

Compet

International Teaching Aid

Reconnoitering Innovative Ideas in Postnormal Times

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2023

itac 2023 INTERNATIONAL TEACHING AID COMPETITION E-PROCEEDINGS

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PREFACE

iTAC or International Teaching Aid Competition 2023 was a venue for academicians, researchers, industries, junior and young inventors to showcase their innovative ideas not only in the teaching and learning sphere but also in other numerous disciplines of study. This competition was organised by the Special Interest Group, Public Interest Centre of Excellence (SIG PICE) UiTM Kedah Branch, Malaysia. Its main aim was to promote the production of innovative ideas among academicians, students and also the public at large.

In accordance with the theme "Reconnoitering Innovative Ideas in Post-normal Times", the development of novel ideas from the perspectives of interdisciplinary innovations is more compelling today, especially in the post-covid 19 times. Post-pandemic initiatives are the most relevant in the current world to adapt to new ways of doing things and all these surely require networking and collaboration. Rising to the occasion, iTAC 2023 has managed to attract more than 267 participations for all categories. The staggering number of submissions has proven the relevance of this competition to the academic world and beyond in urging the culture of innovating ideas.

iTAC 2023 committee would like to thank all creative participants for showcasing their innovative ideas with us. As expected in any competition, there will be those who win and those who lose. Congratulations to all the award recipients (Diamond, Gold, Silver and Bronze) for their winning entries. Those who did not make the cut this year can always improve and join us again later.

It is hoped that iTAC 2023 has been a worthy platform for all participating innovators who have shown ingenious efforts in their products and ideas. This compilation of extended abstracts published as iTAC 2023 E-Proceedings contains insights into what current researchers, both experienced and novice, find important and relevant in the post-normal times.

Best regards,

iTAC 2023 Committee Special Interest Group, Public Interest Centre of Excellence (SIG PICE) UiTM Kedah Branch Malaysia



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MASTERING BUSINESS ANALYTICS AND FINANCIAL MODELLING: A MOOC COURSE BUILT ON GAGNE'S MODEL FOR OPTIMAL ONLINE LEARNING

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ABSTRACT

The course that is being offered provides a comprehensive introduction to the dynamic and rapidly growing field of business analytics. The course covers the use of data, specifically statistical and quantitative analysis, and the three primary types of analytics - descriptive, predictive, and prescriptive. The use of tools such as Excel and Tableau are emphasized throughout the course to support business analytics. In addition to covering the fundamental concepts of business analytics, the course also delves into the practical application of data mining techniques to support decision making in a business context. Specifically, students will learn how to apply selected data mining techniques to real-world business scenarios. A significant portion of the course is dedicated to financial modelling using Excel. Students will learn how to create comprehensive financial statements, including balance sheets, income statements, and cash flow statements. The use of scenario analysis will also be explored to enable



students to evaluate different business decisions and their potential outcomes. To enhance the learning experience, the course utilizes the MOOC UiTM platform, which provides students with a unique and interactive way of learning. This platform is designed to be user-friendly, enabling students to learn and engage with the course material at their own pace. Students are encouraged to actively participate in the delivery of the course, further enhancing their understanding of the concepts covered in the course. In summary, this course provides a solid foundation in the field of business analytics and equips students with the necessary skills to analyse and interpret data in a business context. The practical application of these skills, along with the use of Excel and Tableau, makes this course an excellent choice for anyone interested in pursuing a career in business analytics or data analysis.

Keywords: online learning, business analytic, financial modelling, gagne model, MOOC

INTRODUCTION

The Gagne 9 event theory is a framework used to enhance the learning experience for students in online courses. The theory is based on the idea that learners are more likely to retain information when they are engaged in the learning process and actively participate in their own learning. The theory suggests that by structuring the course content around nine specific events. students can better focus their attention and retain more of the information presented to them (Mukuni, 2020). In the context of the FIN534 course, the MOOC content has been developed based on the Gagne 9 event theory to ensure that students are able to focus and capture knowledge effectively. By incorporating the nine specific events into the course design, such as orientation, scaffolding, and reflection, the course aims to provide students with a structured learning experience that is engaging and effective (Amelia, 2023). Through the use of this theory, students are encouraged to take an active role in their own learning, setting goals, reflecting on their progress, and seeking feedback from their peers and instructors. This can help to promote a deeper understanding of the course material and facilitate the application of new knowledge and skills to real-world situations. Overall, the use of the Gagne 9 event theory in the development of MOOC content for the FIN534 course is an innovative approach to online learning that aims to enhance the learning experience for students, ensure their focus and capture of knowledge, and promote their active participation in the learning process.

The developer chose this course as an online course on MOOC platform to allow everyone to learn how to manage big data and use it for effective decision making. The course of Business Analytics and Financial Modelling provides students with a comprehensive understanding of the fundamentals of data analytics and the tools and techniques used in business analytics, with a particular emphasis on statistical methods and tools for data analysis in business decisionmaking. Furthermore, the course covers various types of models used in business analytics, including descriptive, predictive, and prescriptive models. Excel and Tableau will be introduced as powerful analytics tools that can be used to support data analysis in business settings. Additionally, the course delves into the application of data mining techniques to different business scenarios to aid decision-making. Furthermore, students will develop their



financial modelling skills using Excel to create models that can effectively portray financial statements and scenario analysis. In summary, this MOOC course equips students with the essential skills required for effective business analytics and financial modelling.

OBJECTIVES

- 1. To provide alternative methods of learning that can help students around the world comprehend the concepts of Business Analytics and Financial Modelling.
- 2. To foster enthusiasm in the learning process of this course by introducing compelling activities, an interactive learning environment, and a diverse range of learning tools.
- 3. To offer for individuals who have a vested interest in business analytics and seek to broaden their knowledge of this burgeoning field.

METHODOLOGY

In order to offer this course online, the developer utilizing MOOC platform developed by UiTM called Ufuture. It is a learning management system platform that offers courses to anyone who wishes to take them, with the added benefit of no attendance limitations. Basic elements to form a good MOOC course is applied in this including course overview that provides a comprehensive understanding of the course structure, promotion, learning activities, instructional materials, assessment, and course summary/wrap-ups, while emphasizing the importance of design and layout, instructor roles, building community, and teaching videos.

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Figure 1. Course Outlines



The course begins with a greeting and welcome page that showcases an engaging welcome message to guide the participants. Important information about the course, such as the instructor, course objectives, learning outcomes, syllabus, and introductory and promotional videos, are included here to better introduce students to the course. It's important to break the ice, especially for students who are not familiar with the system. They will participate in two fun activities that also help them practice basic functions, such as inserting comments, pictures, uploading files, and so on. This is important to ensure that they are comfortable and prepared to start the course. This MOOC course consists of eight (8) chapters, which include: 1) Introduction to business analytics, 2) Analytics on spreadsheets, 3) Data visualization and exploration, 4) Descriptive statistical measures, 5) Statistical inference, 6) Regression analysis, 7) Preparation and integration of statements of comprehensive income, cash flow statements, and statements of financial position, and 8) Establishing scenarios and conducting sensitivity analysis (Chuah et al., 2019). In this course, we are not just focusing on the content itself, but also including some extra elements, such as a course summary, semester assignment and assessment, community building sessions, and student feedback and star rating.

CONCLUSION

In conclusion, the availability of this course online means that students from around the world can access it 24/7 through open learning. This approach to education encourages students to take a personalized approach to their studies, allowing them to learn at their own pace without feeling rushed or left behind. The flexibility of online learning also means that students can expand their horizons and connect with others from different parts of the world, sharing ideas and perspectives that can enrich their learning experience. The development of this online course is in line with our learning objectives and is designed to provide students with engaging and comprehensive teaching materials, activities, and assessments. We strive to create a great learning experience for all students who enroll in this course, regardless of their location or background. By making this course accessible online, we hope to make education more accessible and convenient for students around the world. Hence, offering this course online can enable the university to establish itself as a frontrunner in the area of business analytics, address the deficiency of skilled professionals in the local and national workforce, and promote the advancement of a well-educated and informed populace.

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