

## ATOMIC DESIGN SYSTEM FOR TYPOGRAPHY LAYOUT IN STUDENT POSTER DESIGN

**Yon Ade Lose Hermanto<sup>1\*</sup>, Nabisah Binti Ibrahim<sup>2</sup>, Joni Agung Sudarmanto<sup>3</sup>,  
Fariza Wahyu Arizal<sup>4</sup>, Novian Wahyu Firmansyah<sup>5</sup>**

<sup>1,3,4,5</sup> Department of Art and Design Faculty of Letters, Universitas Negeri Malang (UM)

<sup>2</sup> College of Arts and Sciences, Universiti Utara Malaysia (UUM)

\*corresponding author email: yonade.fs@um.ac.id<sup>1</sup>

### Abstrak

Penelitian ini bertujuan untuk menerapkan *atomic design system* pada proses perancangan desain poster komunikasi visual. Banyak cara menciptakan produk desain untuk kebutuhan tertentu. Urgensi penelitian ini adalah karena selama ini banyak desainer terutama mahasiswa, yang bingung dengan proses desain poster. Banyak metode desain yang tidak semuanya sesuai dengan penciptaan desain poster. Maka, *atomic design system* merupakan alternatif metode yang dapat digunakan untuk membuat desain poster. Desain poster tersebut memiliki dua tujuan yang penting, yaitu menyampaikan pesan atau informasi dengan baik dan benar pada masyarakat, dan menampilkan informasi tersebut dengan artistik dan estetik. *Atomic design system* dapat membantu desainer dalam membuat desain dengan tujuan-tujuan tersebut. Disamping langkah yang sistematis, sistem ini juga membuat elemen desain dan elemen informasi yang akan disajikan teridentifikasi dengan lengkap. Metode *atomic* memiliki langkah-langkah sebagai berikut: *atomic element*, *molekul element*, organisme desain, menyiapkan halaman, serta merancang *template* desain. Proses dari *atomic design system* ini menghasilkan elemen desain yang tertata, alur baca yang baik, serta *template* desain yang dapat diterapkan pada desain lain. Studi kasus perancangan poster PIMNAS merupakan studi yang tepat karena poster PIMNAS menampilkan banyak informasi dan data serta harus disajikan dengan runtut dan jelas. Hasil dari penerapan *atomic design system* adalah desain final poster PIMNAS dengan *legibility* dan *readability* yang baik.

**Kata Kunci:** *atomic design*, desain poster, sistem tata letak, tipografi

### Abstract

*This study aims to apply the atomic design system to the poster design process of visual communication design. There are many ways to create and design products for specific needs. This research is urgent because many designers, especially students, are confused about the poster design process. Many design methods are not all appropriate for creating poster designs. So, the atomic design system is an alternative method that can be used to make poster designs. These poster designs have two important goals: conveying messages or information properly and correctly to the public and presenting the information artistically and aesthetically. Atomic Design System can assist designers in making designs with these goals. In addition to systematic steps, this system also makes design elements and information elements be presented wholly identified. The atomic method has the following steps: atomic elements, molecular elements, design organisms, prepare pages, and design templates. This atomic design system produces well-organized design elements, good reading flow, and design templates that can be applied to other designs. The PIMNAS poster design case study is the proper study because the PIMNAS poster displays a lot of information and data and must be presented coherently and clearly. The result of implementing the Atomic Design System is the final PIMNAS poster design with good legibility and readability.*

**Keywords:** *atomic design*, layout system, poster design, typography

## 1. INTRODUCTION

Effective message delivery begins with selecting and structuring the correct design elements. One of the vital design elements in conveying a message is the element of typography. Typography is the knowledge of letter design and arrangement. Typography is important because it can bridge verbal and visual messages and functions as an effective messenger when the language displayed is not ambiguous (Carter, 2021). Layout in typography is essential in composing each message and providing a visual appearance that attracts the audience and can enter the memories of those who see or pay attention to it (Frascara, 2022). The layout uses a grid system that helps organize every design element, especially messages in the form of typography, to create a harmonious display of the Design with the delivery of the message (Li, 2019).

Having a solid grid system to use in the Design (before moving on to the development stage) will allow you to do the things we mentioned above by creating consistency and familiarity (building credibility) in the Design (Samara, 2017). For example, a well-designed design will help the designer project confidence in the audience.

Posters are a popular medium in visual communication design (Ardhianto, 2016). Poster design is an easy-to-understand example of applying atomic design arrangements to molecular design elements. In poster design, the information used is very complex, and it is possible to use more atomic elements. It begins with information and messages that will be conveyed, then continues with collecting information and designing it into infographics according to layout guidelines and atomic elements. PIMNAS poster design is an interesting case study for practising the atomic design method.

The National Student Scientific Week (PIMNAS) culmination of a national-scale meeting and embodies various forms of creativity and research that students have carried out (Putri, 2020). PIMNAS becomes a forum or forum for discussion and dialogue about problems in the community, such as national development, regional development, and other issues. At PIMNAS, students are free to express all their creativity because PIMNAS is the right opportunity to exchange experiences, thoughts, information, and the learning process (Widyo, 2020). PIMNAS has two branches of competitions that can produce medals: the Competition in the Presentation of Scientific Ideas and the Scientific Poster Competition originating from student scientific ideas. The winner of PIMNAS is determined from the medals obtained in the two competitions. The objectives of PIMNAS are: 1) Become a medium and means of communication for students throughout Indonesia; 2) Opening opportunities for the development of student potential in scientific activities; 3) Sharpen insight and increase student creativity in the development of science, technology, and art; 4) Improve the bargaining position of students in the world of work or society; 5) Provide feedback on the teaching and learning process in Higher Education; 6) Improve students' skills in presenting their intellectual works in a scientific forum; and 7) Strengthening academic cooperation and brotherhood within the Unitary State of the Republic of Indonesia framework.

As in the PIMNAS poster design case study, making scientific posters is essential in visual communication design. In addition to applying scientific Design, methods, and theories obtained in lectures, there is also the opportunity to win medals in the PIMNAS event. The novelty of this research is that by using the Atomic Design system, through the minor elements of a design, and with a systematic arrangement, designers can make designs that suit their needs and leave no aesthetic value in the result. Atomic Design has never been tried to make a poster design. Searches related to the use of the Atomic System for poster design have not been found until now. The designers must have guidance in designing scientific posters because besides the information conveyed being scientific. The visual appearance must also be attractive to invite the public to understand the vital information in the poster.

## **2. METHOD**

Using the Atomic Design Method introduced by Brad Frost. Other fields and industries inspire this methodology for creating interface design systems. Given the incredibly complex world that has been created, it seems natural that other fields would tackle similar issues that could be studied and adapted. As it turns out, many different fields, such as industrial Design and architecture, have developed intelligent modular systems to create highly complex objects such as airplanes, ships, and skyscrapers (Frost, 2016). The origin of this method is due to the high school chemistry class that Brad Frost faced in the past. The equation is to look at the arrangement of atoms and molecules to the level of organisms.

In chemical reactions, which chemical equations can represent, it often shows how elements atoms combine with other atoms to form molecules. In later stages, these molecules can combine with other molecules to form relatively complex organisms. To explain a little further:

- 1) Atoms are the basic building blocks of all concrete materials. Each chemical element has different properties and cannot be further broken down without losing its meaning. Atoms comprise smaller parts such as electrons, protons, and neutrons, but atoms are the smallest functional unit in an organism.
- 2) A molecule is a collection of atoms, usually consisting of two or more atoms held together by chemical bonds. This combination of inter-atomic fusion has unique properties and becomes more tangible and operational than atoms.
- 3) An organism is a combination of molecules that function together as a unit. These relatively complex structures can range from single-celled organisms to more sophisticated ones like humans.

The arrangement of these atoms-molecule-organisms is then developed by applying the same process and incorporated into the design process to develop the interface and system layout design. The atomic Design comprises five process stages that work together to create an interface design system more deliberately and hierarchically. The five stages of atomic Design are:



Figure 1. Atomic Design Method  
[Source: Frost, 2016]

Atomic Design is not a straight line like the linear process that requires going through step by step sequentially, but rather a mental model to help think of the user's typographic design layout as a cohesive whole and a collection of parts at the same time. Each of the five stages of the process plays a key role in the typographic layout design system hierarchy. The explanation between processes is as follows:

1) Atom

If atoms are the basic building blocks of matter, then our atomic layout serves as the basic block that comprises all system grid layouts. These atoms include basic design elements such as letters, numbers, characters, colors, and dots that cannot be broken down further without stopping functioning.

2) Molecule

In chemistry, a molecule is a collection or group of atoms bonded together that have new properties that are different from their previous properties. For example, water molecules and hydrogen peroxide molecules have unique properties and behave very differently, even though they are composed of the same atomic elements (hydrogen and oxygen). In layout design, a molecule is a relatively simple group of interface elements that function together as a unit. For example, word order, logotype, or monogram can be joined together to make the molecular form of information.

3) Organism

Organisms are relatively more complex layout components consisting of groups of molecules and atoms and other organisms. These can be said to consist of design elements that have been arranged or are still standing alone, such as letter characters. These organisms form different parts of a layout view. It can be seen from the hierarchical arrangement of design elements that form a single goal, such as delivering messages, persuading the audience, or providing identity, as well as other functions, such as providing information, including infographics.

4) Templates

In this section, chemical analogies are no longer used. The language of atoms, molecules, and organisms brings hierarchies that are useful for designers to construct components of a design system intentionally. However, eventually, we must step into a more suitable language for the final result for both the designer and the client. Trying to take chemical analogies too far may be confusing (Puhalla & Cullen, 2018). A template is a page-level object that places design components or elements into a layout and articulates the Design's underlying content structure (Erlyana & Ressiani, 2020).

5) Page




A specific example of a template that shows what a layout design with real representative content looks like is by using the age base of the audience. Design elements adjust to the target audience, especially regarding age and education level. Based on the previous example, we can take a homepage template and pour representative text, images, and media into the template to show real content in action (Hu et al., 2021; Kikuchi et al., 2021).


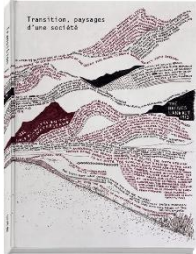


**3. RESULT & DISCUSSION**

**3.1 Typography layout**

Typography layout uses text/typographic elements more than non-typographic elements (Arifrahara, 2021; Hermanto et al., 2022). The function of the typography layout is to help designers convey messages, especially in large quantities, to be easier because of the systematic arrangement of the grid system (Cheng, 2020). Seven types of typography layouts can be used as designer references when creating design works (Czarnecki, 2018), including:

Table 1. Seven types of typography layouts  
[Source: Czarnecki, 2018]

Type	Description	Example
1. Axial	The visual appearance produced by this axial or axial layout is quite strong. The main focus is placed in the center of the page, then the supporting elements are on the right and left sides. This layout is popularly used for marketing materials such as product catalogs.	 <p>Figure 2. Poster of Musica Viva [Muller-Brockmann, 1961]</p>
2. Radial	The radial layout is shaped like a ray from a circular light source. Design elements, especially typography, are arranged like a line of rays emanating from a central point.	 <p>Figure 3. Argumenta Calendar Design [Phoenix, 2009]</p>
3. Dilatational	It is a system in which the writing arrangement follows the grooves in a circle, such as wave lines originating from the center point and in a circular shape. The flow of writing becomes like a row of curved lines.	 <p>Figure 4. Poster of Charles Burowski's poem (Jack, 2008)</p>

Type	Description	Example
4. Grid	It is the most frequently used layout arrangement because it uses vertical and horizontal lines to arrange design elements. The grid system creates a columnar area that can be filled by text or other visual elements.	 <p>Figure 5. KAE Strategic Marketing Poster (Socio, 2014)</p>
5. Transitional	This type of transitional layout is like the organic lines of the soil layers on the earth. These lines are not straight but snaking, following certain contours. Transitional design results such as organic horizontal or vertical lines that are not straight.	 <p>Figure 6. Paysages d'une société Book Cover (Hébel &amp; Fleetwood, 2013)</p>
6. Bilateral	It is a type of layout that uses a horizontal center line as a layout benchmark. The position of the design elements, especially typography, uses a center alignment format to achieve a formal impression.	 <p>Figure 7. Table of Content Design with Bilateral Style (Badarch, 2021)</p>
7. Modular	A modular layout is a layout that uses modular boxes. In this modular box, the layout of the design elements uses the same format and position so that it is like using one layout template for the entire contents of the modular box.	 <p>Figure 8. Modular Style of Barni Startup (MarketMe, 2018)</p>

### 3.2 Atomic Elements in Layout

Several typography layout elements can be used to start making designs (Hermanto, 2021). These elements can be divided into three parts, namely text elements, visual elements, and invisible elements (Puhalla & Cullen, 2018; Rustan, 2008) :

## 1) Text Elements

Text elements consist of characters: letters, numbers, punctuation marks, ligatures, currency, and special accents (Hermanto et al., 2019). In general, the text elements in a layout include:

- a. The title (also called heading/headline/head) is one or several short words describing the content or essence of the message.
- b. A deck (also known as blurb/standfirst) is a brief overview of the message content's topic. It serves as an introduction before reading the body text.
- c. Byline (also called credit line/writer's line). It contains the author's name and can be optionally added with position or other information.
- d. Body text (also called body copy/body/copytext). It is the content of the manuscript or article and the elements that contain the most information on the reading topic.
- e. Under the title (also called subhead/crosshead) is the title of the segments in a long article.
- f. Pull quotes (lift-outs) are snippets of someone's words or can be used to show important information in the script.
- g. A caption is a short description of a picture, chart, or table.
- h. Callouts, basically like captions, only show more than one caption.
- i. Kickers (also known as eyebrows) are one or more short words above the title, which make it easier for readers to find the topic they want and remind them where the page is when reading the article.
- j. Initial caps are uppercase letters of the first word in a paragraph. Due to its aesthetic nature, it is not uncommon for there to be only one Initial cap in one article.
- k. Indent is the first line of the paragraph that indents into, while the Hanging Indent is the opposite. The first row stays in position, while the rows below protrude inward.
- l. Lead lines are the first few words or all the words in the first line of each paragraph, distinguished by their letter attributes. The distinguishable character attributes include typeface/style/size/letter spacing/leading. Its function is the same as markers between paragraphs.
- m. Spacing is the space area between paragraphs to distinguish one paragraph from another.
- n. Headers and footers. The header is the area between the top of the paper and the top margin. The footer is the area between the bottom side of the paper and the bottom margin. The header and footer contain the Running head, footnote, page numbers, and other information.
- o. Running head (also called Running Headline/Running Title/Running Feet/Runners) is information that is repeatedly written on each page, and its position does not change. It can be the book's title, the author's name, or other information. If it is placed in the Footer area, it is called Running Feet.
- p. Footnotes are notes that contain detailed information from certain writings in the manuscript.
- q. The page number is the number of markers for each page in a certain order.

- r. Jumps (also called Jumplines/continuation lines). This bookmark is used for long article links or limited pages cut off on certain pages and spliced to other pages.
- s. Signatures (mandatories) are information in flyers, brochures, or posters containing addresses, telephone numbers, or other additional information such as organizers, partners, and sponsors logos.
- t. The Name-Plate is the name of a newspaper, magazine, tabloid, or newsletter. Usually made in large sizes and placed on the front page / top cover.
- u. The masthead is information about the publication: name of staff, contributors, how to subscribe, address, and logo of the publisher.
- v. The colophon describes the publication of a book, magazine, newspaper, or tabloid. It contains information about the printer, place and time of printing, title, author's name, and the means used by the publisher or printer, which are on the last page of the early period book.

## 2) Visual Elements

- a. Photos, which can be translated into photographic results, are used to make information more credible and give the impression of being "trustworthy."
- b. Artworks are all non-photography works, be they illustrations, cartoons, or sketches made manually or with a digital computer.
- c. Infographics (informational Graphics) are facts and statistical data of research results presented in charts, tables, diagrams, charts, maps, and other forms of graphic Design.
- d. Lines (Rules) are design elements that can create an aesthetic impression on a design work—functioning as an area divider, balancing the arrangement of design elements, and binding the design system to maintain its unity.
- e. Box (also called frame/border) contains articles or information that is additional/supplementary to the main article.
- f. Inset (inline graphics) is a small visual element placed inside a larger visual element. Serves to provide supporting information from larger visual elements.
- g. Points (bullets) are markers in the form of points or numbers in front of information in the form of a list/list with a downward arrangement of rows.

## 3) Invisible Element

- a. Margin is the space between the edge of the paper and the design content or information content. Margins determine the distance between the paper's edge and the space the layout elements will occupy.
- b. Grid is a tool for arranging layout elements. Grid makes it easier for designers to determine the location of design elements to maintain layout consistency and unity, especially for design works with several pages.

In the case study of the PIMNAS poster design, the design requirements according to the PIMNAS guidebook (Tim Penyusun Pimnas, 2022) are:

- a) Posters totaling 1 (one) sheet with a height x width of 80 cm x 60 cm installed vertically (portrait );
- b) Posters should be legible within a maximum of 7 feet or about 2 meters;



- c) The number of words should be limited and combined with the form of illustrations;
- d) Typographic guidelines: it is recommended that the text is justified with a line spacing of 1.2 spaces;
- e) Use sub-headings that are larger than the text (you can also underline/bold );
- f) Limit length/column length to no more than 11 words. Use no more than two typefaces/ fonts;
- g) Do not use all capital letters ;
- h) Margins must match the column size;
- i) The poster layout design must pay attention to the principles of formal-non-formal balance, namely symmetric-asymmetrical, the principle of unity in the arrangement of image elements, colors, backgrounds, and motion directing the reader's eyes to flow throughout the poster area;
- j) Consider hierarchy and contrast to show emphasis on which objects or things take precedence;
- k) The content of the poster must be readable in a structured manner for easy 'navigation';
- l) The poster must contain the title, name of the implementer and the university logo, background, objectives, methods, results (can be in the form of text images/photography/schematics), conclusions, references (other), sponsor/institution (+ logo), contact person details, date or time of research/implementation. PKM-K is equipped with a quantitative (nominal) business plan or activity. PKM-PI contains a description of the conditions or problems of partners and solutions or technology applied to target partners, as well as PKM-PM profiles and problems of partners/target communities, as well as solutions made by the PKM team and program success, including program sustainability. The title of the PKM-RE and PKM-RSH posters is allowed according to the Title of the Final Scientific Article;
- m) Product pictures, especially PKM-KC and PKM-KI or other PKM (if any), will greatly support the visual impression of the implementation of the activity;
- n) Images or photos should comply with the provisions of copyright and ethical use;
- o) Posters made with computer application software (with graphics, tables with photographic documentation are recommended, if any );
- p) Poster resolution at least 300 dpi;
- q) Posters in softcopy are uploaded to Simbelmawa or are to be determined later. The committee will present it in virtual/digital form.

### **3.3 Atomic Design on the layout**

Atomic Design is the smallest element of a final design. These elements make up the molecule and present complete information. Atomic design elements are also called basic design elements. In the context of the PIMNAS poster design, the atomic elements used are:

- a. Type for all kinds of written information. Fonts must be determined according to the theme and content to create a good semantic interpretation. Fox Grotesque is used for the font used in the PIMNAS poster design because it has good legibility and readability.



Figure 9. Fox Grotesque Pro by TipografiaRamis

- b. Color Palette for overall visual elements and design themes. Use colors that match the product color to maintain the color brand: orange, black, and white.

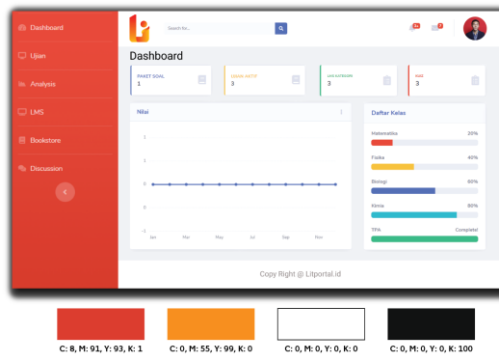


Figure 10. The color palette of PIMNAS products  
[Source: author's documentation]

- c. Basic shapes for infographics, inset, artwork needs, and lines, to make all non-text & shape elements.



Figure 11. Basic shape and line for PIMNAS poster design  
[Source: author's documentation]

### 3.4 Arrangement of Atomic Design Becomes Molecular

After collecting all the design elements, also called atomic elements, these elements are arranged into molecular elements. Molecular design elements are combinations of several atomic elements that can stand alone as one design element. However, molecular elements cannot provide clear and comprehensive information because they are still pieces of information. Please note that layout elements such as text and visual elements are not always used entirely because these elements are adjusted to the needs of delivering messages.

After collecting atomic design elements, it is continued to arrange the pieces into molecular elements to clarify the information to be conveyed and the design style used. In the case study, the Design used was the PIMNAS poster design with the type of PKM-

K (Student Entrepreneurship Creativity Program) competition with the Title Litportal.id. Following the provisions of the poster design for PKM-K, in this phase, the design elements created are: a) Logo, b) Photos used: product photos, group photos, supervisor photos, simulation photos of product usage, c) Content of each subhead, d) Infographics: implementation process, business concept, and marketing strategy, e) QR-code implementation video link, and f) Icons for support content information.



Figure 12. Example of molecular elements for PIMNAS poster design [Source: author's documentation]

### 3.5 Design of Organisms from the Arrangement of Molecules and Atoms

The Design of organisms combines some information from the molecular arrangement of design elements into a single unit. The information presented is displayed in order from background to Acknowledgments.



Figure 13. The order in which information is presented is divided into design subheads and sample content for each PIMNAS poster subhead [Source: author's documentation]

### 3.6 Creating a Template from an Arrangement of Design Organisms

Design templates are created by determining the pattern or type of layout and the position of the design elements so that the reading flow is organized. For the PIMNAS poster design, the grid system pattern is used because it makes it easier for readers to understand the scientific information in the poster. Using fonts with good legibility and

readability also supports the delivery of messages more optimally. The grid system and the position of the design elements can be styled as in the following template pattern:

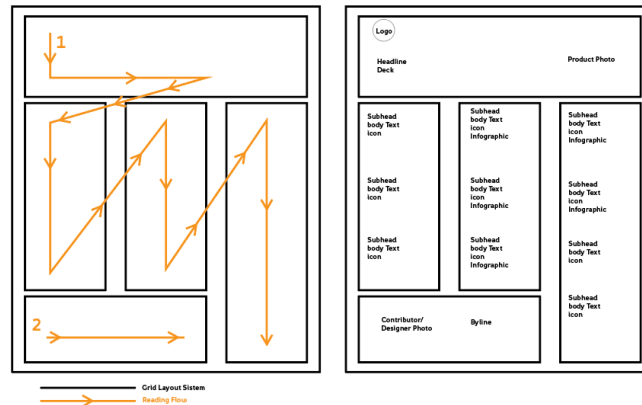


Figure 14. Grid system, reading flow, and design elements position [Source: author’s documentation]

### 3.7 Making Final Design from Template Creation

After creating the design template, the next step is to include all design elements in a final design. The information conveyed is coherent with a regular reading flow. The visual elements are in line with the brand colors used for PIMNAS. From the results of the arrangement of various elements into the template, the final Design of the PIMNAS poster is:



Figure 15. Final design according to the design template [Source: author’s documentation]

After the final Design has been made, the next step is to conduct trials to determine the level of readability, legibility, reading flow, and the effectiveness of using design elements that can help facilitate visual communication from poster designs. The trial

uses the Differential Semantic method (Sukendra & Atmaja, 2020). This method is a way to measure the attitude of the audience towards the designs presented to them. Do not use a checklist or multiple choices form to prepare the research instrument. Arrange in a continuum line with "very positive" answers on the right and "very negative" answers on the left or vice versa.

The following are the results of the final poster design test on 20 respondents with an undergraduate degree (S1) from various scientific fields:

Table 2. Poster design test results  
[Source: author’s documentation]

No	Assessment Aspects	Less Once	Not enough	Enough	Good	Very well
1	Clarity of writing	0	0	0	6	14
2	Colour harmony	0	0	1	6	13
3	Colour contrast	0	0	0	5	15
4	Reading flow	0	0	0	2	18
5	Arrangement of design elements	0	0	0	4	16
6	Layout balance	0	0	1	5	14
7	Information arrangement	0	0	1	8	11
8	Clarity of pictures/photos	0	0	3	6	11
9	Font shape and size	0	0	0	7	13
10	Compliance with the conditions of the Competition	0	0	0	8	12
Total		0	0	6	57	137

From the results of this simple test, it is known that most respondents considered that the final poster design tested had an outstanding design, layout, and message delivery, as Very Well choice 68%, Good 29%, and Enough 3%. It can be seen from the chart below:

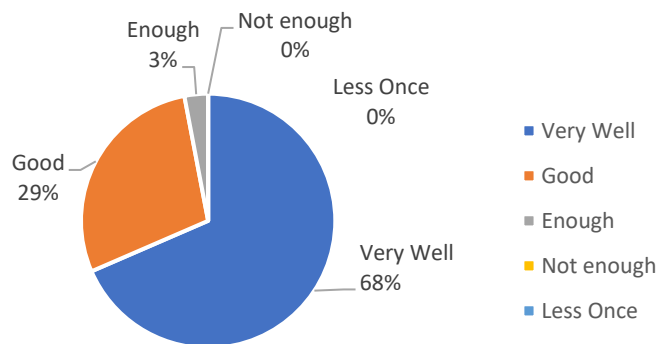


Figure 16. Testing result  
[Source: author’s documentation]

From the table and chart above, it can be concluded that poster designs made using the Atomic Design method can make poster designs better regarding message delivery and visual appearance. The flow of information in the poster becomes more evident and is supported by an excellent visual appearance.

#### 4. CONCLUSION

In the layout, three kinds of elements are used to design: text elements, visual elements, and invisible elements. These elements are part of the atomic design system. Using the atomic design method makes it easier for designers to identify design elements from the smallest to the final Design ready to be published. This phase is important because the information and messages conveyed are not lost. In the atomic design system, several steps must be carried out in sequence: determining and arranging atomic elements into molecular design elements. After becoming several elemental molecules, they are put together to form a single elemental organism. After that, only then make a template to arrange the elemental organisms so that they are arranged with a good and effective reading flow. The design elements are arranged according to the template so that it becomes a final design ready to be published.

Applying the atomic design system with a case study to create a PIMNAS poster design is an alternative process that can be applied because the process of the atomic method is rigid, thus minimizing the potential for messages that are left behind and not delivered. The design process is also more organized because the design elements must be identified first until all are ready to be arranged. Designing a layout template as a guide can also help designers focus on working on the layout. The template can also be reused for future poster designs because its clear and orderly reading flow can make it easier for people to understand the poster's content. Suggestions for future researchers is that the Atomic Design system needs to be used more often so that its success can be further improved, especially for use in creating poster designs. In addition, the quality of photos and images used to complement the poster's needs should use images that match the poster's content and have good visual quality, such as clear, high-resolution images. The use of colour harmony on posters should be studied through related literature and the results of existing designs while considering the theory of colour psychology.

#### 5. REFERENCE

- Ardhianto, P. (2016). Tinjauan Desain pada Karya Poster; Studi Kasus Seri Poster "Marlyn Fish 2009." *ANDHARUPA: Jurnal Desain Komunikasi Visual & Multimedia*, 2(01), Article 01.
- Arifrahara, G. (2021). Analisis Penggunaan Tipografi Spasial Sans Serif Dalam Ruang Publik Taman Tematik Kota Bandung. *ANDHARUPA: Jurnal Desain Komunikasi Visual & Multimedia*, 7(01), Article 01.
- Badarch, B. (2021). *Inhound: The Table of Content Bilateral Design*. Pinterest. [https://id.pinterest.com/pin/Ab8eZS2ToB2xFL47Vi2\\_v6SW5fQPEiV38\\_2Cuajg64GHTA53aEOIMNE/](https://id.pinterest.com/pin/Ab8eZS2ToB2xFL47Vi2_v6SW5fQPEiV38_2Cuajg64GHTA53aEOIMNE/)

- Carter, M. (2021). 4—Typography. In M. Carter (Ed.), *Designing Science Presentations (Second Edition)* (pp. 43–55). Academic Press. <https://doi.org/10.1016/B978-0-12-815377-2.00004-4>
- Cheng, K. (2020). *Designing Type* (2nd ed.). Yale University Press.
- Czarnecki, L. (2018). *7 Essential Typographic Layout Systems*. Type365.
- Erylana, Y., & Ressiani, R. (2020). Perancangan Buku Desain Kemasan "Basic Of Packaging". *ANDHARUPA: Jurnal Desain Komunikasi Visual & Multimedia*, 6(02), Article 02.
- Frascara, J. (2022). Revisiting "Graphic Design: Fine Art or Social Science?"—The Question of Quality in Communication Design. *She Ji: The Journal of Design, Economics, and Innovation*, 8(2), 270–288.
- Frost, B. (2016). *Atomic Design*. Brad Frost Publisher.
- Hébel, F., & Fleetwood, J. (2013). *Transition, Paysages d'une Société*. Xavier Barral. <https://www.decitre.fr/livres/transition-paysages-d-une-societe-9782365110297.html>
- Hermanto, Y. A. L. (2021, December 14). *Creative Process in Creating Letters Design*. International Seminar on Language, Education, and Culture (ISoLEC 2021), Malang, Indonesia.
- Hermanto, Y. A. L., Pahlevi, A. S., & Sutrisno, A. A. (2019). Identifikasi Ilustrasi-Tipografi Graphic Vernacular Sebagai Sistem Tanda & Identitas Warung Tenda Di Kota Malang. *JADECS*, 3(2), 78–87.
- Hermanto, Y. A. L., Pujiyanto, & Pahlevi, A. S. (2022). *Lateral Thinking in Typography Layout System: (Alternative Layout Design for Effective Message Delivery)*. 4th International Conference on Innovation in Engineering and Vocational Education (ICIEVE 2021), Bandung, Indonesia.
- Hu, H., Zhang, C., & Liang, Y. (2021). A study on the automatic generation of banner layouts. *Computers & Electrical Engineering*, 93, 107269.
- Jack, N. (2008). *A bunch of poems by Charles Bukowski*. DeviantArt. <https://www.deviantart.com/natejack/art/Finger-Print-Poems-90177274>
- Kikuchi, K., Otani, M., Yamaguchi, K., & Simo-Serra, E. (2021). Modeling Visual Containment for Web Page Layout Optimization. *Computer Graphics Forum*, 40(7), 33–44.
- Li, Z. (2019). Application research of digital image technology in graphic Design. *Journal of Visual Communication and Image Representation*, 65, 102689.
- MarketMe, S. (2018). *Barni Startup*. MarketMe France. <https://www.market-me.fr/barni-startup/>
- Muller-Brockmann, J. (1961). *Musica Viva—January 6, 1961—Muller-Brockmann, Josef, 1961. 35.4" x 50.4" / 90 x 128 cm. Silkscreen | Paper. ID# SWL14515. \$950.* International Poster. <https://www.internationalposter.com/product/musica-viva--january-6-1961/>
- Phoenix, B. (2009). *Just cool – Page 2*. Oblivion. <https://billyphenix.wordpress.com/category/just-cool/>
- Puhalla, D., & Cullen, K. (2018). *Layout Workbook: Revised and Updated: A real-world guide to building pages in graphic Design* (Revised, Updated edition). Rockport Publishers.

- Putri, A. N. L. (2020, September 28). Ajang Paling Bergengsi, Apa itu PIMNAS dan PKM? *Campuspedia News*. <https://campuspedia.id/news/apa-itu-pimnas-dan-pkm/>
- Rustan, S. (2008). *Layout, Dasar & Penerapannya*. Gramedia Pustaka Utama. <https://opac.perpusnas.go.id/DetailOpac.aspx?id=335475>
- Samara, T. (2017). *Making and Breaking the Grid, Second Edition, Updated and Expanded: A Graphic Design Layout Workshop* (Updated, Expanded edition). Rockport Publishers.
- Socio, D. S. (2014). *KAE — Strategic Marketing*. Behance. <https://www.behance.net/gallery/14625565/KAE-Strategic-Marketing>
- Sukendra, I. K., & Atmaja, I. K. S. (2020). *Instrumen Penelitian*. Mahameru Press.
- Tim Penyusun Pimnas. (2022). *Panduan Pekan Ilmiah Mahasiswa Nasional ke-35 Tahun 2022*. Balai Pengembangan Talenta Indonesia, Pusat Prestasi Nasional, Kementerian Pendidikan, Kebudayaan, Riset, Dan Teknologi.
- Widyo. (2020, March 17). Program Kemahasiswaan Dikti: Mahasiswa Cerdas Komprehensif dan Kompetitif: Pekan Ilmiah Mahasiswa Nasional (PIMNAS). *Program Kemahasiswaan Dikti*. <http://kemahasiswaandikti.blogspot.com/2015/11/pekan-ilmiah-mahasiswa-nasional-pimnas.html>