

LOGO REDESIGN AS VISUAL IDENTITY OF PUI-PRA UNNES

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Abstract

Logo is an essential part of visual identity that plays an important role in representing the character and values of an institution. Pusat Unggulan IPTEK (PUI) Pendidikan Ramah Anak (PRA) Universitas Negeri Semarang requires a logo that reflects the characteristics of science and technology in supporting child-friendly learning while remaining easily recognizable. However, the previous logo was considered unable to optimally represent the institution's identity. This article aims to redesign the PUI-PRA UNNES logo in order to create a visual identity that is simpler, more recognizable, and more representative of the institution's values. This study is a qualitative research, employed a design approach using observation, literature review, and documentation methods. The design process involved analysis of the previous logo, concept development, exploration of alternative designs, digitization of the selected concept, and refinement of the final logo. The redesign resulted in a new logo that integrates the values of child-friendly education, learning media, and science into interconnected visual elements. Redesigned logo is expected to strengthen the institution's visual identity and improve public recognition of PUI-PRA UNNES.

Keywords – Visual identity, PUI-PRA, child-friendly, education

Introduction

Visual identity is an important aspect of building the image and character of an institution (Islam, 2018). Through visual identity, an institution can communicate its values and objectives to the public in an effective and meaningful way (Indrajaya & Redintan, 2024). One of the main elements of visual identity is a logo, which serves as both a representation of the institution and a distinguishing feature from other organizations (Dawami, 2025). Along with the growth of digital media, logo design has shifted toward visual styles that are simpler, more flexible, and adaptable across various communication platforms. Nathanael & Harnoko (2024) stated that the visual complexity of a logo can affect the effectiveness of an institution's brand awareness.

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Semarang is an institution that focuses on the development of child-friendly education based on science and technology. As an institution focused on science and technology, PUI-PRA UNNES requires a visual identity that can represent both its scientific and educational characteristics in a balanced manner (Habsy et al., 2024). Observations revealed that the previous logo had several visual issues, including a relatively complex form, overlapping visual elements, and a lack of strong visual differentiation. These conditions reduced the logo's flexibility when applied to various digital and printed media and limited its ability to effectively represent the institution's science and technology orientation. Johari et al (2019) stated that an effective logo should fulfill five main principles:

1. Simple

An effective logo should be designed with a simple form. Simplicity helps a logo appear clear at a glance and facilitates visual recognition. Ramayanti (2024) emphasized that simple logo forms are more easily retained in the audience's memory.

2. Memorable

In addition to being simple, a logo should have a distinctive visual character that makes it easy to remember. Hanindharputri (2018) explained that excessive detail in a logo may reduce audience recall.

3. Timeless

A good logo should not rely on temporary design trends but should remain relevant over a long period of time (Ha et al., 2020). The timeless principle is important because a logo represents the values and long-term commitment of an institution (Meylina et al., 2024).

4. Versatile

A logo should be consistently applicable across various communication media, including digital and printed platforms (Usman, 2025). Adiningrat (2024) emphasized that the appropriate combination of design elements can improve a logo's effectiveness in different contexts of use.

5. Appropriate

According to Ilmullah & Marwan (2024), a logo functions as a communication tool that represents the values, objectives, and image of an institution. Therefore, the alignment between visual form, meaning, and institutional context is essential for a logo to function effectively as a visual identity (Kurniawan et al., 2025).

A logo that does not fully meet these five principles cannot automatically be considered unsuccessful. However, such conditions indicate the need for a redesign process to improve its effectiveness in strengthening the institution's image and visual identity (Nugrahani et al., 2021; Safitri, M. A., & Prameswari, 2025).

Previous studies on visual identity redesign have been widely conducted to strengthen institutional image and improve public recognition. Logo redesign has been shown to enhance brand identity and recognition through the simplification of visual elements (Nabillah & Marshita, 2021; Setiadi & Yusuf, 2025). However, most previous studies have focused on the branding needs of commercial organizations. Research on the redesign of visual identities for science- and technology-based educational institutions, particularly those adopting a child-friendly education approach, remains limited.

Based on this condition, this study focuses on redesigning the PUI-PRA UNNES logo to create an institutional identity that is simpler, communicative, flexible, and capable of representing the values of child-friendly education, learning media, mathematics, and science in a more harmonious way. The study aims to produce a logo design that can strengthen the institution's image and improve public recognition of PUI-PRA UNNES in the digital era.

Method

This study is a qualitative research, employed a design approach to analyze the issues found in the PUI-PRA UNNES logo and redesign a visual identity that reflects the institution's characteristics.

The design process began with data collection through visual observation, literature review, and documentation of the PUI-PRA UNNES visual identity. Visual

observation was conducted by analyzing the logo's form, color usage, typography, and flexibility across various media applications. The literature review examined theories related to visual identity, logo design principles, and previous studies on logo redesign as a foundation for developing the design concept. Documentation was used to collect visual data, including the previous logo, design references, and records of the design progress.

The collected data were subsequently utilized during the concept development stage, which involved the preparation of a creative brief and the construction of a mind map to establish the conceptual framework and visual direction of the logo redesign. Based on the resulting concept, the design exploration stage was conducted by producing several alternative logo sketches. Each design alternative was evaluated against the five principles of effective logo design, simple, memorable, timeless, versatile, and appropriate to determine its suitability in representing the institution's identity. The selected design alternative was then further developed through the processes of digitalization and refinement to produce the final logo design.

Finding and Discussion

The redesign of the PUI-PRA UNNES logo began with an observation of the institution's existing visual identity. This stage was conducted to evaluate the extent to which the previous logo represented the institution's character and future direction, while also identifying visual aspects that could be improved through the redesign process.

The need for a redesign became increasingly relevant following PUI-PRA UNNES's plan in 2026 to change its institutional nomenclature by placing greater emphasis on the fields of Mathematics and Science. This change reflects the institution's effort to strengthen

its identity as a center of education based on science and technology. However, because the new institutional name was still under discussion and had not yet been officially established, the redesign in this study focused solely on the development of the logogram, the symbolic visual element of the logo, without including the logotype, which consists of the institution's name in typographic form.

Accordingly, the redesigned visual identity was intended to represent the core values of child-friendly education, learning media, mathematics, and science that underpin the institution's development.

Based on the observation of the previous logo, several aspects were identified that could be further optimized. The existing logo attempted to represent the values of child-friendly education through the use of a child figure formed by dynamic curved shapes.



Figure 1. Previous PUI-PRA Logo
Source : Dokumentation PUI-PRA UNNES, 2026

The use of a child figure in the logo represents the values of child-friendly education through dynamic curved forms. However, the figure does not yet possess a strong visual character, making it difficult for the public to remember. In addition to its relatively complex visual details, the child figure appears generic and resembles symbols that have been widely used by various institutions.



Figure 2. Logos of Various Institutions
Source : Authors, 2026

Therefore, stronger visual differentiation is needed to create a more distinctive and recognizable identity.

The flame element at the top of the logo was adapted from the UNNES logo. However, the overlap between the flame and other visual elements creates a dense composition that reduces the simplicity of the overall form. This level of complexity indicates that the logo does not fully satisfy the principles of simplicity and versatility. Overlapping visual details may reduce legibility, particularly when the logo is applied at smaller sizes (Habibi et al., 2026).

As stated by Johari et al (2019) about logo design principles, the analysis of the previous logo can be summarized as follows:

Table 1. Analysis of The Previous Logo

Logo Principle	Previous Logo	Analysis
Simple	Uses multiple overlapping elements.	The complexity of the form reduces visual simplicity.
Memorable	Uses a common child figure.	Lacks strong visual differentiation, making it less distinctive.
Timeless	Does not rely on specific design trends.	Generally neutral and remains relevant over time.
Versatile	Contains dense visual details.	Less effective when applied at smaller sizes.

Appropriate	Reflects child-friendly educational values.	Does not clearly represent the science and technology focus of the institution.
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The previous logo used a combination of blue, yellow, and red. Blue represented education, yellow symbolized optimism, and red reflected enthusiasm. From a conceptual perspective, these colors were relevant to the context of education and child development. However, the combination of multiple colors with varying contrast levels across different visual elements resulted in a visually crowded appearance, which could affect the balance and flexibility of the logo in digital media applications.

According to this analysis, it can be concluded that the previous PUI-PRA UNNES logo had several limitations, particularly in terms of simplicity, application flexibility, and visual differentiation. A redesign process was necessary to enable the institution's visual identity to represent its character more effectively. The findings of this analysis were used to develop creative brief and visual concept of the new logo.

Concept Development

A creative brief was created to establish the direction for redesigning the PUI-PRA UNNES logo and to define a visual identity that reflects the institution's character. PUI-PRA UNNES is founded on four core values: child-friendly education, learning media, mathematics, and science. These values served as the basis for developing visual concept to ensure that the logo would effectively represent the character of a science and technology based institution.

Based on these core values, the concept development process was carried out using a mind mapping approach to identify key concepts that would guide the design exploration process.

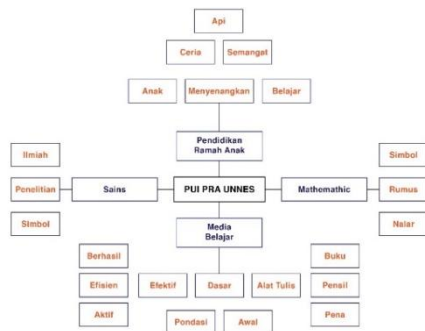


Figure 3. Mind Mapping
Source : Authors 2026

Logo Design Alternatives

The design exploration stage involved producing several sketch variations developed from the visual concept established in the previous stage. The purpose of this stage was to explore various visual alternatives in order to obtain a design that could most effectively represent the institution's character and identity.

Each design alternative began with the development of a moodboard as a visual reference to identify real-world objects associated with the institution's scientific character, the concept of child-friendly education, and the identity of PUI-PRA UNNES as an organization focused on mathematics and science. Through this process, various visual approaches were generated and subsequently developed into several sketch alternatives.



Figure 4. Moodboard of Design Alternative 1
Source: Authors, 2026

The first design alternative was developed by combining three primary visual references: an open book, a child figure, and a DNA structure. The open book was

used as the foundational element of the composition to represent knowledge and learning activities as the basis of the educational process. The child figure was derived from the pose of a child raising both hands. This gesture was selected because it visually represents enthusiasm, eagerness to learn, curiosity, and active participation in the learning process. Meanwhile, the DNA structure served as the inspiration for the interconnected curved elements, symbolizing the continuous advancement of scientific knowledge, research, and innovation. These visual references were then stylized and simplified to produce the visual composition that formed the basis for the first design sketch.

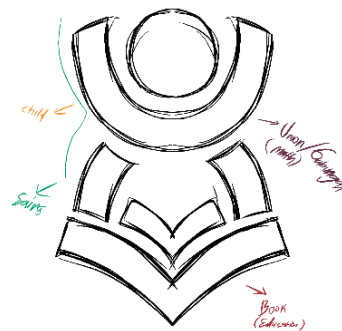


Figure 5. Alternative Design 1
Source: Authors, 2026

The second design alternative was developed by building upon the fundamental concept of the first alternative while incorporating additional visual elements to strengthen its scientific identity and institutional affiliation. Accordingly, the *moodboard* for the second design alternative consisted of four primary visual references: an open book, a child figure, the mathematical symbol, and the logo of Universitas Negeri Semarang (UNNES).



Figure 6. Moodboard of Design Alternative 2
Source: Authors, 2026

The open book was retained as the foundational element of the composition, representing knowledge and learning activities. The child figure was derived from the pose of a child raising one hand, a gesture that visually conveys enthusiasm for learning and active participation in the educational process. In addition, the mathematical symbol there exists ($\exists$) was used as the inspiration for the geometric element positioned at the center of the composition. In mathematics, this symbol denotes the existence of an object; therefore, it was adapted to represent the existence of PUI-PRA UNNES as a center of excellence dedicated to the development of child-friendly education based on mathematics and science. Meanwhile, the flame element was adopted from the visual identity of Universitas Negeri Semarang (UNNES) to emphasize the institutional affiliation between PUI-PRA and its parent institution. All visual references subsequently underwent stylization and simplification to produce the visual composition that became the basis for the second design sketch.

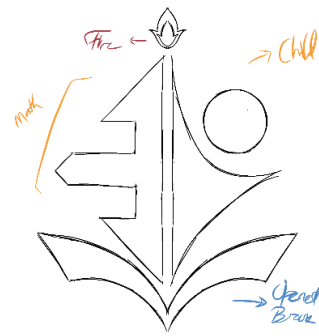


Figure 7. Alternative Design 2
Source: Authors, 2026

The third design alternative continued to build upon the fundamental concept of the previous alternatives while adopting a more symmetrical visual approach through the application of Gestalt principles. Accordingly, the moodboard for the third design alternative consisted of four primary visual references: an open book, a child figure, the flame element adapted from the visual identity of Universitas Negeri Semarang (UNNES), and a pen.



Figure 8. Moodboard of Design Alternative 3
Source: Authors, 2026

The open book was retained as the foundational element of the composition to represent knowledge and learning activities as the basis of the educational process. The child figure was derived from the pose of a child raising both hands. This gesture was selected because it visually represents enthusiasm, eagerness to learn, curiosity, and active participation in the learning process. Meanwhile, the pen was chosen as a symbol of education, literacy, and the

processes of learning and knowledge creation. The pen form was then simplified through the application of Gestalt principles, allowing it to integrate seamlessly with the other visual elements while preserving its symbolic meaning. The flame element was adopted from the visual identity of Universitas Negeri Semarang (UNNES) to reinforce the institutional affiliation between PUI-PRA and its parent institution. Finally, all visual references underwent stylization and simplification, resulting in the visual composition that formed the basis for the third design sketch.

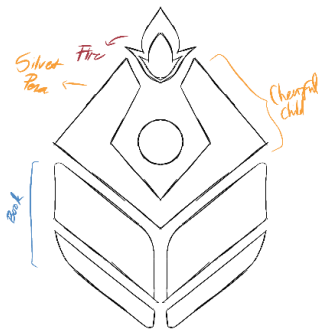


Figure 9. Alternative Design 3
Source: Authors, 2026

Based on an evaluation using the five principles of effective logo design, the first design alternative was selected for further development. Compared with the other alternatives, this design demonstrated a higher level of simplicity, a more memorable visual character, and greater flexibility across different sizes and media applications. Moreover, the integration of the book form, child figure, and curved elements created a more distinctive visual configuration than both the previous logo and the visual representations commonly used by educational institutions.

Logo Design Process

The design stage involved a process of digitizing and refining the design to produce a logo that is structured and suitable for practical application. During the digitalization stage, the selected manual sketch was further developed using vector

design software to achieve a consistent visual form.

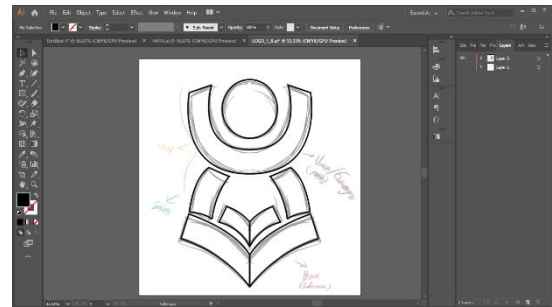


Figure 10. Sketch Digitalization Process
Source : Authors, 2026

The refinement stage included simplifying visual elements and adjusting the proportions of the composition using a grid system. Simplification process was carried out to reduce visual complexity and improve the logo's readability, while the proportion adjustments aimed to create visual balance among the design elements.

Furthermore, the composition was strengthened by optimizing the connections between elements and the distribution of space throughout the design. These refinements resulted in a visual identity that is more harmonious, easily recognizable, and adaptable to a wide range of media applications.

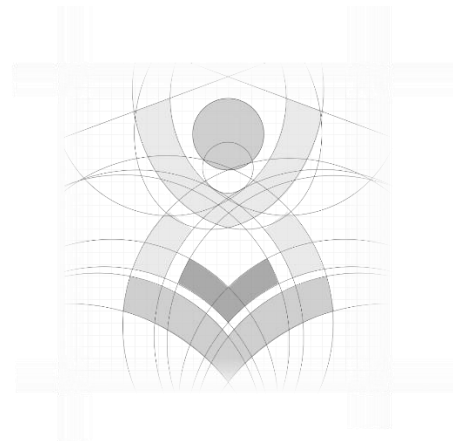


Figure 11. Logo Refinement
Source : Authors, 2026

The design process also included the determination of the logo color palette as an integral part of establishing the institution's visual identity. Unlike the visual form,

which was developed through the redesign process, the logo's color palette adopts the official colors of the visual identity of Universitas Negeri Semarang (UNNES). This decision was intended to maintain visual identity consistency while reinforcing the institutional affiliation of PUI-PRA UNNES as a center of excellence under the auspices of Universitas Negeri Semarang.

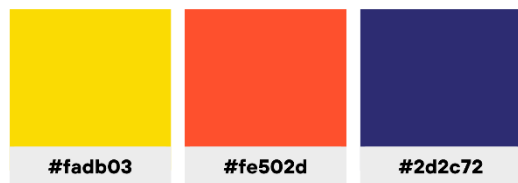


Figure 12. Color Palette
Source: Authors, 2026

The color palette consists of yellow (HEX # fadb03), red (HEX #fe502d), and blue (HEX #2d2c72), which are the dominant colors of the UNNES visual identity. The adoption of these colors aims to preserve visual continuity between the PUI-PRA UNNES logo and the identity of its parent institution, thereby strengthening their visual association across various communication media.

In addition to reinforcing the institution's visual identity, the consistent application of the official color palette enhances the logo's usability across both digital and printed media. By maintaining consistency with the visual identity of UNNES, the redesigned logo establishes a more cohesive and recognizable institutional image while ensuring consistent application across a wide range of communication materials.

Final Logo Design and Discussion

The final PUI-PRA UNNES logo was designed by integrating the institution's core values into a set of interconnected visual elements. The redesign process focused not only on updating the visual

appearance of the logo but also on creating an identity that can represent the institution's character more effectively.



Figure 13. Final Logo
Source : Authors, 2026

Compared to the previous logo, which contained several overlapping elements, the new logo was designed with a simpler and structured composition. The simplification of form was intended to improve visual readability and facilitate recognition at a glance. This approach also supports the application of the logo across various digital and printed media, thereby fulfilling the principles of simplicity and versatility in logo design.

In addition to simplifying the form, the redesign aimed to strengthen the visual differentiation that was previously lacking. While the former logo used a relatively common child figure, the new logo integrates the elements of a book, a child figure, and interconnected curved forms into a unified visual composition. The integration of these elements creates a more distinctive visual character.



Figure 14. Book Form
Source : Authors, 2026

The basic form of the logo resembles a book, which serves as the primary foundation of the visual composition. The book was selected as a symbol of knowledge and the learning process that underpins individual development.



Figure 15. Child Figure
Source : Authors, 2026

In the upper section, circular and curved forms create the silhouette of a child raising a hand. This gesture represents enthusiasm for learning, curiosity, and active participation in the educational process.



Figure 16. DNA Structure
Source : Authors, 2026

At the same time, the resulting curved forms resemble the structure of DNA, reflecting the continuous development of scientific knowledge and innovation. Through this approach, the logo not only represents the values of child-friendly education but also strengthens the institution's identity as a center of excellence in mathematics and science.

The interconnected arrangement of the visual elements was inspired by the mathematical concept of union, which refers to the combination of different sets into a single entity. This concept symbolizes the integration of child-friendly education, learning media, mathematics,

and science into a unified institutional identity.

Furthermore, the redesigned logo fulfills the five principles of effective logo design. The simplified composition improves visual clarity (simple), while the integration of the book, child figure, and DNA-inspired forms creates a distinctive visual identity (memorable). The use of fundamental geometric forms supports long-term relevance (timeless), and the balanced composition allows consistent application across various media (versatile). In addition, the symbolism embedded within the logo aligns with the institutional mission of PUI-PRA UNNES as a child-friendly education center based on mathematics and science (appropriate).

Logo Design Implementation

The logo implementation stage was conducted to demonstrate the adaptability and practical effectiveness of the redesigned logo across various communication media. As a visual identity system, a logo functions not only as an independent graphic element but also as a visual representation that must maintain its readability, recognizability, and consistency when applied in different contexts and scales.

To evaluate its applicability, the redesigned PUI-PRA UNNES logo was implemented through a series of mockups representing both digital and physical media, including building signage, office signage, stationery, banners, social media content, and promotional materials. These applications were selected to reflect the primary communication channels utilized by the institution.



Figure 17. Building Signage Mockup
Source: Authors, 2026

The application of the redesigned logo on building signage demonstrates its ability to maintain visual prominence at a large scale. The simplified composition and balanced arrangement of visual elements contribute to a clear and distinctive appearance that remains recognizable from a considerable distance. Compared to the previous logo, which incorporated multiple overlapping elements and denser visual details, the redesigned logo presents a cleaner and more structured visual form. This simplification enhances readability while strengthening the visibility of the institution's visual identity within the built environment.



Figure 18. Stationery Mockup
Source: Authors, 2026

The application of the redesigned logo across various stationery materials demonstrates its versatility in printed media. Implemented on letterheads, business cards, envelopes, and other institutional documents, the logo maintains its visual clarity and recognizability despite differences in format, scale, and layout. The simplified visual structure allows the logo to be reproduced effectively across diverse

print applications while preserving its distinctive character. This adaptability supports the principle of versatility in logo design, enabling the visual identity to function consistently across a wide range of institutional communication materials.

Overall, the redesign resulted in a visual identity that is simpler, more recognizable, and relevant to the character of PUI-PRA UNNES as a child-friendly educational institution based on science and technology. Through the simplification of form, the strengthening of visual differentiation, and the improvement of composition and color relationships, the new logo addresses the limitations identified in the previous visual identity while reinforcing the institution's image.

Conclusions

The redesign of the PUI-PRA UNNES logo resulted in a visual identity that is simpler and representative of the institution's character than the previous logo. By applying the principles of effective logo design, the new logo addresses the limitations identified in the former visual identity. The resulting design integrates the values of child-friendly education, learning media, mathematics, and science into a harmonious visual composition through the use of a book form, a child figure, and interconnected visual structures. The simplification of form and the structured management of color composition further enhance the logo's effectiveness across both digital and printed communication media.

The findings indicate that a redesign approach based on visual identity analysis and logo design principles can serve as an effective strategy for developing the visual identity of educational institutions focused on science and technology. Therefore, the redesigned logo is expected to strengthen the image of PUI-PRA UNNES and improve public recognition of the institution.

Future research may examine the effectiveness of the redesigned logo through user perception studies, logo recognition testing, and brand awareness measurement to provide a more comprehensive evaluation of the success of the proposed visual identity.

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