



FINVERSE:

FINANCIAL MANAGEMENT INTERACTIVE SIMULATION KIT

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ABSTRACT

Financial Management is a fundamental subject in business education; however, many diploma students struggle to understand its analytical concepts and apply them in real-world decision-making. Traditional lecture-based methods often emphasise formula memorisation rather than practical reasoning, resulting in low engagement and limited conceptual understanding. To address this issue, this study introduces FINVERSE: Financial Management Interactive Simulation Kit, an innovative teaching and learning tool designed to enhance students' financial decision-making skills through experiential learning. FINVERSE integrates simulation-based learning, gamification, and problem-based learning into a structured classroom activity that replicates real business environments. Students assume the role of financial managers, where they evaluate investment opportunities, analyse financial data, and make strategic decisions. Using scenario cards, financial data, and decision tools, students calculate key financial indicators such as Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period. Through collaborative activities, students observe the impact of their decisions on profitability, risk, and firm value. This interactive approach enhances conceptual understanding, critical thinking, and teamwork. FINVERSE is flexible for implementation across physical, blended, and digital learning environments, making it a scalable innovation for higher education and professional training.

KEYWORDS: Financial Management Education, Simulation-Based Learning, Gamification, Experiential Learning, Financial Decision-Making

PROBLEM AND OBJECTIVE

Financial Management is widely recognised as a challenging subject among diploma students due to its analytical nature and the need to apply multiple concepts simultaneously. Students often struggle with topics such as capital budgeting, time value of money, and investment appraisal.

Traditional teaching methods, which rely heavily on lectures and textbook exercises, tend to emphasise calculations rather than conceptual understanding. As a result, students focus on memorising formulas instead of applying them in real business contexts, leading to low engagement, reduced confidence, and weak problem-solving skills. They also lack exposure to decision-making environments where financial analysis influences business outcomes.

Therefore, FINVERSE is developed as a simulation-based learning tool to address this gap. It aims to enhance conceptual understanding, improve analytical and critical thinking skills, promote



active learning, and bridge the gap between theory and practical financial decision-making.

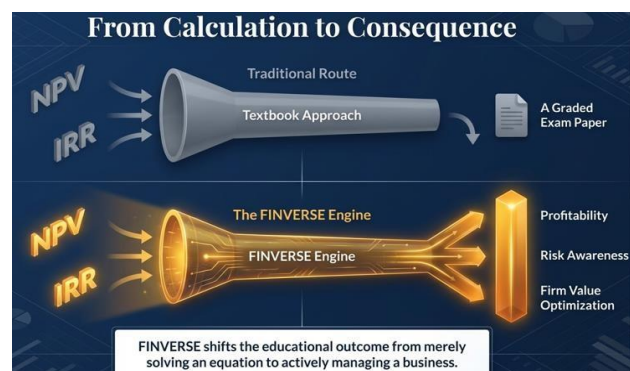
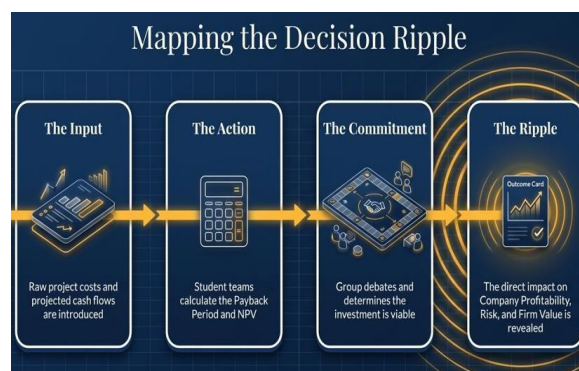
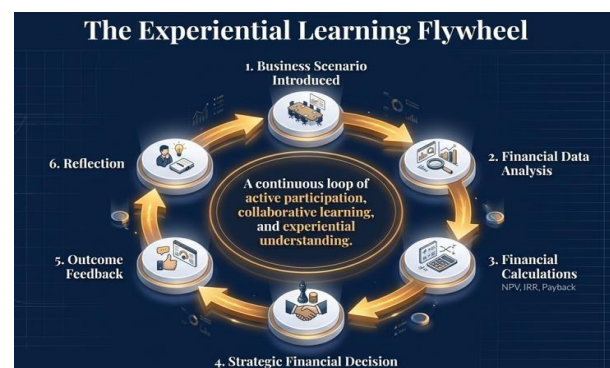
DESIGN DESCRIPTION

FINVERSE is an interactive simulation kit specifically designed to replicate real-world financial decision-making processes in a structured and engaging learning environment. The kit consists of several components, including business scenario cards, financial data sheets, calculation templates, decision boards, and outcome feedback cards.

Students are divided into small groups and assigned the role of financial managers within a simulated company. Each group is presented with a unique business scenario that requires evaluation of an investment opportunity. The scenarios are designed to reflect realistic business conditions, incorporating factors such as risk, cost, and expected returns. The learning process begins with students analysing the given financial data, followed by performing key calculations such as Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period. Students then engage in group discussions to interpret the results and decide whether to accept or reject the investment proposal.

Once a decision is made, students receive structured feedback that illustrates the consequences of their choices on company performance. This includes insights into profitability, financial risk, and long-term sustainability. The feedback mechanism is crucial in reinforcing learning, as it allows students to reflect on their decisions and understand the implications of financial strategies. FINVERSE can be implemented in various teaching modes, including face-to-face classrooms, blended learning environments, and digital platforms, making it highly adaptable and scalable.

VISUALS





NOVELTY AND UNIQUENESS

FINVERSE represents a paradigm shift in financial management education by moving beyond traditional teaching methods toward an immersive, decision-driven learning experience. Its core innovation lies in transforming abstract financial concepts into real-time strategic simulations, enabling students to actively engage with financial data in ways that reflect real industry practice.

Unlike existing solutions that focus on isolated calculations or passive learning through lectures and digital modules, FINVERSE offers a holistic, end-to-end learning ecosystem. It integrates simulation-based learning, gamification, and financial analysis within a structured framework that guides students from problem identification to decision-making and reflection. This seamless integration differentiates FINVERSE from conventional tools that lack contextual application and experiential depth.

A key strength of FINVERSE is its role-based learning model, where students act as financial managers and collaboratively evaluate investment opportunities. This enhances both technical competency and essential soft skills such as communication, teamwork, and strategic thinking. Additionally, its immediate feedback mechanism allows students to observe the impact of decisions on profitability, risk, and firm value. Designed for scalability and adaptability, FINVERSE is suitable for physical, blended, and digital learning environments.

BENEFITS TO MANKIND

FINVERSE delivers significant impact at multiple levels. For students, it enhances financial literacy, critical thinking, and decision-making skills, preparing them for real-world business challenges. It also improves confidence and engagement, leading to better learning outcomes. For educators, FINVERSE provides an effective and innovative teaching tool that supports student-centred learning and improves classroom dynamics. At a broader level, FINVERSE contributes to producing industry-ready graduates equipped with practical financial competencies. This supports workforce development and strengthens the quality of financial decision-making in organisations and society.

COMMERCIAL POTENTIAL

FINVERSE demonstrates strong market potential within higher education and professional training sectors, particularly in business, finance, and accounting programmes. Its key competitive advantage lies in its unique integration of simulation, gamification, and real-world financial decision-making, offering a more engaging alternative to traditional teaching tools. The design is highly scalable, with potential development into digital platforms or mobile applications for wider global adoption. A hybrid business model can be applied, including physical kit sales, institutional licensing, and subscription-based digital access, ensuring sustainable revenue generation and long-term commercial viability.

CONCLUSION

FINVERSE offers an innovative and effective approach to financial management education by integrating simulation, gamification, and experiential learning into a structured learning tool. It enhances students' conceptual understanding, analytical abilities, and decision-making skills by allowing them to apply financial knowledge in realistic business contexts. By bridging the gap between theory and practice, FINVERSE creates a more engaging and meaningful learning experience.

Future development may include the transformation of FINVERSE into a fully digital platform or mobile application to increase accessibility and scalability. Further enhancements could also incorporate advanced scenarios, analytics, and adaptive learning features, positioning FINVERSE as a comprehensive solution for modern financial education and professional training.

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