

Changemakers: Creativity and Value Creation

04 March 2026 8:31 PM

Changemakers: Creativity and Value Creation Module Code: ACCA5033

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Executive Summary

This project proposal explores the development of an AI powered automated blogging and search engine optimisation system designed to support small businesses in improving their online visibility. In recent years digital transformation has significantly changed the way organisations create value and interact with customers. However, many small businesses still struggle to compete in the digital environment due to limited technical knowledge, financial constraints and lack of time to manage online marketing activities.

The purpose of this project is to design and evaluate a prototype system that assists small businesses with automated content generation, keyword optimisation and performance insights. The system aims to simplify complex digital marketing processes and make them more accessible to organisations that lack specialised expertise.

The proposal applies principles of creativity, innovation and value creation discussed in the Changemakers module. It explores how computing technologies such as artificial intelligence and automation can generate economic and social value. The project also integrates research strategies including mixed methods data collection, pilot testing and ethical considerations to ensure reliable and valid research outcomes.

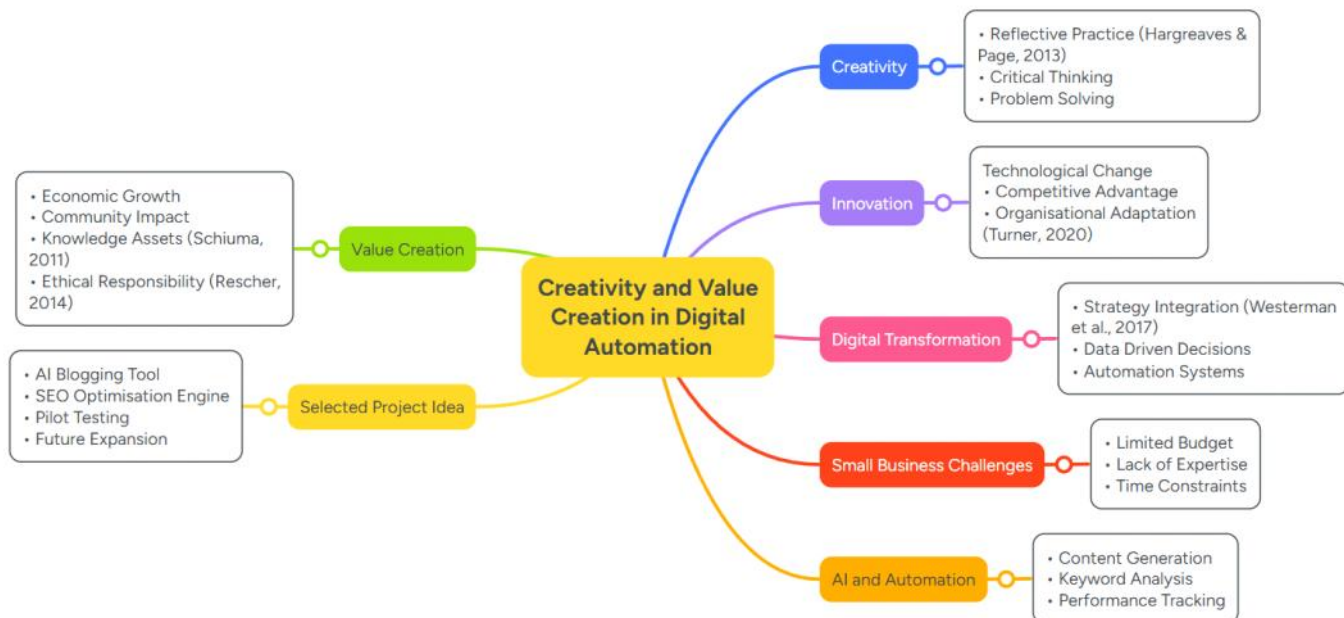
The research will involve literature review, prototype development and evaluation using survey data and qualitative feedback from small business users. Quantitative analysis will examine measurable indicators such as usability scores and perceived effectiveness, while qualitative analysis will identify themes related to user experience and digital marketing challenges.

Overall, the project demonstrates how computing innovation can address real world problems while creating value for society. It also provides a strong foundation for potential expansion into a final year independent project where the prototype system could be further developed and tested on a larger scale.

TASK 1 - IDEATION & MIND MAP

04 March 2026 8:17 PM

Mind map illustrating creativity, innovation and value creation in digital automation.



1.1 Introduction to Creativity and Innovation

04 March 2026 8:19 PM

Innovation shapes the world in ways that are both visible and invisible. From digital banking to artificial intelligence systems, society constantly evolves because individuals and organisations apply creative thinking to real problems. Creativity is not only about art or imagination. It is about problem solving and producing something new and useful. According to Westerman, Bonnet and McAfee [1], digital technologies are transforming organisations not simply through adoption of tools, but through strategic change in how value is created. This suggests that innovation must be aligned with purpose.

Creativity also contributes to personal growth. The Changemakers module highlights that innovation influences both society and the self. When individuals learn to think critically and reflectively, they become capable of generating new ideas. Hargreaves and Page [4] emphasise reflective practice as a mechanism for professional development. Through reflection, individuals identify weaknesses and improve performance. Therefore creativity is both internal and external.

Schiuma [2] argues that knowledge assets inside organisations generate value when effectively managed. This is particularly relevant in computing, where knowledge of systems, algorithms and data can be transformed into products and services. However, innovation must also consider ethical and societal values. Rescher [5] explains that rational evaluation of values is necessary when making decisions that affect society. In digital innovation, ethical responsibility is essential.

1.2 Personal Areas of Interest Linked to Computing

04 March 2026 8:20 PM

As a Computing student, my personal interest areas include:

- Artificial Intelligence systems
- Search Engine Optimisation tools
- Automation platforms
- Web development
- Data analytics
- Digital transformation strategies

These areas are interconnected. Artificial intelligence relies on data. SEO relies on algorithms. Automation integrates software systems. Together they form the foundation of digital value creation.

Small businesses increasingly depend on online presence. However many struggle to compete digitally. According to Turner [6], organisations that fail to innovate risk becoming stagnant and irrelevant. This concept strongly applies to small enterprises who lack resources and digital expertise.

1.3 Brainstorming Possible Project Ideas

04 March 2026 8:21 PM

Using mind mapping, I explored several possible computing related projects:

AI chatbot for student academic support

Cybersecurity awareness training platform

SEO performance analytics dashboard

Automated blogging and content optimisation tool

Smart digital marketing assistant for small businesses

Website performance monitoring system

Each idea was evaluated against three criteria:

- Social value
- Technical feasibility
- Potential for third year expansion

The idea that scored highest was:

AI Powered Automated Blogging and SEO Optimisation System for Small Businesses.

This idea combines artificial intelligence, automation and digital marketing. It addresses a real problem. Many small businesses lack time, knowledge and budget to manage online content effectively.

1.4 Why This Project Creates Value

04 March 2026 8:22 PM

Value creation can be economic, social or knowledge based. Schiuma [2] explains that value emerges when knowledge is transformed into measurable outcomes. In this case, an automated blogging system could help businesses increase online visibility and customer engagement.

Westerman, Bonnet and McAfee [1] argue that digital leaders use technology to drive transformation rather than simply automate tasks. This project aligns with that idea because it integrates AI into strategic marketing processes.

From an ethical perspective, Rescher [5] suggests that rational value systems should guide innovation. Therefore, the project must include transparency, originality checks and user control over AI content.

Creativity plays central role here. The system would not simply generate text but also analyse keywords, optimise structure and provide performance feedback. This requires combining design thinking with technical implementation.

Reference List

04 March 2026 8:34 PM

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AIM, OBJECTIVES AND RESEARCH AREA

04 March 2026 10:39 PM

2.1 Introduction to the Project Focus

04 March 2026 10:41 PM

The selected project for this proposal is:

AI Powered Automated Blogging and SEO Optimisation System for Small Businesses

Digital transformation has changed how organisations compete and survive. Many small businesses struggle with online visibility, content creation and search engine ranking. Larger companies have digital teams and advanced tools, but small enterprises often lack technical knowledge, time and financial resources. According to Westerman, Bonnet and McAfee, digital leaders use technology strategically rather than simply adopting tools [1]. However, small businesses are often left behind in this transformation.

This project aims to address that imbalance by developing a prototype automated blogging and SEO support system using artificial intelligence principles. The system will help generate optimised content, suggest keywords and provide performance tracking insights.

Innovation here is not just technical development. It is about value creation and enabling access to digital growth opportunities. As Schiuma explains, knowledge assets create value when they are transformed into measurable business outcomes [2]. Therefore, this project links computing knowledge with economic and social value.

2.2 Project Aim

04 March 2026 10:41 PM

The main Aim of this project is:

To design, develop and evaluate a prototype AI powered automated blogging and search engine optimisation system that supports small businesses in improving digital visibility and creating measurable online value.

This aim reflects both creativity and practical implementation. It combines research, system design and evaluation. The aim also aligns with pragmatic innovation, where outcomes and usefulness are central [5].

2.3 Project Objectives

04 March 2026 10:42 PM

To achieve the aim, the following objectives have been developed:

To investigate the digital marketing challenges faced by small businesses in relation to blogging and SEO.

To critically analyse existing AI based content generation and SEO automation tools currently available in the market.

To design a system architecture for an automated blogging and SEO optimisation prototype.

To implement a functional prototype using suitable programming tools and AI APIs.

To conduct pilot testing with small business users to evaluate usability and perceived value.

To assess ethical implications associated with AI generated content including transparency, bias and authenticity.

These objectives follow logical progression from research to development and evaluation. Nardi emphasises that research must begin with clear, focused objectives to avoid confusion and weak outcomes [3]. Each objective contributes directly to achieving the overall aim.

2.4 Research Philosophy

04 March 2026 10:43 PM

For this project, the selected research philosophy is Pragmatism.

Pragmatism focuses on practical consequences and real world usefulness rather than purely theoretical debates. It accepts that both qualitative and quantitative data can be used together if they help answer the research problem. This is appropriate because the project involves technical development combined with user evaluation.

Rescher discusses pragmatic idealism as a rational approach where ideas are validated through practical effectiveness [5]. In this context, the AI blogging system will not be judged purely by theoretical capability, but by whether it genuinely helps small businesses.

Additionally, Westerman et al. explain that digital transformation leadership requires experimentation and learning by doing [1]. Therefore, pragmatic philosophy aligns with iterative development and prototype testing.

The project does not follow strict positivism because it is not purely numerical measurement. It also does not follow pure interpretivism because it includes system performance metrics. Instead, it blends approaches, making pragmatism most suitable.

2.5 Research Design Approach

04 March 2026 10:44 PM

The project will adopt a mixed methods research design.

Mixed methods combine quantitative and qualitative data. This improves understanding and strengthens research findings. Hargreaves and Page highlight reflective practice as an essential component of improvement [4]. Mixed methods allow reflection on both numerical outcomes and human feedback.

Quantitative elements will include:

- Survey data from small business owners
- Performance metrics from the prototype
- Comparison of keyword ranking simulations

Qualitative elements will include:

- Semi structured interviews
- User feedback analysis
- Thematic interpretation of concerns and expectations

This integrated approach increases reliability and validity because multiple sources support findings.

2.6 Research Area and Context

04 March 2026 10:45 PM

The research area sits at the intersection of:

- Artificial Intelligence
- Digital Marketing
- Small Business Innovation
- Automation Systems

Digital marketing is evolving rapidly. AI based tools such as automated copywriting systems, keyword clustering platforms and optimisation engines are increasingly common. However, most tools are subscription based and complex. Turner argues that organisations must remain dynamic and fearless in innovation to avoid stagnation [6]. Small businesses often lack that support.

The project aims to simplify and integrate these capabilities into a user friendly system tailored to small enterprise needs.

This research area is relevant to computing because it involves:

- System architecture design
- API integration
- Data processing
- Algorithmic keyword analysis
- User interface development

It also provides strong foundation for future third year independent project expansion.

2.7 Search Tools and Research Databases

04 March 2026 10:45 PM

To identify relevant academic and industry research, the following search tools will be used:

Academic Databases:

- IEEE Xplore
- ACM Digital Library
- ScienceDirect
- Google Scholar
- UWTSD Library Discovery

Search Keywords:

“AI content generation small business”

“search engine optimisation automation systems”

“digital transformation SMEs”

“ethical issues artificial intelligence marketing”

“mixed methods research technology evaluation”

Boolean Operators will be applied:

AND

OR

“Exact phrase search”

Filtering by publication year (last 5-8 years)

According to Nardi, critical evaluation of research requires assessing credibility, sample size, research method and relevance [3]. Therefore each article will be screened based on:

- Peer reviewed status
- Clear methodology
- Transparent data collection
- Academic reliability

Reflective practice will also guide the review process [4]. If bias or limitation is observed, it will be documented.

2.8 Ethical Considerations in Research Area

04 March 2026 10:46 PM

Ethics is important in both research and system design.

Key research ethics include:

- Informed consent from participants
- Data confidentiality
- Secure storage of survey responses
- Right to withdraw

In system development, ethical concerns include:

- AI generated misinformation
- Content originality and plagiarism
- Transparency in automated writing
- Bias in keyword recommendation algorithms

Rescher highlights the importance of rational evaluation of values in decision making [5]. Therefore ethical framework will guide development choices.

2.9 Justification for Project Selection

04 March 2026 10:47 PM

This project is suitable because:

- It solves a real world problem
- It combines creativity and computing
- It creates economic and social value
- It has scalability for final year
- It aligns with digital transformation research

Schiuma emphasises that value creation depends on transforming knowledge into measurable results [2]. This system attempts to do exactly that by converting AI capability into business growth potential.

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TASK 3 - RESEARCH STRATEGIES

04 March 2026 10:57 PM

3.1 Introduction

04 March 2026 10:59 PM

This section outlines the research strategies that will be used to support the development and evaluation of the AI Powered Automated Blogging and SEO Optimisation System for Small Businesses. The purpose is to ensure that the research process is structured, credible and ethically sound.

Research strategy is not only about collecting data. It is about designing the process carefully so that results are trustworthy. According to Nardi, strong research depends on careful evaluation of methods, evidence and interpretation [3]. Therefore, this project applies structured strategies to improve validity, reliability and ethical standards.

3.2 Enhancing Validity

04 March 2026 10:59 PM

Validity refers to whether the research measures what it intends to measure.

There are different types of validity relevant to this project:

Internal Validity

Internal validity ensures that the results are genuinely caused by the intervention. In this project, this means verifying that improvements in perceived usefulness are actually due to the AI system and not external factors.

To improve internal validity:

- Pilot testing of survey questions before full deployment
- Clear alignment between research objectives and questions
- Avoiding leading or biased questions

Construct Validity

Construct validity ensures that abstract concepts such as “usability” or “value creation” are measured properly.

For example:

Usability can be measured through:

- Ease of navigation
- Time required to complete task
- User satisfaction rating

Value creation can be measured through:

- Perceived business benefit
- Time saved
- Likelihood of continued usage

Schiuma emphasises that value must be operationalised into measurable indicators [2]. Therefore abstract ideas will be converted into clear variables.

3.3 Enhancing Reliability

04 March 2026 11:00 PM

Reliability refers to consistency of results.

To ensure reliability:

- Standardised questionnaire format
- Same instructions for all participants
- Clear documentation of prototype testing steps
- Use of digital data logs to record system performance

If the study were repeated under similar conditions, results should be similar. This consistency strengthens research credibility.

According to Hargreaves and Page, reflective practice improves professional processes [4]. Therefore I will reflect after pilot phase to adjust unclear elements before final data collection.

3.4 Generalisability

04 March 2026 11:01 PM

Generalisability refers to whether results apply to a wider population.

Since this is a university project, sample size will likely be limited. Therefore full statistical generalisation may not be possible. However, strategies to improve generalisability include:

- Recruiting participants from different small business sectors
- Including both online and offline business owners
- Clearly defining inclusion criteria

Turner explains that innovation must adapt across contexts [6]. Therefore, even small scale studies should aim for diversity where possible.

3.5 Ethical Considerations

04 March 2026 11:02 PM

Ethical responsibility is critical in both research and AI development.

Research Ethics

- Informed consent form explaining purpose
- Voluntary participation
- Right to withdraw
- Confidential storage of responses
- Anonymisation of data

Nardi highlights that ethical awareness is part of responsible research evaluation [3].

AI Ethical Issues

- Risk of plagiarism
- Potential misinformation
- Algorithmic bias
- Over reliance on automation

Rescher discusses rational evaluation of values in decision making [5]. Therefore ethical framework must guide both system design and research methodology.

Participants will be informed that the system is prototype and not commercial tool.

3.6 Research Strategies and Data Collection Methods

04 March 2026 11:04 PM

The project will use mixed methods approach.

Quantitative Data Collection

Online survey using structured questions

System performance metrics including:

- Content generation time
- Keyword optimisation score
- User rating scale (1-5)

Quantitative data allows numerical comparison. It supports statistical interpretation.

Qualitative Data Collection

Semi structured interviews

Open ended feedback responses

Observational notes during testing

Qualitative data provides depth and context. It helps understand user perception and concerns.

Westerman et al. emphasise experimentation and learning cycles in digital transformation [1]. Therefore combining data types strengthens evaluation.

3.7 Pilot Data Collection Design

04 March 2026 11:05 PM

Before conducting full study, a pilot will be conducted with 3-5 small business participants.

Pilot Survey Questions (Example)

Section A - Background

What type of business do you operate?

Do you currently maintain a business blog?

Section B - Digital Marketing

What are your main challenges in online marketing?

How much time per week do you spend on content creation?

Section C - AI System Testing

How easy was the system to use? (1-5 scale)

Did the generated content meet your expectations?

What concerns do you have regarding AI generated content?

Feedback from pilot will be analysed to:

- Identify unclear wording
- Adjust technical language
- Add missing questions
- Improve usability testing flow

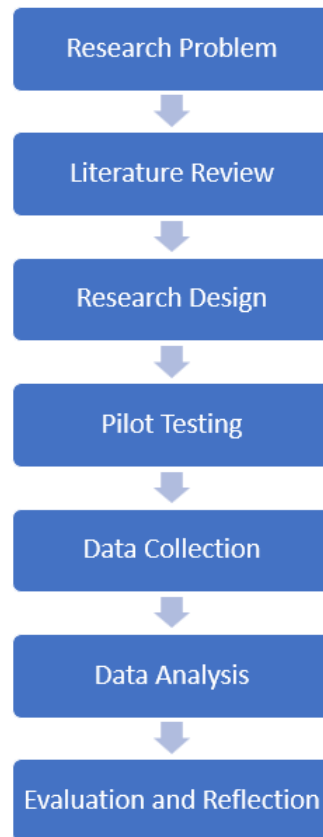
Hargreaves and Page argue reflection improves practice [4]. Therefore pilot stage is essential before final data collection.

Research Process Flowchart

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Research Process Flowchart



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Validity and Reliability Framework Chart

04 March 2026 11:33 PM

Strategies used to enhance research quality are summarised as below:

Validity and Reliability Framework Chart



3.8 Quantitative Analysis Methods

05 March 2026 12:01 AM

Quantitative analysis will involve:

- Descriptive statistics
- Mean and percentage calculation
- Bar charts for usability scores
- Comparison charts

For example:

Average usability score out of 5

Percentage of users willing to adopt system

Unit 4 Topic 1 highlights importance of numerical interpretation in decision making. Statistical data helps identify measurable impact.

3.9 Qualitative Analysis Methods

05 March 2026 12:07 AM

Qualitative data will be analysed using thematic analysis.

Steps:

Read all responses

Identify repeated words or ideas

Group into themes

Interpret meaning

Possible themes:

- Lack of technical knowledge
- Time pressure
- Trust concerns
- Cost sensitivity

Thematic analysis allows deeper understanding beyond numbers. According to Schiuma, knowledge becomes valuable when interpreted and transformed into insight [2].

3.10 Limitations

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- Small sample size
- Limited time frame
- Prototype functionality may be basic
- Results may not represent all industries

However transparency about limitations increases research credibility [3].

3.11 Conclusion

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This research strategy combines structure, reflection and ethical awareness. By enhancing validity, reliability and mixed method integration, the project aims to produce credible and meaningful findings.

Innovation requires both creativity and discipline. Research strategy provides that discipline. Without structured methodology, innovation becomes guesswork.

This task demonstrates how computing research can be rigorous while still focused on real world value creation.

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05 March 2026 12:09 AM

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