Perceptions of postgraduate students on academic writing skills: A metaphor analysis study*

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Abstract

In this research, it was aimed to determine the perceptions of postgraduate students towards academic writing skills through metaphors. In this context, the study group is composed of postgraduate (master and doctorate) students studying at Adnan Menderes University, Faculty of Education in the 2017-2018 academic year. In this context, 100 graduate students were interviewed by appropriate sampling method; an academic writing form was applied to these postgraduate students. In the research, descriptive approach has been adopted. Participants were asked to complete the sentences of *"academic writing is like............; because............"*. The metaphors obtained from the research classified according to their similarities and differences with the descriptive analysis technique and then tabulated according to the frequency values separated by the categories. Then, the findings were interpreted. Accordingly, the metaphors associated with academic writing vary. The metaphorical perceptions are collected under 9 categories / themes. The categories include *"a long / challenging/difficult process", "a process of producing / discovering new things", "an action that requires composition / analysis-synthesis / interpretation skill", "an action that requires expert support", "a multi-threaded action", "an action requires care in language and expression", "an unpleasant action", an action that gives joy"* and *"other"* titles. Findings suggest upper academic level students with academic writing experience refer mostly positive attitude towards academic writing.

Keywords: Academic writing; postgraduate students; metaphor; perception; writing skills

1. Introduction

Basic language skills are divided into skills based on acquisition / meaning (listening, reading) and transfer / narrative skills (speaking, writing). One of them is the act of "*transferring what we hear, what we think, what we design, what we see and live*" (Sever, 2004: 24). Writing is an ability that progresses more slowly than other language skills (Göğüş 1978: 236; Yalçın, 2002: 25; Maltepe, 2006: 5; Murray and Moore, 2006: 6) because, "*writing is based on a multidimensional mental production*

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like foundation, knowledge, experience, creative associative power, expression ability" (Aydın, 2015: 18). "The skill and ability of the individual to use the language develops in parallel with the progress of the cognitive sense" (Doğan, 2008: 82). According to Hughey (1983), writing is an essential form of communication for people, a tool for critical thinking and problem solving, helping the individual to self-renew and to control the environment.

1.1. Literature review

Writing is an extended process. Bowker states (2007: 32) "*In managing this process, there are certain steps that you can take every time you begin an assignment. These steps will help to maximise your efforts and make meaning out of the chaos and disorder that often appears when first embarking on any assignment*". Therefore, "[*T*]*eaching to write means teaching to think. The conversion of thinking into writing begins with the arrangement of the words to meet the thought, which are arranged side by side and convey it. The success of written expression and thought is determined by the conversion of words as a means of conveying thought into sentences in a certain order, of sentences into paragraphs, paragraphs into texts*" (Ünalan, 2006: 99). As the writing skill of the individual develops, the transfer of knowledge, the consideration of the thoughts and the arrangement are made more effective (Akyol, 2006: 93).

It is known that individuals who are faced with different writing efforts at each stage of primary education, usually exhibit a negative attitude towards writing, and as a result, writing ability does not develop at the expected level. Oral (2008) lists the reasons for not being considered as an attractive activity. Therefore, the necessity of strict adherence to the rules when writing, paper cleanliness, how letters should be drawn. The writing should be proper. Thus, the rules of linguistic knowledge are taught mainly in the first years of school. The author (Oral, 2008) then states that such activities tend to draw attention to the form rather than the content, and that the texts must conform to the same standards. "*However, writing, cannot be taught, only by patterns and rules*" (Binyazar and Özdemir, 2006: 13).

Karatay (2011: 1031) states that writing skills, are both an "intrinsic" complex process stemming from their own structure, the inability to follow the evaluation, and feedback and correction phases in the implementation process that, cannot be developed as competently as possible due to the "student" density of the classes or the other "external" problems due to the tutorial. This situation, unfortunately, is reflected in the achievement of literary products, even at the postgraduate and undergraduate level.

Writing when considered as a whole with form, content, language and narrative features; is a process with cognitive, affective, and psycho-motor dimensions. Different types of writing are met in the literatüre according to their purpose, structure and work (İleri, 1998: 105; Özdemir, 2005: 185-218; Akyol, 2006: 139-169; Günay, 2007: 230; Ünsal, 2008: 50; Coşkun, 2009: 251-259; Ataman, 2011: 25). If it is evaluated in its most general form, types of writing are based on three groups. These are official letters (petition, essay, report, business letter, minutes, etc.), articles (essays, articles, anecdotes, criticisms, essays, etc.) and writings based on fiction (fiction, legend, poem, story, etc.). In this context, "academic writing" is a type of writing that starts with the determination of a problem. It applies planning and has technical rules. Therefore, academic writing requires certain skills. These skills include sentence structure (i.e. how to arrange words in a sentence), organization (i.e. how to arrange ideas in a paragraph), and, of course, grammar and punctuation (Hogue, 2008: 2). Thus, there is a need for continuous research and revealing creativity in the subject, which requires advanced writing skills (Aydın, 2017: 277). Tarnopolsky and Kozhushko (2007) refer that "*this type of writing is hard to teach and learn because the level of standardization of texts to be written is much lower than in the written texts that were referred to above as belonging to practical writing category*".

Monippally and Pawar (2010: 29) state that academic writing *"needs to fulfil certain requirements such as communicating the significance of the research question, adequately describing the research process, describing the research outcome, and describing the implications of the research and research outcome"*. *"Therefore, the very nature of academic writing is also different from many practically-oriented or socially-oriented writing tasks. This is because academic writing tasks require you to look beneath the surface for underlying principles, theories, and concepts that can offer mainstream as well as alternative explanations for common practices, processes, and procedures"* (Bowker, 2007: 3).

Academic writing is often written about comparing two points, discussing a solution, introducing a project, summarizing information, reporting a research or experiment (Boardman and Frydenberg, 2002, cited in Bayat, 2014: 157). The distinguishing features of academic writing from other literary genres can be listed as topic choice, access to sources of information / preparations for research / thinking, language used, flow of narration (information organization) and ethics. These features may be summarised as follows:

The most important element in academic writing is the *selection of the subject*. At the selection phase of the subject, attention must be paid to the relevance, originality, adequacy of the relevant resources, capacity and interest of the researcher (Dura, 2005; Dinler, 2012).

Preparations for *accessing / researching / thinking about sources of information* are important to draw the proper and effective theoretical / conceptual framework of the research. It will also emphasize the importance of providing information that is not addressed before, that there are points to be investigated. Working with the number of resources available has also a scientific value. Because increasing the number of resources means using more analysis, synthesis, classification, interpretation and evaluation skills.

Academic writing is, first and foremost, an activity to be realized by individuals who have gained a *high level of language awareness* to organize their knowledge and experience through mental processes. Those who have structural and semantic problems in written expression cannot be expected to succeed in academic writing (Aydın, 2015), because the *"language style suitable for academic writing is formal"* (Monippally and Pawar, 2010: 78). Besides, the academic language has a serious, neutral, terminological, intricate structure according to the language of other written expression types. Sincere, artistic, everyday expressions or overturned sentences are points that should be avoided from academic writings. "*Academic writing requires the use of a measured scientific style. It means that certain results have been achieved by moving from the causes rather than the definite verdict. Care should be exercised when using generalized expressions without considering exceptions*" (Gillett, Hammond and Martala, 2009: 94).

An important detail in academic writing is the use of individual expressions. Although preferred by more researchers in recent years, Arnaudet and Barrett (1984: 68) warns about avoiding the "*I*" personal pronoun as much possible in academic writing, while Hartley (2008: 3) suggests the use of third person and passive structures. This is because the information obtained through research and reports is no longer subjective. Likewise, passive structured sentences (such as "... *was found*" instead of "*I found*") are preferable in terms of having a distance from the reader (Aydın, 2015: 39). Aydın (2015) argues that academic writing is a tool for sharing the results of a research with the public, but these researches require the use of terminology and technical jargons belonging to the field; so it is a fact that every research is a contribution to the public although it is a natural result that each person does not necessarily understand.

Certainly, every scientific research is based on previous researches. Adherence to certain rules in referencing the previous work is essential (Uçak and Birinci, 2008: 188). Adhering to these rules is

called scientific ethics. Therefore, "*academic dishonesty (plagiarism)* is, for example, using other researchers' findings without referencing, distorting or making academic texts through fabricated data. The writer is responsible for everything he/she writes and must act with the awareness that *plagiarism* is a kind of misconduct.

It is not easy to master all this, just as an academic text prepared in accordance with the mentioned features and technical and formal rules. Schriver (1989; cited in Hartley, 2008: 5) states that academic writing has three different difficulties. These are (1) expert-based methods (including reviews and evaluations of field experts, eg referee's article evaluation, etc.); (2) reader-based methods (including readers' comments and evaluations), (3) text-based measures (computer-based reading formulas and computer-based measures of style and vocabulary usage). Thus, students who are expected to write academic reports challenge these problems. Therefore, some studies mention this phenomena. For example, Bahar (2014) states that postgraduate students are experiencing many problems in their preparation of academic texts. Kan and Gedik (2016) found out, for example, the views of postgraduate students on academic writing before and after their degree. They reported that the students who did not feel well enough before their thesis and had difficulties, but, they felt relaxed after the completion of their studies.

It is expected that academic writing experiences starting with projects and assignments in the undergraduate learning process will be further developed at the postgraduate level and new academic texts will be revealed by following the progress of the individual in the world of science. The fact that academic writing skills are at the desired level is related to the development of the feasibility of the idea, which prioritizes the perceptions and views about this skill, because positive or negative perceptions can control approaches.

One way to determine the individual perceptions is to use metaphors. Demir (2005, 13) states that the term *metaphor* comes from Greek, *meta* (beyond) and *pherine* (transport, load) and used to mean *'to take [the meaning] from one place to another'*. As it is understood from this, the metaphor can be regarded as a way of conveying the meaning to another point. Therefore, it shows the individual's viewpoint about a subject, the way of thinking, and lead to creative observations.

Many studies on metaphors have been found in the literature (Aydın and Pehlivan, 2010; Akkaya, 2011; Akkaya, 2013; Çoban and Çeçen, 2013; Erdem, Bülbül, Gün and Oran, 2014; Ceran, 2015; Susar Kırmızı and Çelik, 2015; Gün and Şimşek 2017; Boylu and Işık, 2017; Uysal, 2017; Bayram, 2018). Despite there was a limited number of metaphor studies on writing skills (Lüle Mert, 2013; Ulusoy, 2013; Erdoğan and Erdoğan, 2013; Tiryaki and Demir, 2015; Bozpolat, 2015; Müldür and Çevik, 2017); not any metaphor study directly related to academic writing was found. Bayat (2009) for example, conducted research on the structural features of the academic writings of Turkish and English teacher candidates; Tok (2012), searched the development of academic writing skills in teaching Turkish as a foreign language; Bayat (2014), investigated the relationship between critical thinking levels of academic candidates and achievement of academic writing, and found that there was a significant relationship between critical thinking and academic writing achievement.

Yıldız and Gizir (2018) examined the perceptions of academic staff about the concepts of university, academics and scientific research through metaphors. They found that difficulty and labour of the nature of scientific research were uncertainty and infinity, systematic and planning, professional satisfaction, ethical principles. They went to categorize these metaphors as reaching and informing contribution, promotion / progress / score, self-cultivation / development of scientific research. However, when the metaphoric criterion is left on the edge, it is clear that there are a limited number of studies on academic writing.

1.2. Research questions

Determining how academic literacy skills are perceived and understood by postgraduate students can guide the students to be trained as competent and equipped individuals. This can also contribute to finding out the deficiencies in the field of academic writing. For this reason, the aim of this research is to determine the metaphorical perceptions of the postgraduate students towards the academic writing in the Education Faculty of Adnan Menderes University. Depending on this purpose, the following research questions were sought to answer:

1. How do the postgraduate students metaphorically express their thoughts on academic writing?

2. What kind of experiences do these postgraduate students have for providing their academic writing considerations?

2. Method

2.1. Research model

In this research, it was aimed to determine the perceptions of postgraduate students regarding academic writing skills through metaphors. The research is a descriptive study in which structured interview technique consisting of metaphorical discourse questions is used. The, descriptive analysis is used to describe the present situation of the mentioned subject.

2.2. Participants

This research was conducted on the people at postgraduate level who attended the departments with postgraduate education programs at Adnan Menderes University, Faculty of Education during the fall semester of 2017-2018 academic year. Appropriate sampling is preferred in the research. Appropriate sampling can be defined as sampling of individuals in close proximity who are easy to access and want to voluntarily participate in research (Erkuş, 2009). The use of this sampling method has been decisive for giving research speed and practicality, for being less costly, easier for researchers to study with a familiar sample (Yıldırım and Şimşek, 2006).

In this research, all the postgraduate students from different age groups and gender who are in the stages of the course and the thesis (master with (i.e. MSc) or without thesis (i.e. MA), doctoral degree with thesis (i.e. PhD), all the existing programs (classroom, preschool, social studies, mathematics and science education) were aimed at to be included in the study group. Therefore, 100 postgraduate students were reached; but 5 forms were excluded from the evaluation because they were improperly complied with, thus a total number of 95 participants were included in the survey. Information on participants is given in Table 1.

Table 1. Sample characteristics of the postgraduate students

		f	%
Gender	Female	63	66,32
	Male	32	33,68
	Total	**95**	**100,00**
Age group	21-25	37	38,95
	26-29	18	18,95
	30-33	15	15,79
	34-37	17	17,89
	38-41	7	7,37
	42 and above	1	1,05
	Toplam	**95**	**100,00**
Degree- Field	**MA level**		
	-Education Management, Inspection, Planning and Economy	6	6,32
	-Education Programs and Teaching	4	4,21
Degree- Field	**MSc level**		
	-Social Studies Education	27	28,42
	-Science Education	9	9,47
	-Mathematics Education	8	8,42
	-Classroom Education	7	7,37
	-Preschool Education	6	6,32
	-Education Management, Inspection, Planning and Economy	4	4,21
	-Education Programs and Teaching	3	3,16
Degree- Field	**PhD level**		
	- Education Programs and Teaching	13	13,68
	- Science Education	5	5,26
	-Education Management, Inspection, Planning and Economy	1	1,05
	- Classroom Education	1	1,05
	- Computer and Technology Education	1	1,05
Total		**95**	**100,00**

As shown in Table 1, 66% of the participants were female and over 50% of whom were among the 21-29 age group; 21 out of 95 participants were at the PhD level.

2.3. Data collection procedures

In this research, "*Metaphorical Perception Form for Academic Writing Skill*" was used as a data collection tool based on gaps filling. Metaphoric discourses based on quantitative interviewing with this form have been identified. Pilot application of the form prepared by the researchers with the opinion of five experts from four different departments was carried out on 10 postgraduate students and the final form was given according to the obtained results. In this direction, it was decided to include 5 questions on personal information (gender, age group, postgraduate program) and academic writing experiences. These questions are as follows:

      1. Academic writing is like this................ Because ....

      2. Do you have academic writing experience?

3. What have you written if you have had an academic writing experience?

4. What were the most challenging/difficult sections / situations during your academic writing?

5. What were the most comfortable / easy sections / situations during your academic writing process?

The first question in the form was the main point of the study. Questions 2 to 5 were asked to identify the reasons behind their positive or negative metaphor. The data were collected between December 15, 2017 and January 5, 2018 for a three-week period. Participants were first explained by exemplifying what the metaphor is; an average of 15 minutes time was given to fill out the form.

2.4. Data analysis

The data obtained from this study were analysed by descriptive analysis. "Descriptive analysis is (Yıldırım and Şimşek, 2013), where the data obtained are summarized and interpreted according to a pre-determined theme, frequently the direct quotations are used in a striking way to reflect the views of the individuals interviewed, and the results obtained are interpreted in terms of the causal relationships.

The form, created by the researchers, was applied a total of 100 postgraduate students, numbers were given for each form before the evaluation and all information was transferred to the computer environment. 5 forms of 35, 38, 39, 78 and 81, in which the metaphors were not related to the reasons given by the postgraduates were not included in the study. For example, academic writing is like a "*dandy brush*", "*because a heavy language is used instead of simple. A feeling of belonging to a specific group is created so that a simple citizen cannot understand*". Another form included the metaphor of "*science*", "*because academic writing is done by enormous labour, doing research and gathering data. The work done is as definite and unchanging as science*". Therefore, the metaphors in 95 forms were examined and classified under categories determined by similarity and interrelationships. The data were then presented in a tabular form with frequency values. The answers to the other questions were also written in subheadings with separate titles, tabulated with frequency values.

2.5. Validity and reliability

Even though this article uses descriptive tools due to the presence of the researcher at the focus of a research influences bias / persuasiveness. Therefore, it is necessary to take some precautions to dismiss preliminary knowledge, experience and beliefs when interpreting the data. In their studies, Maxwell (1992), Kwale (1996), Hammersley (1998) and Silverman (2001) reported that researchers collecting data will increase the value by researching the validity and reliability of the investigated subject (cited in Yıldırım, 2010: 81).

- The procedures to increase the validity and reliability of this research are as follows:
- The form developed to collect the data of the study was prepared by taking the opinions and recommendations of the five experts working in the Adnan Menderes University, Faculty of Education Turkish and Social Sciences Education, Education Sciences, Mathematics and Science Education and Elementary Education Departments. Then, the pilot form was applied to ten postgraduate students and the form was finalized according to the results obtained.
- Collection of the research data lasted three weeks. Participants were asked to fill in the metaphorical perception form for academic writing skills that were collected in one session

and lasted for an average of 15 minutes. Care has been taken to ensure that the people voluntarily participated in the research.

- In order to ensure maximum diversity in the working group, female and male participants from different educational backgrounds (MA, MSc, PhD levels) and all existing programs (classroom, preschool, science, social studies, mathematics education etc.) have been reached.
- In order to categorize the collected data, two researchers set up separate categories in order to ensure reliability among the researchers where there was no unity, another researcher's opinion was consulted.
- The opinions and recommendations of the field experts were used for accurate and effective presentation of the categories that were created.
- The scope, methodology and stages of the research (collecting data, processing data, analysing-synthesizing, interpreting and reaching results) were clearly demonstrated.
- Obtained data and the results were clearly related.
- The raw data (metaphorical perception forms for academic writing skills) of the research were kept that they can be presented to the supervision of other researchers.
- Processes carried out with expert opinions were then presented to the same experts, and a common understanding was provided.

3. Findings and discussion

In this section, findings are presented according to the order of the research questions, the metaphors developed by the postgraduate students towards the academic writing skills, and the categories formed by the way they justified these metaphors, the academic writing experiences, the situations that were challenged and/or being comfortable during academic writing. The data are presented in tables with their frequency values.

3.1. Findings of how postgraduate students express their thoughts metaphorically in academic writing

A total of 100 forms were enumerated before the evaluation and a total of 95 valid metaphors were identified. These metaphors are given in Table 2 together with the frequency values.

Table 2. Metaphors for academic writing skills by the sample group of postgraduate students

Participant	Metaphors	f	Participant	Metaphors	f
1	Sudoku	1	49	Very difficult exam	1
2	Landscape image interpretation	1	51	Moving away being social	1
3	Drawing a picture	1	52	Breaking away from things we like	1
4	Puzzle	1	53	Extinguishing a burning petroleum product	1
5	A sneeze request that suddenly flies	1	54	Rainbow	1
6	Progression of the tortoise	1	55	Carpet weaving	1
7	Combining clothes	1	56	Newborn child	1
8 9	Digging a well with a needle	2	57	Hitchhiking	1
10	Emancipation	1	58	Nature	1
11	Scrutiny (splitting hairs)	1	59	A drop in the ocean	1

No	Metaphor	f	No	Metaphor	f
12, 32, 90	Needle search in a haystack	3	60	A glass of water with vinegar	1
13	Sports competition	1	61	Making art for art	1
14	Processing raw material	1	62 70	Labyrinth	2
15	Cognitive therapy	1	63	Climbing on a tree	1
16	Grasping at straws	1	64 83	Artwork	2
17	Encyclopedia	1	65	Dam	1
18	Library	1	66	Going on a vacation	1
19	Driving a car	1	24, 50, 67, 100	Building construction	4
20 71	Baking a cake	2	68	An explorer ship	1
21	Nested rings	1	69	Parenthood	1
22	Riding a bicycle	1	72	The military	1
23	Knowledge ball	1	74	Grinder	1
25	Floating system	1	75	Acrobatics	1
26	Flower seed	1	76	Making sculpture	1
27	Raising a child	1	77	Algorithm	1
28	Staple	1	79	Programming	1
29 99	Childbirth	2	80	*Bülent Ersoy* (a famous singer)	1
30	Adolescent child	1	82	Surgery	1
31, 73	Climbing a mountain	2	84	Learning a skill	1
33	Advocacy	1	85	A spiral structure	1
34	A long way	1	86	The formation of a cocoon	1
36	Fruitcake	1	87	Gold	1
37	*Eti Brownie* (a kind of chocolate cake)	1	88	The North Star	1
40	Constantly growing organisms	1	89	Alphabet	1
41	Passing a difficult road	1	91	Nervous system	1
42	Universe	1	92	A way of saying "*be decent*" in academic language	1
43	Development of mobile phone	1	93	Repairing a broken car	1
44	Inheritance	1	94	Learning to read and write	1
45	Torture	1	95	Choosing friends	1
46	Alarm clock	1	96	Fruit tree	1
47	Taking a very little step in a long time	1	97	Sequoia plant	1
48	Drowning in the ocean	1	98	Visit a new country	1
				Total	**95**

Table 2 represents the most common metaphors expressed by postgraduate students regarding academic writing are "*building construction*" (f: 4), "*needle search in a haystack*" (f: 3), "*digging a well with a needle*" (f: 2),"*childbirth*" (f: 2), "*mountain climbing*" (f: 2), "*labyrinth*" (f: 2) and "*artwork*" (f: 2). The metaphors produced have been quite varied and expressed mostly only once. The metaphors seem to focus mainly on academic writing difficulty, taking a long time, worries about creation/production as well as too many rules and unpleasant activities.

3.1.1. Conceptual categories of metaphors developed by postgraduate students on academic writing skills

The 95 valid metaphors developed by the postgraduate students in relation to their academic writing skills were examined together with their reasoning, which were then collected in 9 categories. These categories include "*a long and difficult process*" (f: 23), "*the process of producing / discovering new things*" (f: 22), "*an action that requires skill in composition / analysis-synthesis-interpretation*" (f:

17), "*an action that requires expertise/expert support*" (f: 8), "*a multi-threaded action*" (f: 7), "*an action that requires care in terms of language and expression*" (f: 5), "*an unpleasant action*" (f: 5), "*an action that gives joy*" (f: 4) and "*other*" (f: 4).
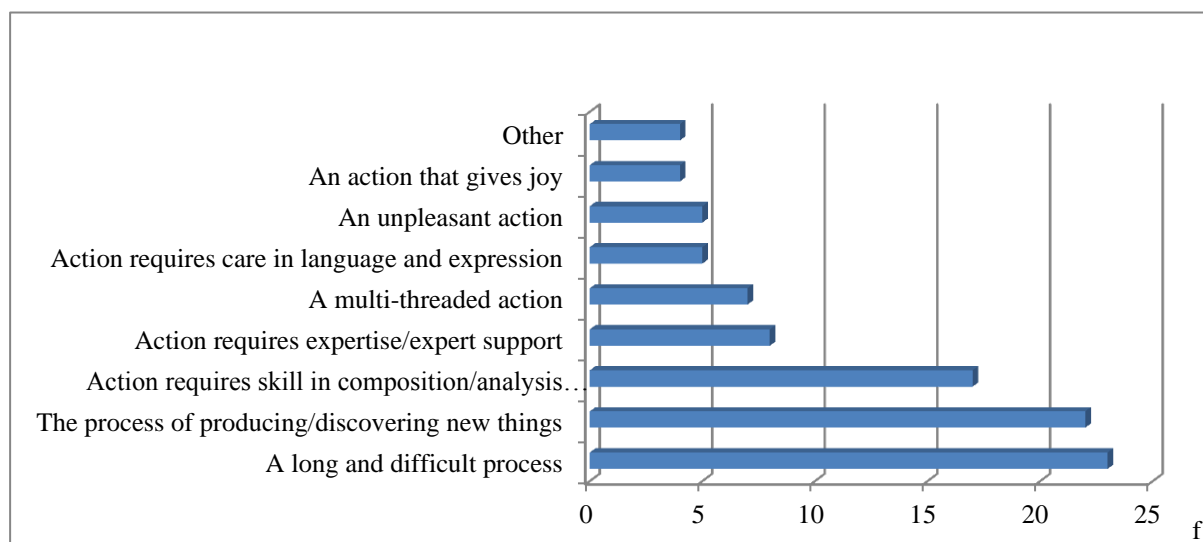

Figure 1. Categorical distribution of the metaphors

As can be understood from the frequency values in each category, academic writing is perceived primarily as an "action requiring composition / analysis / synthesis / interpretation skill" based on "long and difficult", "producing / discovering new things" (f 23, 22, 17). Although the number of metaphors is less than 8 in the first four categories, the rest also contains remarkable metaphors and their reasoning.

3.1.2. Distribution of metaphors developed by postgraduate students about academic writing skills by categories
Each metaphor has been included in a certain category according to their reasoning. Information on which categories of metaphors are evaluated is given in Table 3.

Table 3. Conceptual categories of metaphorical perceptions about academic writing skills

Categories	Metaphors (f)
A long and difficult process (f: 23)	*Progression of the tortoise (1), digging a well with a needle (as an idiom) (2), scrutiny (splitting hairs, as an idiom) (1), needle search in a haystack (as an idiom) (3), grasping at straws (as an idiom) (1), a flower seed (1) raising a child (1), an adolescent child (1), mountain climbing (2), a long path (1), passing a difficult road (1), taking a very little step in a long time (1), extinguishing a burning petroleum product (1) learning a skill (1), a labyrinth (2), a dam (1), the formation of a cocoon (1), choosing friends (1).*
The process of producing/ discovering new things (f: 22)	*A sneeze request that suddenly flies (1), emancipation (1), riding a bicycle (1), knowledge ball (1), floating system (1), childbirth (2), constantly growing organisms (1), universe (1), development of mobile phone (1), rainbow (1), carpet weaving (1), hitchhiking (1), building construction (4), an explorer ship (1), the north star (1), learning to read and write (1), fruit tree (1), visiting a new country (1).*
An action that requires skill in composition/ analysis/synthesis/ interpretation (f: 17)	*Sudoku (1), landscape image interpretation (1), drawing a picture (1), puzzle (1), combining clothes (1), processing raw material (1), library (1), baking a cake (2), nested rings (1), staple (1), parenthood (1), grinder (1), a spiral structure (1), gold (1),*

	nervous system (1), repairing a broken car (1).
An action that requires expertise/expert support (f: 8)	*Encyclopaedia (1), a newborn child (1), climbing on a tree (1) artwork (2), acrobatics (1), making sculpture (1), surgery (1).*
A multi-threaded action (f: 7)	*Sport competition (1), driving a car (1), nature (1), military (1), algorithm (1), programming (1), alphabet (1).*
An action that requires care in terms of language and expression (f: 5)	*Very difficult exam (1), a glass of water with vinegar (1), Bülent Ersoy (a famous singer) (1), the way of saying "be decent" in academic language (1), Sequoia plant (1).*
An unpleasant action (f: 5)	*Torture (1), alarm clock (1), drowning in the ocean (1), moving away being social (1), breaking away from things we like (1).*
An action that gives joy (f: 4)	*Cognitive therapy (1), fruitcake (1), Eti Brownie (a kind of chocolate cake) (1), going on a vacation (1)*
Other (f: 4)	*Inheritance (1), a drop in the ocean (1), advocacy (1), making art for art (1).*

In this part of the study, the metaphors and the reasons for each category are given in a tabular form. Table 4 contains the findings of the "long and difficult process" category:

Table 4. Findings of the "*long and difficult process*" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
6	*Progression of the tortoise*	*Problems, hypotheses, experiments and solutions take a considerable amount of time in the direction of the stated objectives.*	1
8	*A well with a needle (as an idiom)*	*You have to do a lot of reading before each step you have written, each step of which requires a separate labour in itself.*	2
11	*Scrutiny (splitting hairs, as an idiom)*	*First of all, it is necessary to have the scientific research ability and master the literature. An original text should be written that will determine the need in and contribute to the area.*	1
12	*Needle search in a haystack (as an idiom)*	*You look for expressions to support your findings in thousands of research.*	3
16	*Grasping at straws (as an idiom)*	*Too much detail, too many thoughts and resources to consider. The more literature searches are made, the more information is obtained in that area.*	1
26	*A flower seed*	*Just as a seed of a flower grows on the Earth, it requires labour, interest, and basic nutrients such as water and sunlight; academic writing also requires a foundation. It becomes an academic writing with these necessary works and efforts.*	1
27	*Raising a child*	*Just like the struggle of raising your child in the best way, you think what you live every minute, what you need to do, and so on. At night you will be sleepless, get tired; but you will also enjoy it.*	1
30	*An adolescent child*	*In this process, it is about to go crazy, to scream but not express oneself. It's a very tough process. When you're done, you'll take the first step in maturity.*	1
31	*Mountain climbing*	*It gives you a feeling of being easily visible at the beginning of your work, but when you start working you get tired and want to go back on the half way. But you cannot answer whether returning or reaching the summit are difficult.*	2
34	*A long path*	*Patience and serious effort are needed to complete it.*	1

41	*Passing a difficult road*	*We go through many different stages and skip tough conditions, steps, and write a scientific article. At these stages, we are affected by many limiting factors.*	1
47	*Taking a very little step in a long time*	*It's a very long and difficult process. You feel you have never progressed as you have absorbed different perspectives and resources.*	1
53	*Extinguishing a burning petroleum product*	*A fire containing a petroleum product is intense smoky and goes out for a long time. In academic writing, we do not see anything at first as if there was a dense smoke, and it scares us. But if we move with patience and care, we will definitely reach the end.*	1
70	*A labyrinth*	*There are many different ways to find the exit and reach the destination. Although these roads are tiring and complicated, we can find the right way by being patient and determined. If you follow the wrong way or method, you can not get out.*	2
65	*A dam*	*It accumulates very slowly, and with the filling, it fulfils the human need for information like water. Never stops, always accumulates.*	1
84	*Learning a skill*	*It is not something that can be achieved easily. It is a process that gets better by seeing mistakes. In the first stage it is done by looking at an example, and then it is made independently over time.*	1
86	*The formation of a cocoon*	*It requires a laborious, rigorous and long process like the formation of a cocoon.*	1
95	*Choosing friends*	*When choosing a friend, we decide after a long period of time that he is the right person, knowing in all aspects, testing with appropriate approaches.*	1
		Number of total responses	**23**

According to Table 4, the metaphor of "*needle search in a haystack*" is the most frequently repeated metaphor (f: 3). The reason, among the ideas to support this metaphor is the phrase of participant 12: "*You look for expressions to support your findings in thousands of research*". It is thought that the needle is sought in the haystack, which seems to be equivalent to find supportive statements about the topic from the literature.

Similarly, the metaphors of "*digging a well with a needle,*" "*mountain climbing*" and "*labyrinth*" with a frequency of 2 each also refer to the fact that academic writing is a time consuming process. Expressions like "*progress of a tortoise*" with a frequency of 1, "*scrutiny/splitting hairs*", "*raising a child*", "*passing a difficult road*", "*a dam*" are also included in this category. Participant 53's metaphor of "*extinguishing a burning petroleum product*" is expressed as "*a fire containing a petroleum product is intense smoky and goes out for a long time. In academic writing, we do not see anything at first as if there was a dense smoke, and it scares us. But if we move with patience and care, we will definitely reach the end*". Participant 65's metaphor of "*a dam*" is expressed as "*it accumulates very slowly, and with the filling, it fulfils the human need for information like water. Never stops, always accumulates*". Moreover, the reason given by the participant 70's metaphor of the "*labyrinth*" is "*there are many different ways to find the exit and reach the destination. Although these roads are tiring and complicated, we can find the right way by being patient and determined. If you follow the wrong way or method, you can not get out*". Therefore, it is seen that the process is "*long and difficult* ".

Table 5 contains the findings of the category "producing / discovering new things".

Table 5. Findings of the "process of producing/ discovering new things" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
5	*A sneeze request that suddenly flies*	*You say I have associated this very well with my writing, as soon as you start writing, it breaks away. Similarly, you say the writing must add something valuable to the literature you see a lot of repeated examples. Therefore, you have to write the most different.*	1
10	*Emancipation*	*Too many resources are read. Later, by integrating all these with the relevant subject, you reveal yourself in a way of working, your style of writing.*	1
22	*Riding a bicycle*	*Once you discover and learn, it is unforgettable after small repetitions.*	1
23	*Knowledge ball*	*We expect from academic writing to offer information that has been compiled from a scientific point of view and expect the interpretation left to the reader.*	1
25	*Floating system*	*Before you write, the necessary readings to fill your depot should be done and the literature should be examined as well. Filling the information like the water in the floating system and then emptying it is the outline of the academic writing.*	1
29	*Childbirth*	*You make a lot of sacrifices until you give birth, and then you are happy when the child is born. Academic writing is something like that. You give a lot of labour; then you'll be happy when your paper is to be published.*	2
40	*Constantly growing organisms*	*Just like organisms, thanks to academic writings, the body of science grows and evolves every second.*	1
42	*Universe*	*Science is as big as the Universe. We can answer every question with science. Academic writing is also the foundation of science.*	1
43	*Development of mobile phone*	*As technology improves, a better model of a mobile phone is developed. As academic writings are written, new things emerge as the level of knowledge and thinking increases.*	1
54	*Rainbow*	*When we look at the rainbow, we think it is unique and very beautiful. Academic writing is also unique. Each colour as in the rainbow is the equipment of the researcher.*	1
55	*Carpet weaving*	*Before writing, you think you would focus on the pattern of your carpet, the colours, the shape in your head. Then you use sources carefully as the harmonious stitch loops. At the end of the slow progress and patience, you are proud of creating something new.*	1
57	*Hitchhiking*	*Patience, meticulousness and interest in exploration are required to endure hungry days without having sleeplessness or finding a soft bed. People who do not like to read constantly in academic writing cannot discover new things and do new research.*	1
67	*Building construction*	*How the material used affects the stability of a building, it is necessary to say something different, to do an unprecedented work.*	4
68	*An explorer ship*	*An explorer's ship opens with curiosity to the seas. He has a goal to reach. He may encounter obstacles with difficulties on the journey. But if you continue with patience, you will discover new places and beauties.*	1
88	*The North Star*	*Just like the North star, academic writings are guiding people. It allows people to be knowledgeable and reach the destination easily.*	1
94	*Learning to read and write*	*At first you do not know how to do it or where to start. If you are familiar only theoretical, the practice is painful. But as you write it opens up and your confidence increases as you master the subject; thus providing you with a good work.*	1
96	*Fruit tree*	*With the idea of writing a seed falls on the soil, it sprouts by the thesis proposal, the branches with the literature search, strengthens the roots with the resources, opens the flowers with its presentation and gives its*	1

		fruit with acceptance of the publication.	
98	*Visiting a new country*	*In each study you enter a process exploring new things in which you will need your previous experiences.*	1
		Number of total responses	**22**

According to Table 5, "*building construction*" is the most frequent metaphor (f: 4). Participant 67 justified this metaphor as "how *the material used affects the stability of a building, it is necessary to say something different, to do an unprecedented work*". This is related to the connection of the building's strength with the "material used". Explanation of the participant 29 for the metaphor of "*childbirth*", which is repeated twice, is "y*ou make a lot of sacrifices until you give birth, and then you are happy when the child is born. Academic writing is something like that. You give a lot of labour; then you'll be happy when your paper is to be published*".

In this category, there are quite different metaphors with a frequency of 1. Some metaphors are associated with the constant growth of science ("*constantly growing organisms*" and "*the Universe*"). Participant 40 explained that "*just like organisms, thanks to academic writings, the world of science grows and evolves every second.*" Participant 42 wrote that "*science is huge like the universe. We can answer everything with science. Academic writings are also the foundation of science*".

The metaphors of "*floating system*", "*rainbow*", "*carpet weaving*", "*fruit tree*" and "*learning to read and write*" points out the emergence of new products. The reason for the "*rainbow*" metaphor described by participant 54 is "w*hen we look at the rainbow, we think it is unique and very beautiful. Academic writing is also unique. Each colour as in the rainbow is the equipment of the researcher*". The reason for participant 55's metaphor of "carpet weaving" is "*before writing, you think you would focus on the pattern of your carpet, the colours, and the shape in your head. Then you use sources carefully as the harmonious stitch loops. At the end of the slow progress and patience, you are proud of creating something new.*"

Table 6 contains the findings of the category "an action that requires composition / analysis / synthesis / interpretation skill":

Table 6. Findings of the "action that requires skill in composition/ analysis/synthesis/ interpretation" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
1	*Sudoku*	*In academic writing, it is aimed to reach the whole by finding pieces, catching clues, and getting out of the key concepts.*	1
2	*Landscape image interpretation*	*Just as a landscape picture is interpreted moving from previously seen images, the process of reporting an academic subject is a unique interpretation of what the author reads.*	1
3	*Drawing a picture*	*As how the harmony of the colours in a picture is important completeness is also important in academic writing. Fluid, interrelated subjects should be used.*	1
4	*Puzzle*	*It requires transferring different sentences from different sources in an order. You need to use the correct part in the right place.*	1
7	*Combining clothes*	*It is important that the parts fit together. We need to make them whole. If the pieces are incompatible, the subject is incomprehensible and the aim cannot be reached.*	1
14	*Processing raw*	*As in the case of raw material processing and getting the final*	1

	material	*shape, in academic writing, all the information must be reached before writing the report and the data must be compiled according to the determined method.*	
18	Library	*There are many sources about the subject, thus a lot of information is compiled.*	1
20	Baking a cake	*Just as the materials to be used when baking cakes are carefully selected according to certain ratios, materials should be gathered in academic writing with a rigorous literature search and the writing should be shaped as making the cake.*	2
21	Nested rings	*Without a section the others are always missing. It is necessary to present the findings by connecting all the parts correctly.*	1
28	Staple	*Academic writing is the gathering of the information that is reached by examining a lot of sources into a meaningful whole.*	1
69	Parenthood	*If one wants to educate his/her child in a way that is attentive and desired, the same care has been taken in the research according to the scope and purpose.*	1
74	Grinder	*We will produce a comment and a conclusion in the work we put forth by synthesizing the information.*	1
85	A spiral structure	*By organizing the relationship between different but relevant information and topics, spiral wholeness is created. Creating this wholeness is a complex process.*	1
87	Gold	*The gold goes through a lot of processing to make it available after it is found. The more the hand labour, the fine workmanship, the more the value increases. Literature search also increases the value of academic writing by trying to put together meticulously all the elements.*	1
91	Nervous system	*Neural networks allow perception of the environment, processing of information, organizing activities of organs. There are many systematic orders from the problem to the end. Just as the research is completed, a robust, balanced product emerges, just as the nervous system encircles the body, helps create and maintain the balance of the body.*	1
93	Repairing a broken car	*If a part of a vehicle is missing, it will be condemned to malfunction again in the future. If there are no meaningful transitions between the parts, there will be no perfect functioning like a broken tool.*	1
		Number of total responses	**17**

According to Table 6, the frequency value of all metaphors, except from the metaphor of "*baking a cake*" (f: 2), is 1. Participant 20 writes the reason for this metaphor: "*just as the materials to be used when baking cakes are carefully selected according to certain ratios, materials should be gathered in academic writing with a rigorous literature search and the writing should be shaped as making the cake*". That can be commented that the academic writing can be perceived as examining sources, using appropriate materials in their own work and arranging / working the plans in accordance with certain rules.

Simulations such as "*sudoku*", "*puzzle*", "*combining clothes*", "*spiral structure*" and "*nervous system*" mean reaching wholeness through a struggle or an effort in academic writing. As a matter of fact, participant 1's statement is that "*in academic writing, it is aimed to reach the whole by finding pieces, catching clues, and getting out of the key concepts*", or, as participant 28 did, academic writing is like a "staple" that brings together the pages, b*y saying that "a*cademic writing is the gathering of the information that is reached by examining a lot of sources into a meaningful whole*".

Participant 2's metaphor for "*landscape image interpretation*" draws more attention to the previous research (because of the participant's "*moving from pictures*" expression), in other words, to the related literature: The process of reporting an academic subject, such as interpreting it from the pictures seen, is a unique interpretation of what the author has read. Participant 69's attention to the "*parenthood*" metaphor emphasizes that the academic writing should be in line with its scope and purpose: "*If one wants to educate his/her child in a way that is attentive and desired, the same care has been taken in the research according to the scope and purpose*".

Table 7 contains the findings of the "action that requires expertise / expert support" category:

Table 7. Findings in the "action that requires expertise/expert support" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
17	*Encyclopaedia*	*When writing an academic article, you will have to master about the subject like encyclopaedia, you need to have all kinds of knowledge about the subject.*	1
56	*A newborn child*	*The newborn baby is fed only with the help of her mother; he/she grows, develops, and hold on to life. Academic writing is also. It does not show improvement without consultant support.*	1
63	*Climbing on a tree*	*When we attempt to climb on a tree, we try to climb many times and when necessary we get help from someone. When we need academic help we will get support from our advisor.*	1
83	*Artwork*	*The artist must be impressive despite the fact that many paintings that process the same theme have the same feelings and thoughts as an original line or touch. Passing situations through their own senses adds extraordinary character. Academic writing also requires this mastery.*	2
75	*Acrobatics*	*Knowledge, skill and experience are needed to do this job skilfully. Academic writing is like acrobatics because it is a process that requires mastery.*	1
76	*Making sculpture*	*Sculpting requires skill. The statue is seen by everyone; but an educated, sanctified eye understands what is worthwhile.*	1
82	*Surgery*	*Surgery is a specialist job that is very serious and requires attention. Incomplete or incorrect information can have very serious consequences. Plagiarism, incomplete or erroneous information will lead to information pollution in the academic world, which, if used in other investigations, will cause the error to multiply exponentially. This is vital for science.*	1
		Number of total responses	**8**

The metaphor of "*artwork*" is repeated twice (Table 7). The reason for this metaphor of by the participant 83 is "the *artist must be impressive despite the fact that many paintings that process the same theme have the same feelings and thoughts as an original line or touch. Passing situations through their own senses adds extraordinary character. Academic writing also requires this mastery*". Here, "*original*" refers to a certain "perceptual filtering" and "*mastery*" phrases "*expertise*".

The "*encyclopaedia*", "*newborn child*", "*climbing a mound*", "*acrobatics*", "*making sculpture*" and "*operating*" all point to the need for expertise or expert support of the academic liaison. For example, participant 82 stated the reason: "*Surgery is a specialist job that is very serious and requires attention. Incomplete or incorrect information can have very serious consequences. Plagiarism, incomplete or*

erroneous information will lead to information pollution in the academic world, which, if used in other investigations, will cause the error to multiply exponentially. This is vital for science", he notes, to what extent the expertise is "*vital*".

Table 8 contains the findings of the fifth category, "a multinational action":

Table 8. Findings in the "*multi-threaded action*" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
13	*Sport competition*	*The referee can determine the fate of the match. You also expect feedback from the referees in your work, and any referee may ask different kinds of requests. Each sport branch has a wide variety of rules to follow. Academic studies also need to follow many rules. With the academic premium promotion, it turned into a full-on competition.*	1
19	*Driving a car*	*We must know certain rules before driving. Just as in academic writing, continuity and knowing the rules are important.*	1
58	*Nature*	*Nature has a balance within itself. Each is similar to a gear wheel. If one of these teeth gets damaged, everything will go bad. The disappearance of cattle in the food chain affects the lives of other species. A mistake or inadequacy in academic writing can also make the whole work meaningless.*	1
72	*Military*	*The thesis can be reconciled with the discipline of the military as it is the rules which must be strictly obeyed when writing articles.*	1
77	*Algorithm*	*A scientific study proceeds in certain stages. There is a starting point and a result. There are progress and possibilities. So this is similar to the algorithm.*	1
79	*Programming*	*It is algorithmically advancing. Everything is tracked step by step and the introversion is done. In this way an academic writing emerges.*	1
89	*Alphabet*	*In order to be understandable and meaningful, the letters must be used in certain rules and order. Academic writing also has certain rules that must be obeyed.*	1
		Number of total responses	**7**

Table 8 explains the reasons for the formation of "multi-threaded" category of academic writing; "*sports competition*", "*driving*", "*nature*", "*military*", "*algorithm*", "*programming*" and "*alphabet*" are the related metaphors. For example, participants 77 and 79 who are students in the postgraduate mathematics field note that the academic writing progresses step by step and thus comes to a conclusion when doing "*algorithms*" and "*programming*". The metaphor of "*military*" also explains well that the academic writing emphasizes the need to fulfil a great deal of necessity: "*The thesis can be reconciled with the discipline of the military as it is the rules which must be strictly obeyed when writing articles*".

Table 9 contains the findings of the category "an action that requires care in terms of language and expression":

Table 9. Findings in the "action that requires care in terms of language and expression" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
49	*Very difficult exam*	*If we have to do the research we must do the best and the literature should be well scanned, so we should express it as unspoken or written. We must build our own sentences by trying and synthesizing. This is so hard.*	1
60	A *glass of water with vinegar*	*If we adjust the ratio of water and vinegar properly, so that when we drink in the morning, the toxins are removed from the body. If the rate is wrong, it will taste very bad, it may not be drunk. In academic writing, it is difficult to read the article if a formal and abbreviated language is used. A plain and understandable language make it easy to read.*	1
80	*Bülent Ersoy (a famous singer)*	*A language other than the spoken language is used. Academic writing is not written that everyone can understand.*	1
92	*The way of saying "be decent" in academic language*	*It is neither as if you would write to your newspaper, nor to talk to your friend or to tell your students a lesson. It requires a simple language that even a low-educated person can understand, as well as you must have high-tech qualifications suitable for writing rules.*	1
97	*Sequoia plant*	*Academic writing has different growth and development stages, just like trees. Sequoia trees are rapidly growing trees with very large diameters. There are differences between the writings of an author related to their development by the time. The written language develops and becomes an expert writing that reaches wide masses and sheds light on current problems*	1
		Number of total responses	**5**

Table 9 contains metaphors such as "*a very difficult exam*", "a *glass of water with vinegar*", "*Bülent Ersoy*", "*a way of saying "be decent" in academic language*" and "*Sequoia plant*". With these metaphors, explanations have been made about how the language and expression are used in academic writing. For example, participant 49's explanation for the metaphor for "*a very difficult exam*" is that "*we have to do the research we have done best and the literature should be well scanned, so we should express it as unspoken or written. We must build our own sentences by trying and synthesizing. This is so hard*". Again, the fact that the academic writer is far from the spoken language is identified with the participant 80's "*Bulent Ersoy*" metaphor, and the reason given is "a *language other than the spoken language is used. Academic writing is not written that everyone can understand*".

Table 10 contains the findings of the category of "an unpleasant action":

Table 10. Findings in the "*unpleasant action*" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
45	*Torture*	*Since I am a mathematics teacher, it is like torture to do research about how to remove negative thoughts about this course.*	1
46	*Alarm clock*	*It reminds me of the necessity of planning time and being stressed,*	1

		getting up early, sleeping late at night.	
48	*Drowning in the ocean*	*We do not know how to express what or how to write an article. There are many ideas in our minds, the way we want to use them, but we do not know how doing it. We're drowning in the ocean.*	1
51	*Moving away being social*	*It requires very long research and study process. A large part of your time is spent doing desk and PC research, learning the rules, and getting away from normal life.*	1
52	*Breaking away from things we like*	*Academic writing demands that we leave everything to one side and turn to the work we want to do, to spend our whole day, our hours. Even if we are in another activity for a moment, we still think about what we cannot write.*	1
		Number of total responses	**5**

According to Table 10, the metaphors of "*torture*", "*alarm clock*", "*drowning in the ocean*", "*moving away being social*" and "*breaking away from things we like*" are justified by the fact that participants do not like academic writing. However, only 5 people out 95 showed negative attitude on this issue. Participants at the beginning of the graduate study who do not have academic writing experience may face more negative attitudes toward academic writing. Being a few numbers in negative approach in this study can be explained by the high level of readiness of the postgraduate students towards academic writing.

While the reasons for the metaphors of participants 45 and 46 focus on the untidiness and the stresses of the academic writing process, participant 47 speaks of drowning in the thoughts of what to do. The metaphors of participants 51 and 52 focus on being away from social life, everyday affairs, and having not a self-time while academic writing.

Table 11 contains the findings of the "pleasure-giving action" category:

Table 11. Findings in the "*action that gives joy*" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
15	*Cognitive therapy*	*Many cognitive processes such as reasoning, problem solving, algorithmic thinking and associating are actuated. It is also a great pleasure to finish each stage.*	1
36	*Fruitcake*	*You encounter and taste different situations everywhere.*	1
37	*Eti Browni (a kind of chocolate cake)*	*Taste is understood in the third, fourth bite. For the best taste you need to eat plenty.*	1
66	*Going on a vacation*	*Going on a holiday makes us excited. We do a research about the place to be seen, and we prepare a suitcase according to the conditions there. Preparations are also made in academic writing; resources are collected regarding the target.*	1
		Number of total responses	**4**

It is seen in Table 11 that postgraduate students are referred to as "*cognitive therapy*", "*fruitcake*", "*Eti Brownie*" and "*going on a vacation*" metaphors. For example, participant 15, for the metaphor of "*cognitive therapy*", reports that "*many cognitive processes such as reasoning, problem solving, algorithmic thinking and associating are actuated. It is also a great pleasure to finish each stage*" Participant 37 says about the metaphor of "*Eti Browni*" that "*taste is understood in the third and fourth*

bite. For the best taste you need to eat plenty" which means that the academic writing experience increases.

Table 12 contains the findings of the "other" category:

Table 12. Findings in the "*other*" category

Participant	Metaphor	Samples of postgraduate student explanations (Because……..)	f
44	*Inheritance*	*The fact that knowledge has been proven correct through academic and scientific synthesis, and then it has become more and more a genetic heritage for the next generation of research.*	1
59	A *drop in the ocean*	*First, you are like a water droplet and your knowledge is limited. It is as deep and extensive as the ocean. This water drop gets a little bit bigger in every piece of information, and it starts taking more space in the ocean. So, we start to take place in the academic society with every new writing.*	1
33	*Advocacy*	*It is necessary, defending your idea that you must explain its grounds and evidence.*	
61	*Making art for art*	*There is no consistent framework. Unity has not been established even when writing the source.*	1
		Number of total responses	**4**

The metaphors of "*inheritance*", "a *drop in the ocean*", "*advocacy*" and "*making art for art*" are included in Table 12. Metaphors of "*inheritance*" of participant 44 and "a *drop in the ocean*" refer, although the work is valuable it is a rather small part of the entire literature when it is considered.

It is also worth noting that the "*inheritance*" metaphor is identified with the texts remaining for the future generations. Participant 33's "*advocacy*" metaphor is also associated with the ability to present academic writings on the basis of advocating evidence. Participant 61 reports that the metaphor of "*making art for art*" is of academic writing as being a non-standard action: "*There is no consistent framework. Unity has not been established even when writing the source*".

Figure 2 shows the word cloud formed by the metaphors obtained from the participants. The word cloud is the image in which the most repeated words in a text can be clearly seen. While the metaphors that repeated more often than others (such as "*building construction*", "*mountain climbing*", "*labyrinth*", "*needle search in a haystack*", "*artwork*", "*difficult test*", "*baking cake*") mean they are more, if there are less repetitive metaphors are then less prominent the visibility.

Figure 2. The word cloud of metaphors developed by the participants

3.2. Findings of what kind of experiences postgraduate students have for providing their academic writing considerations

When the data on the academic writing experiences of the postgraduate students were examined, 51 of the total of 95 graduate students stated that they did not have any academic writing experience while the remaining 44 students wrote academic reports in different genres. Information on the types of academic texts written by these students is given in Table 13.

Table 13. Academic writing experiences of postgraduate students

Types of academic writing	f
Thesis	7
Journal article	2
Presentation	4
Research proposal	4
Thesis and journal article	9
Thesis and presentation	1
Thesis, journal article and presentation	10
Thesis, journal article and project	1
Thesis, journal article and book chapter	1
Journal article, book chapter and presentation	2
Book, journal article, project and translation	1
Thesis, project, journal article, presentation and book chapter translation	2
Number of total responses	**44**

Seven of the 44 respondents who stated that they had an academic writing experience, according to Table 13 wrote only "*thesis*", 2 wrote only "*an article*", 4 wrote only "oral presentations", 4 had only "*research proposal*" 1 reported "*dissertation, article and project*", 1 "thes*is, dissertation and book section*", 2 wrote "*essays, projects, articles, papers and book chapters*", 1 "*books, articles, projects and translations*". When considering the participants' characteristics, it is believed that writing "*a research proposal*" must have been experienced by the most participants, although in fact it is not mentioned by the most of the participants.

3.2.1. Findings of the most challenging /difficult situations / sections of postgraduate students during academic writing

Findings on the most challenging / difficult situations / sections of the postgraduate students during their academic writing are given in Table 14.

Table 14. Challenging / difficult situations /sections faced by the postgraduate students during academic writing

Situations / Sections	f
Introduction	15
Literature review	14
Correct and effective presentation	9
Methodology	8
Not finding enough number of resources	6
Translate/understand resources written in a foreign language	6
Discussion	5
Writing the references	5
Conclusion and suggestions	4
Data collection	3
Formal standards	3
Making the acquired information in a meaningful whole	3
Problem statement	3
Citation	2
Subject selection	2
Starting and planning	2
Findings and comments	2
The importance of the research	1
Data analysis / Statistics	1
Ethic	1
Working with people who do not fit the working discipline	1
Acquisition of research related permissions	1
Introducing quality products at limited time	1
All sections are difficult	1
Number of total responses	**99**

When Table 14 is examined, it appears that the participants indicated "*the introduction*" (f: 15) and "*literature search*" (f: 14) as the most challenging / difficult situations / sections. "*Correct and effective presentation*" (f: 9), *methodology*" (f: 8), "*inadequate resources*" (f: 6)", "trans*lation / comprehension of resources written in a foreign language*" (f: 6), "*discussion*" (f: 5), "*referencing*" (f: 5), "*conclusion and suggestions*" (f: 4) have been reported as difficulties with decreasing numbers. From the "*data collection*" stage it is possible to talk about 15 different challenging / difficult situations / sections whose frequency values are significantly reduced.

3.2.2. Findings about the relaxed/easy situations faced by the postgraduate students during academic writing

Table 15 provides information on relaxed/easy situations faced by the postgraduate students during academic writing.

Table 15. Relaxed/easy situations faced by the postgraduate students during academic writing

Situations / Sections	f
Findings and comments	15
Introduction	12
Conclusion and suggestions	11
Discussion	10
Methodology	10
Literature review	6
All sections are easy	4
Formal standards	3
Abstract	2
Data analysis / Statistics	2
Writing the references	2
Problem statement	1
The importance of the research	1
Review process	1
Finishing off the manuscript	1
Flow (interrelationship of expressions)	1
Citation	1
Number of total responses	**83**

Table 15 summarizes the findings about the cases / sections in which the postgraduate students are most comfortable during academic writing. These sections are "*findings and comments*" (f: 15), the "*introduction*" (f: 12), "*results and suggestions*" (f: 11) "*discussion*" (f: 10), "*methodology*" (f: 10) and "*literature search*" (f: 6) respectively. The perception of some sections, both "hard" and "easy" such as "*introduction*" and "*methodology*" may be related to the grade of the academic writing experiences of the participants, as well as the quality of the scientific research methods taught.

As seen in the word cloud (Figure 2) using 95 metaphors, the words such as "*building construction*", "*needle search in a haystack*", "*mountain climbing*", "*labyrinth*", "*artwork*", "baking cake" stand out. Expressions regarding the category of "*an unpleasant action*" related to academic writing were pleasantly limited in the research. This suggests that postgraduate students have positive attitudes towards academic writing and that their level of readiness at this level is high.

Almost half of the postgraduate students experienced academic writing, while a little more than half are inexperienced, contributing to the diversification of metaphors. It is also possible to reveal situations / sections that felt difficult / uncomfortable during academic writing. Here, the "*introduction*" and "*methodology*" sections with similar ratios in both the easy and the hard sections are noteworthy. In addition to this, it is required to be problem-based when scientific research skills are given at the postgraduate level regarding the variety of metaphors, situations that are felt difficult and comfortable in this study.

As mentioned earlier in this text, Bahar (2014) stated that postgraduate students are experiencing many problems in their preparation of academic texts. This supports this study's findings about the "situations / sections that are challenged during academic writing".

Bayat (2014) found that there was a significant relationship between critical thinking and academic writing achievement. Expression of the need for analysis, synthesis, and interpretation skills of participants in our research, whether the participants had academic writing experiences or not, and how to sort, merge, and integrate the data into a meaningful integration is in line with Bayat's (2014) research.

In her qualitative research, Aydın (2015) found through the diaries of prospective teachers that "general characteristics" (such as form, content, narration and ethics) are easily understood and applied in academic writings after learning the characteristic structure of all the sections. Prospective teachers reported that the "abstract" section was the easiest; while the "methods", "findings and discussion", and "results and suggestions" sections were often referred as uncomplicated sections. On the other hand, the "introduction" section was seen the most challenging section; while "references" section was viewed too detailed and unnecessary due to the APA criteria's punctuation marks, font, giving the references in varying forms, and so on. These findings, therefore, are mostly in line with the findings of this research.

Kan and Gedik (2016) found out the views of postgraduate students on academic writing before and after their degree. They found that the students who did not feel well enough before the thesis and had difficulties, but, they felt relaxed after the completion of their studies. The participants in our research are also thought to be lacking in the experience of those who find it difficult to write academic writing. The increase in experience would improve the academic writing skills and reduce the anxiety.

Yıldız and Gizir (2018) examined the perceptions of academic staff about the concepts of university, academics and scientific research through metaphors. They found that difficulty and labour of the nature of scientific research were uncertainty and infinity, systematic and planning, professional satisfaction, ethical principles. They went to categorize these metaphors as reaching and informing contribution, promotion / progress / score, self-cultivation / development of scientific research. Some of these categories also parallel to the categories and the metaphors produced by the postgraduates in our study. These categories are "*a long and difficult process*", "*the process of producing/ discovering new things*", "*a multi-threaded action*", "*an action that gives joy*"**.**

4. Conclusion and Suggestions

Academic writing has a *recursive way* and *continuous nature* (Murray and Moore, 2006: 4), then its character has complexities and paradoxes. Therefore, numerous metaphors in this study have been produced about academic writing. The reason why the number of metaphors is great can be considered as the versatility of academic writing skills. There are 9 categories of metaphors, from which 95% of the metaphors obtained, and more than half of these metaphors are composed of "*long and difficult processes*" (f: 23), "*processes of producing / discovering new things*" (f: 22) and "*an action that requires skill in composition / analysis / synthesis / interpretation*" (f: 8), "*an action that requires expertise / expert support*" (f: 8), "*a multi-threaded action*" (f: 7), " *an action that requires care in terms of language and expression*" (f: 5), "*an unpleasant action*" (f: 5), "an action that gives joy" (f: 4) and "*other*" (f: 4).

Based on the findings of our research, the following suggestions can be made:

• Further studies of academic writing in higher academic levels may be effective in facilitating comparison and diagnosis of the problems.

• It will be beneficial for students to enrol in compulsory courses based on practice, in which vocabulary, sentence, paragraph and text-based training will be given to the postgraduate curricula, particularly who are studying in the social sciences to improve the ability to use the academic language seen as a challenging area / problem.

• Academic writing skills are a field in which individuals with advanced written expression skills can catch success. For this reason, it will be appropriate to give importance to activities and applications that include "advanced writing techniques" for under and postgraduate students.

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Lisansüstü öğrencilerin akademik yazma becerisine ilişkin algıları: Bir metafor analizi çalışması

Öz

Bu araştırmada, lisansüstü öğrencilerin akademik yazma becerisine yönelik algılarını metaforlar aracılığı ile belirlemek amaçlanmıştır. Araştırmanın çalışma grubunu 2017-2018 eğitim-öğretim yılında Adnan Menderes Üniversitesi Eğitim Fakültesinde öğrenim gören lisansüstü (yüksek lisans ve doktora) öğrenciler oluşturmuştur. Bu bağlamda uygun (kolay ulaşılabilir) örneklem metodu ile 100 lisansüstü öğrenciye ulaşılmış, araştırmacılar tarafından oluşturulan *akademik yazma becerilerine yönelik algı formu* uygulanmıştır. Katılımcılardan "Akademik yazma … gibidir; çünkü …" cümlesini tamamlamaları istenmiş; bunun yanında, akademik yazma deneyimlerine dair sorular sorulmuştur. Araştırmadan elde edilen geçerli 95 adet metafor betimsel analiz

yöntemi ile benzerlik ve farklılıklarına göre sınıflandırılmış, daha sonra benzetme gerekçelerine göre kategorilere ayrılmış, frekans değerlerine göre tablolaştırılarak yorumlanmıştır. Akademik yazma ile ilgili çeşitlilik gösteren metaforik algılar 9 kategori/tema altında toplanmıştır. Kategoriler "uzun/zorlu bir süreç", "yeni şeyler üretme/ keşfetme süreci", "kompoze etme/analiz-sentez/yorumlama becerisi gerektiren bir eylem", "uzmanlık/uzman desteği gerektiren bir eylem", "çok kurallı bir eylem", "dil ve anlatım bakımından özen gerektiren bir eylem", "hoşlanılmayan bir eylem, , "haz veren bir eylem" ve "diğer" başlıkları altında toplanmıştır. Sonuçlar üst düzey akademik yazma deneyimi olan öğrencilerin akademik yazmayla ilgili olumlu tutumlar sergilediklerini ortaya koymuştur.

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