

## CHAPTER III

### RESEARCH METHODOLOGY

Chapter 3 of this study consists of research design, data sources, data analysis, and data presentation.

#### 3.1 Research Design

This study used a comparative qualitative analysis method to obtain its aim, which was to identify and compare the realization of rhetorical moves and linguistic features in sports science research articles published in 5 levels of the Science and Technology Index (Sinta). The research results were then presented as a table and diagram, followed by an explanation.

#### 3.2 Data Collection

The data sources of this study were 120 research article abstracts in the field of sports science published in Sinta. Due to the nonavailability of sports science research articles published on Sinta-1, this study only used the data from five Sinta levels, namely; Sinta-2, Sinta-3, Sinta-4, and Sinta-5. One hundred twenty research article abstracts were taken from Sinta (24 abstracts from each Sinta level).

*Table 6 Description of data sources*

Data	Sinta level	Publication year	Number of abstracts
Research article abstracts published in Sinta	Sinta-2	2015-2022	24
	Sinta-3		24
	Sinta-4		24
	Sinta-5		24
	Sinta-6		24
		Total	120

The total of 120 research article abstracts were chosen because most of the previous studies regarding move analysis only took less than 120 data. The more the data is taken, it is expected that the result obtained can be more valid.

The study used a purposive sampling technique for collecting data. First, the sports science field of the study was typed into the search box in Sinta. Then, it was

found that sports science journals in Sinta only appear in five levels of Sinta, namely, Sinta-2 until Sinta-6. After that, the data were chosen with the criteria English abstracts in research articles published in the range of the year 2015-2022.

### 3.3 Data Analysis

The analysis was done using the five models theory by Hyland (2000) as the main framework to analyze the rhetorical moves, including move and step, and linguistic features, including tense and voice. The theory explains that an ideal abstract consists of Move 1 (Introduction; explain the context of the research article), Move 2 (Aim; state the intention of the research article), Move 3 (Method; give information regarding the design, procedure, data, concept, and instrument), Move 4 (Findings; provide the final product of the research article), and Move 5 (Conclusion; briefly summarize the content of the research article).

*Table 7 five-models theory by Hyland (2000)*

Move	Step	Function
M1	S1: Arguing for topic significance S2: Making topic generalization S3: Defining key terms S4: Identifying gap	Establishes the context of the articles and motivates the research.
M2	Stating the research's intention	Delivers the information about the research's intention.
M3	S5: Describing participant or data S6: Describing instrument S7: Describing Context or procedure	Describes the methodology of the research.
M4	Stating main product	States the main product of the research.
M5	S8: Deducing conclusion S9: Evaluating significance S10: Stating limitation S11: Presenting recommendation or implication	Interprets the result of the research.

The theory by Hyland (2000) was chosen since it is considered the most appropriate framework containing five main moves and taken from such a large scale of data; 800 abstracts from 8 fields in science and social science. Furthermore, Hyland (2000) has been used by majority research studies regarding abstract analysis (Amnuai (2019).

The first step to do the analysis was to classify the data into a table in Excel, consisting of the number, journal of the research articles, the title of the research articles, the authors, year of publications, the abstracts, moves, steps, tenses, and voices. Second, the data were analyzed manually to determine the rhetorical moves and the linguistic features. Third, the results of the analysis were inputted into a new table in Excel so that it could be tabulated the manifestation of rhetorical moves and linguistic features. Gustina (2020) described the term ‘occurrence’ as the total of moves or steps occurring in an abstract and the term ‘salience’ as the total of a particular move or step presented in an abstract. Lastly, the discussion and conclusion part were made to explain the result of the study. Below is one of the samples of data analysis:

*Table 8 Sample data analysis*

Year	Abstract	Move	Step	Tense	Voice
2018	Elderly gymnastics in Pucang Gading Nursing Home has been doing every morning, but followed by a little elderly people, so need investigated what elderly gymnastic activity take effect to body fitness, reduction body fat and reduction relapsed joint pain?	M1	S4	Present perfect continuous	Active
	This research has purposed to analyze what elderly gymnastic activity take effect to body fitness, reduction body fat and reduction relapsed joint pain?	M2	-	Present perfect	Active

Investigated sample was 20 elderly people who that followed elderly gymnastics continuously.	M3	S5	Simple past	Active
Body fat had been measured by used body fat caliper tool and fitness had been measured by calculation of pulse.	M3	S6	Past perfect	Passive
Obtained result has analyzed by regression and t test.	M3	S7	Present perfect	Passive
The results showed that the activity of elderly gymnastics has a positive effect on body fitness, as evidenced from the results of regression analysis with $F_{count} = 6.947 > F_{table} = 4.41$ .	M4	-	Simple present	Active
T test results obtained $t_{count} = 7.151 > t_{table} = 1.73$ , which means there is an increase in body fitness elderly after a routine follow gymnastics elderly.	M4	-	Simple past	Active
Elderly gymnastics also affect the body fat loss, as evidenced from the regression analysis with $F_{count} = 8.905 > F_{table} = 4.41$ .	M4	-	Simple present	Active

	T test results obtained t-count = -5,772 < -ttable = -1,73, which means that there is a decrease in body fat after following the elderly gymnastics on a regular basis.	M4	-	Simple past	Active
	Gymnastics elderly also affects the decrease of relapse of joint pain, proved from result of regression analysis with Fhitung = 9,544 > Ftable = 4,41.	M4	-	Simple present	Active
	The result of t test is t = -6,282 < -ttable = -1,73, which means that there is decrease of joint pain relapse after following elderly gymnastics regularly.	M4	-	Simple present	Active
	Concluded that elderly gymnastics take effect for fitness enhancement, body fat loss, and decreased relapse of joint pain in elderly people at Pucang Gadng nursing house Semarang.	M5	S8	Simple present	Passive