

# Writing A Research Outline

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Most students have problems when writing a research outline. Chapter 1-3 How to start and importantly, What research topic should be chosen? What is the writing method? How to write? Where to search? Is the research up-to-date? There are many problems that new researchers will worry about and seek a starting point.

Students who want to start writing a research paper, they must first consider the topic of interest. Here are some guidelines for creating a topic:

1. Students must read various theories and articles to find out if there are any research studies that have problems or questions that are similar to what students are interested in or want to solve. How does this research solve the problem? To provide students with ideas for solving the problem. Students should select articles that have been published within the last five years to reflect the current nature of the article.
2. If articles in the same group, such as education, marketing, religion, etc., have similar ideas, perspectives, and techniques of interest, it shows that the idea is of interest to society and is consistent with current events.
3. Study new concepts and theories, including theory development guidelines, teaching models, and operating models according to changes in society in each era.
4. Reading the article. The reader should read from the title to all details of the article.

**4.1 Title:** Journal articles are divided into two groups: academic articles and research articles.

Classification of academic articles and research articles

**Example:** academic articles

**Montessori Method of Education in Terms of Philosophical Anthropology.**

The title should indicate what the author is interested in, perhaps a new theory or concept, and not mention the independent, dependent, and population variables.

From the example, the author interests about **Montessori Method of Education** scope for write is **Terms of Philosophical Anthropology**

**Example:** research articles.

**Digital Leadership and Maturity as a Key to Successful Digital Transformation: Country Case Study of Croatia.**

The title of a research article will consist of three parts: the independent variable, the dependent variable, and the population.

(Digital Leadership and Maturity – **independent variable**) as a Key to (Successful Digital Transformation – **dependent variable**): (Country Case Study of Croatia – **population**).

**Example:** research articles.

**Enhancing Vocational Skills Through Metaverse Technology: A Study of Digital Media Education in Chinese Higher Vocational Institutions.**

Enhancing (Vocational Skills – **dependent variable**) Through (Metaverse Technology: A Study of Digital Media Education – **independent variable**) in (Chinese Higher Vocational Institutions - **population**).

**4.2 Abstract:** It tells you whether the research you read is an academic article or a research article. Classifying research articles from the abstract is considered from: Research article that is read as an academic article or research article. Classification of research articles from abstracts is considered from the research article must have a population or sample group, data collection tools, statistics used, and research results. The abstract will use approximately 200 words.

**Example Abstract Research Article**

**Digital Leadership and Maturity as a Key to Successful Digital Transformation: Country Case Study of Croatia.**

Karolina Kokot, Ivana Đunđek Kokotec, Marina Klačmer Čalopa

TEM Journal. Volume 12, Issue 1, pages 192-199,

DOI: 10.18421/TEM121-25, February 2023.

**Abstract** - Organizations are facing a disrupted environment, which results in a need for managers who can quickly respond to volatile conditions. Such conditions lead to changes in traditional leadership and the construction of new leadership recognized by contemporary literature as digital leadership (DL). The main **objective** of this research paper is to examine the levels of DL and digital maturity (DM) in small and medium-sized Croatian companies in

the context of digital transformation (DT). The **research sample** included 156 companies, and **the results** indicated relatively high levels of DL; indeed, nearly four companies achieved the highest level of DM. **The results** indicated a negative correlation between the level of DL and DM. Gender was shown to have an impact on the level of DL, while it was not indicated that gender has an impact on the level of DM.

### **Example Abstract Research Article.**

#### **Enhancing Vocational Skills Through Metaverse Technology: A Study of Digital Media Education in Chinese Higher Vocational Institutions.**

Yelan Wang, Wannaporn Siripala

#### **Abstract**

This study (**objective**) explores the impact of metaverse technology on vocational skills training in higher vocational education in my country, focusing on practical experience, professional knowledge, innovation ability and technical proficiency, and assessing the level of students using metaverse technology to improve technical and vocational skills. The research subjects are (**sample**) students of the audio-visual language course of the digital media art design major of Fuzhou Software Vocational and Technical College. A quantitative research method (**research design**) was adopted, using (**research instruments**) teaching plans, pre-test and post-tests, questionnaires and other tools, and a total of 54 valid questionnaires were collected. The results showed that: (**results**) (1) The impact of metaverse technology on vocational skills training in higher vocational education, focusing on practical experience, professional knowledge, innovation ability and technical proficiency had high level. (2) Vocation skill after learn by metaverse technology higher than before learn by metaverse technology. (3) Student who learn metaverse technology had qualify the students' feedback level high qualify. Metaverse technology fosters an interactive learning approach, enhancing vocational skills, transforming educational models, and supporting teaching reform, while laying the groundwork for its broader application in vocational education through curriculum innovation.

Academic articles are the summary of knowledge studied from various theories or documents.

## Example Abstract Academic article

### Montessori Method of Education in Terms of Philosophical Anthropology

Zeynep Başerler Berber, Dilek Başerler, Mehmet Ali Dombaycı

International Journal of Progressive Education, Volume 18 Number 2, 2022

DOI: 10.29329/ijpe.2022.431.16

Since its existence, the subject of man has been difficult and painful to understand. Philosophical anthropology comes to the fore as the field that deals with the essence and function of man to make sense of him. Philosophical anthropology tries to evaluate man from his birth to death. By doing so, philosophical anthropology draws on various philosophers. The process of understanding man, which started with Kant, is shaped by names such as Scheler, Cassirer, Mengüsoğlu, and Hartmann. In philosophical anthropology, besides these names, Maria Montessori, who assessed man as a child, is also significant. She contributed to philosophical anthropology by actualizing theoretical structures with the Montessori method of education, which is based on the understanding of a child who stands on his/her own feet and which presents a new perspective on the man. This study is considered important in terms of grounding the aforementioned contribution and guiding future studies on the subject.

From the abstract, if researchers conduct research that is similar to what students are interested in, it will give students ideas for studying their own research.

**4.3 Conclusion** The author of the article will summarize the knowledge gained from the research. If there is limited time to read, you may have to read the title, abstract, and conclusion to get the overall picture of the research. In addition, you can also decide whether the article is relevant to the topic of interest or not.

### Example Conclusion

**Conclusion** The research results indicated that the examined Croatian companies reported a high level of DL. These results showed that leaders recognize the current market conditions and the importance of DL in Industry 4.0. The results indicated that the level of DL is higher than that of DM, which aligns with the results of [19], who state that DT starts with DL and a vision to enable all activities and processes. Thus, it can be concluded that companies have laid the foundation for further DT to achieve a higher level of DM. The results reported a statistically significant difference between the responses of men and women, which is in line with the results of [18], who show that gender can have an impact on DL. The results indicated

that 23% of the researched companies had achieved the highest level of DM but that 16% of them were at the first stage of DM; thus, most of the examined companies had the opportunity to increase their level of DM. Generally, all the companies achieved their lowest results in relation to insight and their highest results in relation to technology, indicating that digital leaders recognize that technology is the most important element of DT; however, other aspects such as insight are underestimated.

For completeness, the entire article should be read to study the purpose, hypothesis, theory, research process, and presentation of research results. This allows students to see the research approach and research writing methods.

After studying theories and articles, the researcher will search for issues that no one has researched yet, such as problem-based teaching and art teaching.

### **Guidelines for finding your own readiness**

Students who want to do research should consider their potential with techniques SWOT Analysis.

#### **Internal factors:**

**S – Strength.** Your strengths, such as your expertise in teaching a particular subject, your special interests, such as new technologies used Metaverse or TIKTOK for teaching,

**W – Weakness.** Your weaknesses, such as your lack of fluency in statistical calculations.

#### **External factors:**

**O – Opportunity.** Opportunities, Students lack expertise in statistical calculations but can seek statistical programs to help them analyze data.

**T – Threat.** Threat, Students are concerned about using English fluently, but students have friends who give them advice on choosing vocabulary.

The results of the study will allow researchers to fill in the missing parts and enhance the outstanding parts.

## **Studying the research outline**

Each educational institution has a different format for writing research papers. Therefore, students need to study the outline of each chapter, especially Chapters 1-3, because they are guidelines for conducting successful research.

# **CHAPTER I**

## **INTRODUCTION**

### **1.1 Background and Statement of The Problem**

In writing the background, students should write from the problems found, which may come from problems from classroom teaching, problems that are determined to be solved by the policy of the educational institution or government policy, problems found from the environment, and daily life. Importantly, the problems mentioned must have a source. It may come from studying theories, reading research, reading articles, but importantly, students must write references using the principles of: If there are no references, it means that students are writing from their own ideas, which will make this topic lose credibility. More importantly, this topic must be related to the research topic.

### **1.2 Research Questions**

It should be written as a question using the words ‘What’, ‘How’, ‘Why’, because, reflecting that it is a question that seeks an answer that is not the word ‘Yes’ or ‘No’. The question sentence should be consistent with background and statement of the problem.

#### **Example research question :**

1. How can metaverse technology improve the vocational skills of students in higher vocational education in China?
2. What extent does the implementation of Metaverse Technology improve students' vocational skills, in Chinese Higher Education compared to before its implementation?
3. What are the students' opinions about the use of metaverse technology in Chinese higher vocational education to improve students' technology on vocational skills?

### 1.3 Research Hypotheses (If applicable)

When writing a research hypothesis, it is necessary to consider two points: it is consistent with research questions and research objectives. The other point is to consider the statistics used to prove research hypotheses. The words that should be used with hypotheses are comparative, relational, level.

#### Example research hypotheses

1. Vocational skills after learn by metaverse technology **higher than** before learn by metaverse technology.
2. Students who learn metaverse technology have qualify the students' feedback level high qualify

From research hypotheses

Vocational skills after learn by metaverse technology higher than before learn by metaverse technology.

Statistics: t-test dependent variable

Students who learn metaverse technology have qualify the students' feedback level high qualify

Statistics: average or mean, standard deviation

### 1.4 Research Objectives

It should be written in line with the research questions and should be written in a format 'to + v. ....'

#### Example research objective:

1. To analyze the impact of metaverse technology improve the vocational skills of students in higher vocational education in China.
2. To based on the differences before and after implementing metaverse technology to investigate the extent does the implementation of Metaverse Technology improve students' vocational skills, in Chinese Higher Education.
3. To assess the students' qualify level about the use of metaverse technology to improve technology and vocational skills in Chinese higher vocational education.

### 1.5 Scope of the Research Study

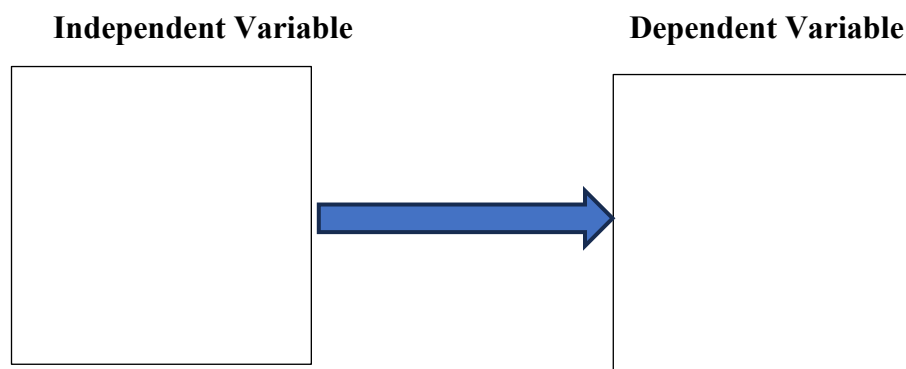
What group of students do you think you want to study? Caution: Do not write too broadly, such as China. You should specify the university G, grade level 3, province ....., etc.

#### Example

This study focuses on the practical application of Metaverse technology in the Digital Media Art Design major of Fuzhou Software Vocational and Technical College. We will randomly select one class of students from three first-year classes of the Digital Media Art Design major of the college to participate in this study to explore the impact of the Metaverse course on students' learning outcomes and vocational skills.

### 1.6 Research Framework

The easiest way to write is to express the relationship between independent variable and dependent variable by writing it in the form of two boxes.



Sometimes there are intervening variables that can influence the variable.

#### Example Research Framework

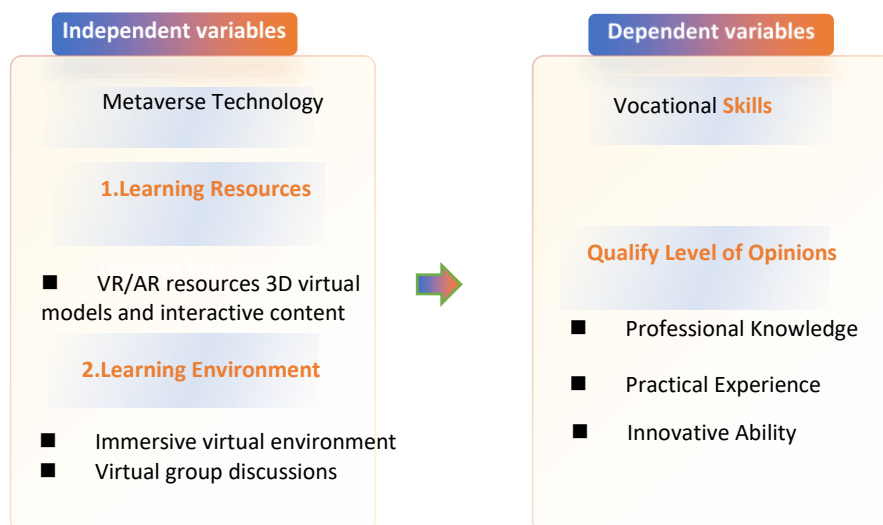


Figure 1.1 Research Framework



## 1.7 Definition of Key Terms

The terms used in this section should include all variables mentioned in the boxes for independent variable and dependent variable, including the sample.

Writing the meaning in Definition of Key Terms, every words, students should read books, theories, various substances and then write a summary in their own language. Therefore, this topic will not have references.

### Example Definition of Key Terms

#### Metaverse Technology

Metaverse Technology refers to a new digital platform that integrates multiple cutting-edge technologies such as virtual reality (VR), augmented reality (AR), artificial intelligence (AI), and blockchain. Through these technologies, Metaverse creates a highly immersive virtual environment that seamlessly combines the virtual world and the real world, providing innovative application scenarios for multiple fields such as education, entertainment, and social interaction. Users can fully immerse themselves in various activities and interact in these virtual experiences. It provides users with a brand-new digital space, expands people's interaction methods and experience methods, and has broad application prospects and far-reaching impacts. The application of Metaverse technology in education is particularly eye-catching because it provides rich learning resources, innovative learning environments, and interactive student participation methods for teaching. It encompasses a wide array of technologies and concepts, such as:

#### *Learning Resources*

*VR/AR Resources and Three-dimensional Virtual Models* .....

*Interactive Content* .....

#### *Learning Environment*

*Immersive Virtual Environment* .....

*Virtual Group Discussion* .....

*Immersive learning environment* .....

*In Immersive learning environment, visual, auditory and three-dimensional experiences are all crucial.*

*Vision:* .....

*Auditory:* .....

*Three-dimensional experience:* .....

*Vocational Skills* .....

*Professional Knowledge:* .....

*Innovation Ability* .....

*Practical Experience* .....

*Chinese Higher Education* .....

*Types of Higher Education* .....

*Postgraduate Education* .....

*Adult higher Education* .....

### **1.8 Benefit of The Study**

When the research is completed, who will benefit from this research, such as educational institutions, parents, teachers, etc., and how will they benefit?

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Related Theories**

The theory that is written must be related to independent variable and dependent variable. Each theory should be written with 2-3 volumes of research, references, and conclusions.

Theory Z (A, 2024) .....

.....

Theory Z (B, 2023) .....

.....

Theory Z (C, 2025) .....

.....

Summary Theory Z means ..... (You will write by yourself and you will summary from 3 person)

## **2.2 Related Studies**

Students collect journal articles related to independent variable and dependent variable because it will be useful when writing the discussion of the results in Chapter 5 because it is necessary to compare the results that students obtained with the results of the articles.

For writing references, you must study APA the documents specifically to avoid mistakes.

# **CHAPTER III**

## **RESEARCH METHODOLOGY**

3.1 Research Design

3.2 Samples and Sample size

3.2.1 Population

3.2.2 Samples

3.2.3 Sampling Methods

3.3 Data Collection

3.4 Research Instrument

3.5 Content Validity and Reliability

3.6 Data Analysis

For this topic (Research Methodology), it has already been presented. You can search for it.

The above information is a guideline for setting the research outline, Chapter 1-3.

1. Set a clear, comprehensive topic, independent variable, dependent variable and population
2. Organize the research framework according to the format of ISIC
3. Study theories, journals related to the topic of interest
4. Population, sample groups must be within their own potential to be able to collect data
5. Select statistics related to the objectives and hypotheses

## **APPENDIX**

### **Structure of ISIC form Chapter 1-3**

#### **CHAPTER I**

#### **INTRODUCTION**

1.1 Background and Statement of The Problem

1.2 Research Questions

1.3 Research Hypotheses (If applicable)

1.4 Research Objectives

1.5 Scope of the Research Study

1.6 Research Framework

1.7 Definition of Key Terms

1.8 Benefit of The Study

#### **CHAPTER II**

#### **LITERATURE REVIEW**

2.1 Related Theories

2.2 Related Studies

#### **CHAPTER III**

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3.1 Research Design

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3.2.3 Sampling Methods

3.3 Data Collection

3.4 Research Instrument

### 3.5 Content Validity and Reliability

### 3.6 Data Analysis

#### 3.6.1 Descriptive Statistics

#### 3.6.2 Inferential Statistics