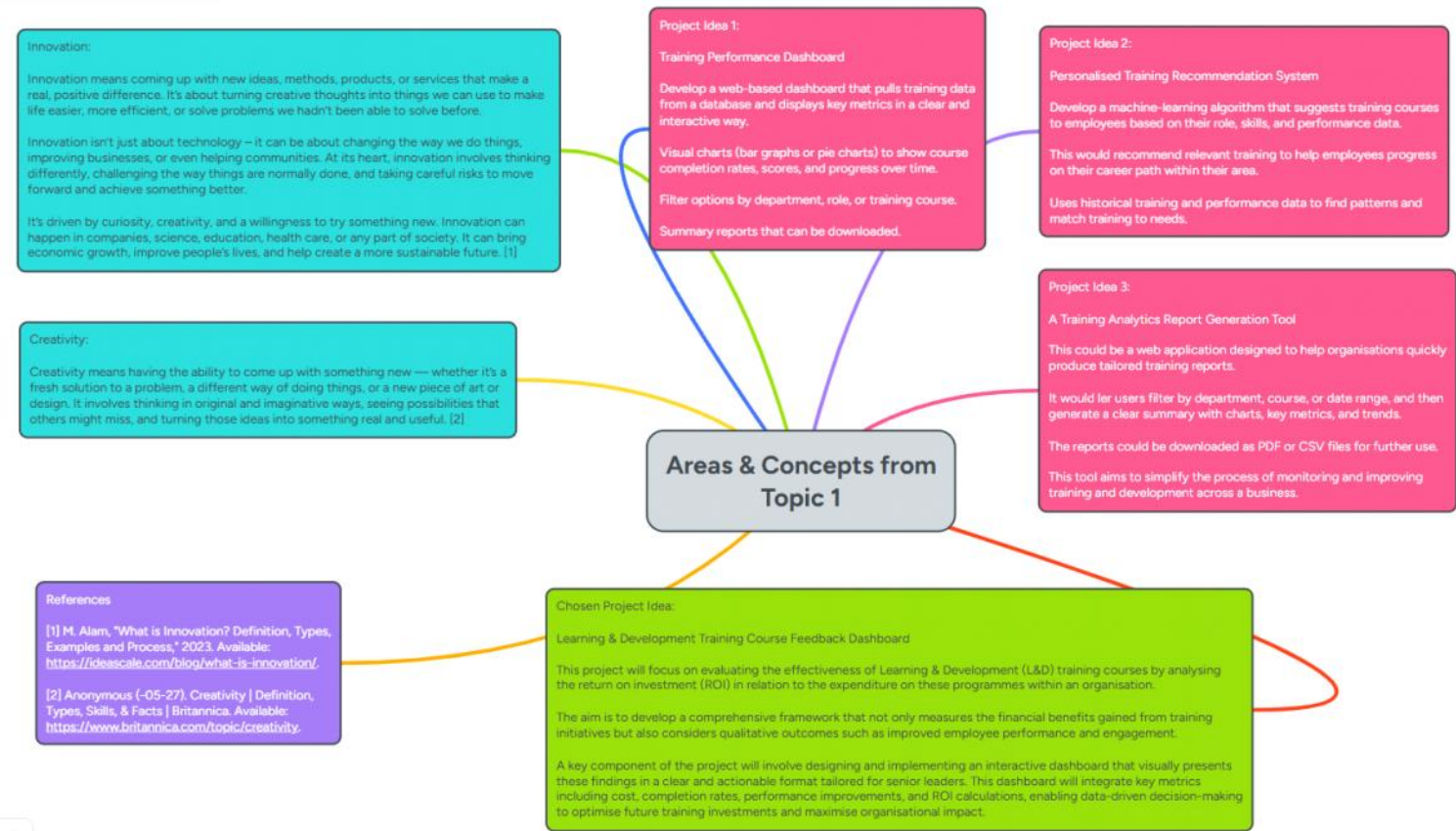
Mind Map

03 June 2025 12:15

Q1. Create a mind map that includes some of the areas/concepts from Topic 1 of Unit 1 on Moodle and include some project ideas from areas of personal interest related to your programme of study.

Online Section: Unit 1 Topic 1 - How Innovation Shapes The World. The role that creativity and innovation plays in the development of society and self.

Q2. Select a project idea that you would like to take forward and add this to the map. (Link to MindMap: <https://mm.tt/map/3745412034?t=238u22B6Bf>)



Selected Project Idea

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Learning & Development Training Course Feedback Dashboard

This project will focus on evaluating the effectiveness of Learning & Development (L&D) training courses by analysing the return on investment (ROI) in relation to the expenditure on these programmes within an organisation.

The aim is to develop a comprehensive framework that not only measures the financial benefits gained from training initiatives but also considers qualitative outcomes such as improved employee performance and engagement.

A key component of the project will involve designing and implementing an interactive dashboard that visually presents these findings in a clear and actionable format tailored for senior leaders. This dashboard will integrate key metrics including cost, completion rates, performance improvements, and ROI calculations, enabling data-driven decision-making to optimise future training investments and maximise organisational impact.

Aim & Objectives and Research area

24 June 2025 11:24

Q1. Create and document a single Aim and several Objectives for your project.

Aim

To evaluate the return on investment of training and development opportunities within the ITS department in the agency and identify the most effective way to measure and present their impact to senior management.

Objectives

- **Assess previous training bookings:**

Review existing and previous training and development initiatives in the ITS department, including program types, participation rates, and associated costs over the past 2-3 years, to establish a baseline for ROI evaluation.

- **Gather quantitative data on training outcomes:**

Collect and analyse key metrics such as employee performance improvements, retention rates, and staff feedback using surveys, performance reviews, and booking data.

- **Identify qualitative impacts:**

Interview ITS staff, managers, and trainees to capture non-financial benefits, such as enhanced skills, job satisfaction, and innovation contributions, and integrate these into a combined assessment with quantitative data.

- **Research measurement methodologies:**

Review industry best practices and academic literature on training ROI measurement techniques such as the Kirkpatrick's evaluation model, to determine the most suitable approaches for the agency.

- **Develop presentation strategies:**

Design and test various formats for presenting ROI findings, such as Microsoft Excel dashboards, PowerPoint reports, or interactive Power BI visualisations, to ensure clarity when presenting results to senior management.

- **Recommend improvements:**

Based on the evaluation, propose actionable enhancements to training courses that are booked and measurement processes to maximize future ROI, including potential tools for ongoing monitoring.

Research Philosophy

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Q2. Identify an appropriate research philosophy for your project.

Below are the 5 different research methodologies with a brief explanation and examples of how these each relate to my project idea.

- **Positivism:** Focuses on objective, measurable facts using scientific methods like surveys or experiments.

Example: Measuring training ROI with hard data like cost savings or productivity metrics.

- **Critical Realism:** Recognises a scientific approach, but does not require it to be proven. Uses mixed methods to explore underlying causes.

Example: Analysing why certain training programs improve ITS performance by combining metrics with staff interviews.

- **Interpretivism:** Emphasises understanding subjective experiences and meanings through qualitative methods like interviews.

Example: Exploring how ITS staff perceive training's impact on their skills and job satisfaction.

- **Postmodernism:** This challenges the idea of single, objective truth. Uses creative methods like narrative analysis. Data doesn't speak for itself, it can be interpreted differently depending on who's looking at it.

Example: Examining varied ITS staff stories about training to challenge assumptions about its value. HR might measure it in staff retention, finance in cost savings, ITS managers in reduced downtime, and staff in personal skill growth.

- **Pragmatism:** Prioritises practical solutions, using mixed methods (quantitative and qualitative) based on what works best for the problem.

Example: Combining ROI calculations with staff feedback to create a practical report for senior management.

For my project on evaluating the return on investment of training and development within the ITS department, critical realism is a strong fit because it recognises that training has real, measurable statistics, yet those are also shaped by human perceptions and other influencing factors. This philosophy will allow me to combine quantitative data, such as performance metrics before and after training, with qualitative insights from staff and management to uncover not just whether the training works, but why its having the impact that it does. By acknowledging both the objective outcomes and the realities around them, critical realism will help me produce a richer evaluation and present findings that capture the bigger picture of training's value to senior management.

Search Tools

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Q3. Select and document appropriate search tools including some specific research databases to identify research related to your project area and use search strategies to identify relevant research related to your project.

For this project, I will use a combination of trusted search tools and databases to identify and access relevant research. These will include Google Scholar for broad academic coverage, the UWTSD Library search platform for access to subscription-only resources, and Web of Science for high-quality, peer-reviewed literature and citation tracking. I will also use RefWorks to store, organise, and reference my sources efficiently throughout the research process.

To ensure my searches are targeted and effective, I will develop clear keyword combinations and apply Boolean operators (e.g. , AND, OR, quotation marks for exact phrases) to refine results. For example, I will combine concepts such as “return on investment,” “training,” “learning and development,” and “information technology services” to capture literature relevant to both the measurement of training impact and the context of the ITS department. Where necessary, I will also apply filters such as publication date, subject area, and document type to focus on recent, credible, and context-specific studies.

This structured approach will help ensure that I gather a strong body of evidence to support my evaluation of training ROI and the development of effective measurement and reporting strategies for senior management.

Research Strategies

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Q1. Consider and document strategies to enhance validity, reliability, generalisability and ethical considerations.

To improve validity when looking at the return on investment of training in the ITS department, it's important to make sure the methods used actually measure the real impact of the training. This can be done by choosing clear and relevant ways to check how training has helped, such as looking at changes in employee performance, gathering feedback from staff, and reviewing business results. Using different sources of information helps to make the findings more reliable and less biased. It's also important to make sure the measures fit well with the goals of the training and the agency. Testing the measurement tools beforehand and getting advice from experts can help make sure they are accurate. This way, the results will be trustworthy when shared with senior management.

To improve reliability within the project, the aim is to make sure the results are consistent and repeatable. This means using the same methods and measures each time, so that if the study was done again, it would give similar results. Clear instructions and standard processes for collecting data, such as how performance is measured or how surveys are carried out, help avoid differences caused by human error or personal opinion. Checking the data more than once, and comparing it across different groups or time periods, also makes the results more dependable. By keeping the approach consistent and well-documented, the findings will be more reliable and trusted by senior management.

To improve generalisability it's important to make sure the findings apply to more than just the specific group or time studied. This means gathering data from a wide range of staff, roles, and training courses, rather than focusing on a small or narrow group. Using different sources of information and looking at results over a longer period can help show whether the patterns hold in other situations. Being clear about the context in which the data was collected also helps others judge whether the findings could apply to their own teams. By designing the study so it includes varied examples, the results will be more useful for decision-making across the whole ITS department, not just in one small section.

It is important to follow ethical guidelines to protect everyone involved. This means making sure all participants give their clear permission before any data is collected, and they understand how their information will be used. Personal data must be kept confidential and stored securely to protect privacy. It's also important to be honest and fair when reporting results, avoiding any manipulation or bias. Ensuring that the process does not harm anyone or create unfair pressure on employees is key. By respecting these ethical principles, the evaluation will be trustworthy and respectful to all staff and senior management.

Data Collection

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Q2. Select research strategies/data collection methods you would use to collect data for your project. And design a pilot data collection method appropriate for your project and acquire some feedback to improve the focus of your project (include in an appendix section/page and refer to in the main body of the proposal).

To evaluate the return on investment (ROI) of training and development opportunities in the ITS department, this project will use a mixed-methods research strategy. Combining quantitative and qualitative approaches will give a richer, more reliable understanding of both measurable business impacts and personal perceptions of value.

Quantitative Data Collection Methods

Pre and Post-Training Performance Metrics: Comparing key performance indicators (KPIs) such as task completion times, error rates, or project delivery metrics before and after training.

Attendance and Cost Data: Recording course costs, participant hours, and time spent away from normal duties to calculate ROI.

Qualitative Data Collection Methods

Pre and Post-Training Staff Surveys: Measuring self-reported skill levels, confidence, and perceived usefulness of training using a mix of scaled and open-ended questions.

Manager Interviews: Exploring observed changes in employee capability, productivity, and problem-solving after training.

The mixed-methods approach ensures results are both valid (measuring what is intended) and reliable (consistent and repeatable), while also increasing generalisability by capturing a range of roles and experiences.

Pilot Data Collection Method

The pilot will test the suitability, clarity, and practicality of the data collection tools and procedures before the full study.

I will take 20 ITS staff members (and their line managers) from different areas who are booked on a training course due to commence in the near future.

1. Pre-Training Survey (10 questions)

- Self-rating of relevant skills (1–5 scale)
- Confidence in applying skills (1–5 scale)
- Open-ended: “What do you hope to gain from this training?”

2. Post-Training Survey (10 questions)

- Change in skill rating and confidence levels
- Perceived usefulness of training (1–5 scale)
- Open-ended: “What part of the training has been most valuable?”

3. Manager Feedback Form (5 questions)

- Observed performance changes
- Notable examples of improved work outcomes
- Perceived value for team productivity

4. Performance Data Review – Comparing pre and post-training KPIs (where measurable).

Pilot Procedure

- Surveys distributed online one week before training and four weeks after.

- Managers complete feedback form four weeks after training.
- KPI data collected from departmental records.
- Short debrief with participants and managers to discuss question clarity and process practicality.

Use of Feedback

Findings from the pilot will be used to:

- Reword or redesign unclear survey questions.
- Adjust KPI selection to ensure relevance.
- Refine timing of data collection to reduce disruption.

Types of Quantitative & Qualitative Analysis

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Q3. Outline some different types of quantitative and qualitative analysis.

Quantitative Analysis

Statistics are ways in which we can try to show different patterns or trends in numbers.

Descriptive statistical analysis is one form of quantitative analysis which is all about summarising and describing the information you have. Instead of trying to guess or predict something, it focuses on telling you what the data shows right now.

Descriptive analysis helps you figure out things like:

- What's the average score? (mean)
- What's the most common score? (mode)
- What score did the middle person get? (median)
- How spread out are the scores? (range or standard deviation)

It's a summary or snapshot of your data, which is easy to understand and straight to the point.

Another type of analysis is Inferential Statistics.

This type helps us conclude what the data is saying. It is more like using the stats to make a guess. This may be due to it being too difficult or impossible to collect the data from a whole population as opposed to a sample of data.

Inferential statistics can also be used to help prove if an opinion that is stated in research can be taken as either true or false. A causal link is usually sought in this type, aiming to see if there is a positive, negative or zero correlation in the data.

Inferential analysis can help you make a decision or a prediction on a larger group based on a smaller (sample) piece of data. For example, if you found that some data had a positive correlation to a variable, you could say that as one variable increases, so does the other. If this has been found in a smaller sample of data, it could be used in a prediction of the larger amount. However, depending on the size of the sample, this could be misleading. This is why it is important to decide on how big a good sample size is, to make better more accurate predictions.

Qualitative Analysis

Qualitative analysis is about understanding people's thoughts, feelings, experiences, or ideas. Instead of numbers, it looks at things like words, stories, or pictures.

It helps you find out why people think or behave a certain way, or what something means to them. Therefore, it is again dependant on the type of data you are trying to collate or analyse and whether or not it requires a qualitative analysis.

This can be very open to interpretation. Data is collected, read and re-read, interpreted and then reported on.

Even though this type is not all related to numbers and statistics, themes and trends can still be found by analysing the results.

Thematic analysis is a way of studying qualitative data (like interview answers, survey comments, or written texts) by looking for common themes or ideas that come up again and again.

It helps you spot patterns in what people say or write, so you can understand the main points or important topics in the data.

Depending on the questions asked and the answers received, you may be looking for similar or the same words being used to describe something. If many people have the same or similar reasons for their answers, this may produce a theme within the qualitative data.

A case study is another type of qualitative analysis. Instead of looking at lots of examples, a case study focuses on a single detailed example.

A case study analysis looks closely at one person, group, or situation to understand it well. It starts by introducing the case and giving background information. Then, it explains what information was collected and shares the key findings. After that, it looks at what these findings mean and what can be learned from them. Finally, it sums up the main points and why the case is important. This helps organise the information clearly and makes it easier to understand.