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BRS20103 RESEARCH METHODOLOGY

THE IMPACT OF VIRTUAL REALITY: ENTEREPRENUAL TRAINING, BIG DATA, SOCIAL MEDIA TECHNOLOGY ON BUSINESS PERFORMANCE.

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TABLE OF CONTENTS

TABLE OF CONTENTS i
LIST OF TABLES iii
LIST OF FIGURE iv
LIST OF ABBREVIATIONS v
ABSTRACT 1
CHAPTER I 2
1.1 BACKGROUND OF RESEARCH 2
1.2 PROBLEM STATEMENT 3
1.3 RESEARCH OBJECTIVES 3
1.4 RESEARCH QUESTION 4
1.5 SIGNIFICANCE OF THE RESEARCH 4
1.6 SCOPE OF RESEARCH 4
1.7 DEFINITION OF KEY TERMS 5
1.8 CHAPTER CONCLUSION 6
CHAPTER II 7
2.1 INTRODUCTION 7
2.2 REVIEW OF PREVIOUS STUDIES 7
2.3 Underpinning Theories 9
2.3.1 Business Performance 9
2.3.2 Entrepreneurial Training 10
2.3.3 Big Data 11
2.3.4 Social Media Technology 11
2.4 CONCEPTUAL FRAMEWORK 12
2.5 RESEARCH HYPOTHESES 12
2.6 CONCLUSION 12
CHAPTER III 13
3.1 Introduction 13
3.2 Research Design 13
3.3 Data Collection Method 13
3.4 Population 14

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3.5 Sample Size 14
3.6 Sampling Design 15
3.7 Data Analysis Process 15
3.7.1 Primary Data 15
3.7.2 Secondary Data 15
3.8 Chapter Conclusion 16
CHAPTER IV 17
4.1 Introduction 17
4.2 Pilot Test 19
4.3 Normality 20
4.4 Reliability Analysis 21
4.5 Correlation 23
4.6 Regression Analysis 24
4.7 Chapter Conclusion 26
CHAPTER V 27
5.1 Introduction 27
5.2 Summarization and Interpretation 27
5.3 Entrepreneurial Training 27
5.3.1 Big Data 27
5.3.2 Social Media Technology 28
5.4 Implication of Study 28
5.5 Limitation and Recommendation for Future Studies 28
5.6 Conclusion 29
REFERENCES 30

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LIST OF TABLES

Table 1 Definition of Key Terms **5**
Table 2 Demographic Distribution **18**
Table 3 Reliability Analysis of Pilot Test **19**
Table 4 Test of Normality Individual dependent **20**
Table 5 Validity Statistics **22**
Table 6 Reliability Statistics **22**
Table 7 Correlation Value and Strength of Relations **23**
Table 8 Pearson Correlation **23**
Table 9 Model Summary **24**
Table 10 ANOVA Result **24**
Table 11 Coefficients **25**
Table 12 Hypothesis Results **26**

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LIST OF FIGURE

Figure 1 Research Framework 12
Figure 2 Average of people who accessed VRC 14
Figure 3 Histogram Dependent Variable. 21

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LIST OF ABBREVIATIONS

VR	**Virtual Reality**
VRC	**Virtual Reality Chat**
ET	**Entrepreneur Training**
BD	**Big Data**
SMT	**Social Media Technology**
KIPs	**Key Indicator Performances**
ITCILO	**International Training Center of International Labor Organization**

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ABSTRACT

The purpose of this study is to determine whether the Virtual Reality platform: Entrepreneurial Training, Big Data, and Social Media Technology (SMT) affects business performance. This participants study has selected to certain factors such as genders, ages, position, and educational background which are affected mostly to a business performance. The participants who are given questionnaire in this research are people who have positive experiences with the digital world, especially virtual reality. The research applies quantitative methods where online questionnaires are distributed using Link of google form in Virtual Reality chat and 158 people have responded. Therefore the study uses convenience sampling. Research hypotheses and a conceptual model of the study are developed. Finding shows that virtual reality entrepreneurship training had a positive impact on marketing and business performance meanwhile big data and social media technology (SMT) showed no positive impact. This finding can contribute to the development of entrepreneurial training in improving business performance.

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CHAPTER I
INTRODUCTION

1.1 BACKGROUND OF RESEARCH

In recent years, the developments of immersive technologies−Augmented reality (AR) and virtual reality (VR) − have accelerated following the need for digital technology particularly in digital marketing and business improvement on global business. Offering various conveniences for digital global businesses, these technologies bring many benefits such as the ability to easily connect with all consumers who are relatively far away, even those who may not be reachable (Saunila et.al. 2021; Soelaiman & Ekawati, 2022), also, how these technologies transformed virtual experiences into more realistic to engage users such as tourism experiences (Fan et.al., 2022; Weiger, 2023). Thus, maximizing the utilization of these technologies can lead to better business performance.

Dreams to maximize the usage of virtual reality technology have significantly become common in all business fields. For example, when Indonesian traders meet buyers who live in Malaysia and Singapore or other countries, they can still reach their customers with relative ease using digital technology to help run the transaction smoothly. As the "Immersive experience" becomes one of the selling points of an industry that uses real-life dreams for marketing and has become one of the most accessible marketing methods. Specifically, how to communicate, engage, and deliver new and real experiences to customers, furthermore, to enhance customers' gaming experience, shopping or even traveling (Chen, 2021; Del Giudice et al. 2021). Maximizing these technologies to boost business performance is also applied in many sectors including the private and government sectors which are using this virtual reality to improve their business performance (Iqbal &Rao, 2022; Soelaiman & Ekawati, 2022; Hasbolah, et, al., 2022)

Virtual Reality, known as VR, basically is a digital technology originating from personal computers that makes appearances and objects appear real, giving users the feeling of being in a real environment. Virtual reality itself has become another digital culture for a modern society which is obsessed with digital technology. Moreover, virtual reality is prevalent in social media technologies such as Facebook Horizon, Sandbox, and Virtual Reality Chat, or known as VRC. Another aspect of the company's digital business strategy regarding the use of social media technology involves the use of commercial networks for e-commerce, marketing, and customer interaction (Aral et

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al., 2013). The use of social media technology in real estate dreams facilitates digital marketing for businesses and improves business performance. However, Virtual reality has a platform that is popular among users. The platforms are Entrepreneurial Training (ET), Big Data (BD), and Social Media Technology (SMT). Hence this study is focused on investigating the impact of these platforms on business performance.

1.2 PROBLEM STATEMENT

Knowing the impact of VR technological advances on marketing and business performance will help to develop a strategy to support the company's own performance and (Gartner 2006 cited in Mütterlein et al., 2017). Moreover, the rapid development of digital technology will certainly have an impact on business performance, such as the use of virtual reality in company marketing (Wolor et al., 2020). By considering some platforms in VR, particularly the popular one, entrepreneurship training, big data and social media technology as important references for business performance, it will be the pivot step to establish how to improve business performance. Thus, understanding how far these platforms in VR impact business performance will be the focus of this study.

To get profounder insight, as we know that there are many studies, still the research based on more of two platforms in Virtual reality remains limited. Previous studies have almost exclusively focused on the effects of virtual reality in one particular platform to business performance ((Fosso Wamba et al., 2017; Gunasekaran et al., 2017; Gupta et al., 2019; Bharati et al., 2015; Yu et al., 2021). Moreover, there are rare to search which platform could mostly impact business performance. To fill this gap, focusing on particular platforms, which are entrepreneurship training, big data, and social media technologies, in the virtual reality which one positively impacts on business performance, and to what extent these platforms affect business performance. Therefore, the specific research problem is intended to focus on the effect of three specific platforms in virtual reality to the business performance.

1.3 RESEARCH OBJECTIVES

The objectives of this research are as below:

- To study the impact of virtual reality in entrepreneurship Training to the business performance.
- To study the impact of virtual reality in big data to the business performance.

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- To study the impact of virtual reality in Social Media Technology to the business performance.

1.4 RESEARCH QUESTION

The questions of this research are as below:

- Does virtual reality in entrepreneurship training impacts on businesses performance?
- Does virtual reality in big data impacts business performance?
- Does virtual reality in social media technology impacts business performance?

1.5 SIGNIFICANCE OF THE RESEARCH

The significance of the study is twofold. First, the present study provides valuable insights and knowledge to academicians and practitioners such as marketers or/and managers. The result of study will help the future formulation of business performance strategy and positioning of digital technologies particularly platforms in Virtual Reality as a tool in enhancing the business performance. Second, the present study provides on how contributions in theoretical assessment and utilization of Virtual Reality platforms can be added the value of business performance in more diverse application

1.6 SCOPE OF RESEARCH

The scope of this research is looking for how far the impact of using Virtual Reality experiences on the performance of business and marketing based on some platforms, there are Entrepreneurial Training (ET), Big Data (BD), and Social Media Technology (SMT). This research is conducted by using basic quantitative methods to obtain the relevant primary data and the data will be collected by questionnaire. Supporting by participants of the research who actively using VR as their daily application on conducting their business, the questionnaire will be distributed as data collection technique. The limitation of the participant would be based on certain demographic characteristic. It is needed since demographic characteristic would be defined the variables since it cannot be manipulated (Lee. M & Schuele, C.M in Salkind N.J 2010). The demographic characteristic of participants in this research are position in company, gender, age, education level, and salary. Pilot test will be conducted to determine whether the research questionnaire can be proceed as data collection.

The study would be limited into three main independent variables which become the research framework. The limitations of the study would be needed in order to find which platform/platforms contribute positively in improving the business performance.

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The reac Therefore, for the future research can be conducted to find a way how this/these platforms can be maximizing the business performance. Lastly, the research questionnaire which in form of Google Form link will be contributed in VR chat to validate the participants who involved meet the criteria of the research participant.

1.7 DEFINITION OF KEY TERMS

To clarify the term and the concept that will be used in this research, the definition of particular terms will be given as following in the table. Moreover, definitions given will help on discussing the finding regarding the hypotheses and answering the research questions.

Table 1 Definition of Key Terms

CONTRUCT	OPERATIONAL DEFINITION OF CONSTRUCT
Business Performance	Business performance is stated as "the operational ability to satisfy the desires of the company's major shareholders" (Smith & Reece, 1999, p. 153). According Colase in Taouab & Issor (2019, p. 94) performance can be defined as "a bag-word" which covers many different concepts such as growth, profitability, return, productivity, efficiency, and competitiveness.
Entrepreneurial Training	The notion that entrepreneurial Training generates productive entrepreneurial activity is built upon human capital theory (for meta-analyses, see Bae et al., 2014; Martin et al., 2013). Human capital embodies the skills, experience and knowledge acquired through formal schooling or on-the-job training and mentoring (Tan, 2014). According to neoclassical human capital theory,education increases the productivity and earnings of individuals (Sweetland, 1996).
Big Data	Insightful information for decision-making, such as bigdata and big data analytics, can help firms in creating circular economy business systems (Wamba et al., 2017; Gunasekaran et al., 2017; Gupta et al., 2019).In the context of supply chains, big-data-driven supply chains enhance productivity and growth and impact on overall firm performance.

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Social Media Technology	Social media's value proposal stems primarily from the potential it gives firms to interact with their customers (Blanchard, 2011, p. 45) and other agents, create awareness, increase sales and generate loyalty (Castronovo and Huang, 2012) while also increasing attention to the company itself (Owyang & Toll, 2007). Other aspects of digital business strategies in SMTs use for firms include e-commerce, marketing, use of commercial. Networks focus to correlations management and knowledge management, among others (Aral et al., 2013).

1.8 CHAPTER CONCLUSION

To sum up, the gap that has been discussed in the research problem and objectives should be covered by this research. The three particular platforms which mentioned above would be closely explored as independent variable to find as the most influence factor on improving business performance and marketing.

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CHAPTER V
DISCUSSION

5.1 Introduction

In this chapter, the analysis and finding will be discussed further based on data collection. The data that was obtained from the distributed questionnaire in the Virtual Chats has gained 158 participants. All the data were analyzed using Statistical packages for Social Science version 23. The further discussion which related to the implication of this study will explain the limitation and recommendation for future study.

5.2 Summarization and Interpretation

The main aims of this study to determine whether some platforms in Virtual Reality have impacted towards business performance. Among three platforms which became the independent variables, the entrepreneurial training has shown as platform that gave impact to business performance positively with sig. value 2.923.

5.3 Entrepreneurial Training

This independent variable has 4 indicators questionnaire which will be described by Likert scale. This scale will measure allow responders to express how much they agree or disagree with a particular statement of entrepreneurial training.

The Hypotheses of "there is a positive relationship between Entrepreneur Training and Business Performance" has accepted since the t value for ET shows a value of 2.923 and a Sig. of 0.004, so the Sig value is less than 5% (0.022 <0.05). Because the significance level is less than 5%, it can be concluded that Entrepreneur Training (ET) has an influence on Business Performance.

While from Table. 4.7 shows the calculated F is 7.113 with a significance level of 0.000. This shows that Entrepreneurship Training significantly influence the business performance.

5.3.1 Big Data

This independent variable has 4 indicators questionnaire which will be described by Likert scale. This scale will measure allow responders to express how much they agree or disagree with a particular statement of big data.

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5.3.2 Social Media Technology

This independent variable has 6 indicators questionnaire which will be described by Likert scale. This scale will measure allow responders to express how much they agree or disagree with a particular statement of Social Media Technology.

5.4 Implication of Study

Even there many researches which conducted related on how Entrepreneurial training impacted the business performance, still, there are rare studied how digital entrepreneurial training platform could improve the business performance. This study would put a groundbreaking base on how this entrepreneurial training platform would be conducted in the future. Also, in the Social Media Technology, the results showed that some of social media platform might have lost its popularity or even have not been recognized well such as Linkedln.

5.5 Limitation and Recommendation for Future Studies

Although the research only prove the first hypotheses proposed, this research has limitation. Still, there are many possibilities that influenced the result of other two hypotheses. The fact that the participants who own companies around 8.2% of population, they might not apply big data for their data storage, even if they have, there is still possibility that they do not conduct analysis on their big data to improve their business performance. Moreover, most of participant working as private employee is 35, 4% of the research participants, this information lack of detail of their daily task whether Big Data and SMTs concerns. In addition, related to the salary which almost 47.5% of participants get Rm.600 to Rm 1.200 indicated that they are in the middle to lower management where their responsibility might not related to the big data analysis and usage. Furthermore, most of participants are in the age of 21-25 years old with 35.4%, it is one fourth of sample size. This fact indicates that they just start working or building the company where Big Data is not their pressing issues.

Whereas, for SMT, participants who are in the age of 21-25 years old might expert on some SMT Platforms but not for business reason only for personal reason. Also, the most of the participants are men around 53.5% who might seldom access SMTs. Even if one fourth of participant education background are held Bachelor degree, still the possibility that they access SMTs only for entertainment.

Based on those facts, for future study, there many aspects that can be used as consideration how to improve business performance related to big data and social

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media technology. The detail of their job tasks, duration and purposes of accessing the social media platforms, duration either as an employee or the company owner can be included in the question items for further and succinct informations.

5.6 Conclusion

The goal of this research is to better understand how particular platform in virtual reality impact the business performance. Basically utilizing virtual reality platforms is an effort conducted by to improve their business performance. Even though two of platforms did not show positive effects, there are still possibility to gain benefits from those two platforms in purpose to improve business performance. Even though some results are not in the line of previous research, this study was based only on the results of a questionnaire

distributed to business owners without further analyzing the effect of the use of big data and social media technology on business performance.

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Dissertation Grading Rubric

. STUDENT NAME: MUHAMMAD IRHAM PARIPUTRA MATRIC ID: 012022091728

Measurable Attributes	1	2	3	4	Weight	Marks
1. Explication of how the study relates to a phenomenon or area of interest within the discipline	Provides a vague (or no) description of the relationship	Provides some explication of the relationship	Provides a clear explication of the relationship	Explicates the relationship in an insightful manner	1	
2. Specification and limitation of the research problem and questions	Provides very vague description of the research problem and questions	Provides limited specification of the research problem and questions	Provides clear specification and limitation of the research problem and questions	Provides an engaging specification and limitation of the research problem and questions	1	
3. Review of literature	Reports on earlier literature without connecting it to the research problem and question, and/or fails to identify relevant literature	Reports on earlier literature without connecting it clearly to the research problem and question	Reviews earlier literature relevant to the research problem and questions	Demonstrates critical thinking creativity and insight in reviewing earlier literature relevant to the research problem and questions	4	

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4. **Develops asystematic and logical approach to the inquiry**	Provides a vague explanation of the approach to the inquiry; Fails to logically describe planned approach	Describes logically and clearly the research approach	Describes logically and clearly the research approach with a clear justification of the chosen approach above other approaches	In addition to the description for "Good": Explains how the chosen approach fits into existing paradigms of research methodologies and their limits	2	
5. **Developsconceptual** Synthesis/framework	Fails to develop a conceptual structure	Identifies some appropriate concepts and explains what they mean	Clearly identifies appropriate concepts and explains what they mean in the context of the study; Demonstrates a conceptual structure	Develops and applies a clear and consistent conceptual structure through synthesis of other/new concepts or lenses	4	
6. **Collects and uses** empirical material/data **(if applicable)**	Fails to clarify what material/data is used or how it is used; or uses inappropriate material/data; or exhibits inappropriate use of material/data	Identifies appropriate material/data and explains how it is used	Clearly identifies appropriate material/data and explains how it is used; Uses material/data is a way that is consistent with the logic of the inquiry and its purpose	In addition to the description for "Good": Identifies problematic issues and limits to the use of the material/data	3	
7. **Interprets and discusses results;** draws conclusions	Provides unclear interpretations and conclusions, and/or provides conclusions that do not	Makes some interpretations and draws conclusions; Provides little discussion	Provides clear interpretations that emerge from analysis and draws	In addition to the description for "Good": Identifies and discusses problematic issues and limits; Where relevant,	4	

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8. Academic style, language use and readability	Uses nonacademic style; inaccurate language use interferes with reading and comprehension; citation format not observed	Uses language sufficiently accurately and appropriately for comprehension but use of illustrations and examples infrequent and/or not fully competent; citation format not always observed	Uses appropriate academic language well; minor errors may exist but do not interfere with fluent reading and comprehension; illustrations and examples contribute to the clarity of the arguments; citation format almost always observed	Produces a thesis that meets academic writing standards; readily conveys meaning; illustrations and examples enhance the clarity of the arguments; citation format consistently observed	3	
9. Consistency and coherence of the thesis	Text is fragmented and unbalanced; internal links among theory, methods and results are not explicit; problems with headings and paragraph and section structure	Text is not fully balanced; some key internal links are missing; does not fully form a coherent whole; some problems with headings and paragraph and section structure	Forms a balanced and coherent whole; some internal linkages are implicit rather than explicit; headings and paragraph and section structure typically support the overall coherence	Forms a coherent whole with consistent and explicit internal linkages; has a logical flow of argumentation with neat headings and clearly structured paragraphs and sections	3	
TOTAL						

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