

Optimizing Visual Communication: an Interdisciplinary Approach of Semiotics and Management to Digital Presentation Platforms

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ABSTRACT

In the digital era, presentation platforms such as Prezi, Canva, and PowerPoint have become fundamental instruments in professional and educational communication. However, their utilization is often confined to functional aspects, lacking a profound understanding of how each platform uniquely shapes and communicates meaning. This paper, written from an interdisciplinary perspective of linguistics (semiotics) and management, aims to comparatively analyze the semiotic affordances of these three platforms and explore their managerial implications for strategic communication decision-making. Employing a framework of social semiotics and *multimodality*, we dissect how each platform facilitates meaning construction through visual, textual, spatial, gestural, and auditory semiotic modes. The analysis reveals fundamental differences: Prezi excels in spatial and gestural semiotics, making it ideal for non-linear narratives and concept mapping. Canva stands out in visual and textual semiotics, facilitating the creation of aesthetic and communicative multimodal texts. Meanwhile, PowerPoint, with its linear structure, offers flexibility in audio integration and the delivery of structured information. From a management standpoint, this understanding is crucial. The choice of a platform is not merely a technical selection but a strategic decision that impacts persuasion, audience engagement, and message clarity. This analysis asserts that an awareness of the semiotic potential of a digital tool empowers educators, managers, and professionals to select the most appropriate instrument for their communication goals, thereby enhancing the processes of learning and meaning construction in the digital age.

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Introduction

In the digital era, the education landscape has been transforming significantly, revolutionizing the dynamics of teaching and learning. The integration of various technology devices, carried on learning management systems (LMS), presentation of multimedia interactives,

comprehensive online assessment, dynamic virtual classes, and professional applications based on Artificial Intelligence (AI), has enriched the educational process. These sophisticated innovations are not only empowering educators in the process of managing and orchestrating teaching activities efficiently, but also facilitating the creation of personal and adaptive learning experiences, tailored to the needs and learning style of each individual student, and offering unprecedented flexibility (Mayer, 2009).

Modern educational technology has increased access, interaction, and student-centered learning. Applications such as Prezi, Canva, and PowerPoint (Mayer, 2009) are examples of how technology facilitates collaboration, instant feedback, and the exchange of learning resources. The integration of these applications is evident in the process of designing presentation slides, the interaction between slide visuals and the delivery of material and the presenter's body language, and the influence of social norms on their design and use. Online assessments and data analysis provide teachers with tools to monitor student progress and personalize learning (Shute & Rahimi, 2021).

Several factors determine the effectiveness of using technology in education, including teachers' digital skills, infrastructure availability, and relevance to learning strategies. Teachers must be equipped with the skills and perspectives that support the effective integration of technology with traditional teaching methods to optimize study results, not only transforming conventional approaches into digital forms (Koehler & Mishra, 2009).

Teaching and learning are essentially semiotic activities. Semiotics is a process rich in the use and interpretation of signs, symbols, gestures, and multimodal representations. In the context of education, semiotic practices describe how educators and learners use signs (such as spoken language, visuals, gestures, objects, and spatial arrangements) to construct meaning, share ideas, and develop knowledge (Bezemer & Kress, 2016). In the classroom, artifacts not only convey information, but also construct meaning through socially and culturally influenced sign processes. Textbooks, visual aids, digital devices, classroom layouts, and gestures are all educational artifacts that have semiotic potential. They are not only learning aids; they serve as carriers of meaning and communication in the teaching-learning process (Bezemer & Kress, 2016).

Given the increasingly complex learning environment due to the integration of digital technology and media, a semiotic perspective becomes crucial. This perspective allows for the analysis of the function of artifacts, not only as learning aids, but also as active components in the construction of meaning. This encourages educators and researchers to examine how learning materials convey messages, influence student engagement, and shape learning outcomes (Leeuwen, 2005). Through a semiotic approach, we can understand how the signs and symbols contained in these artifacts shape students' knowledge, identities, and interactions. This approach is rooted in the study of semiotics, the science of signs and sign systems, developed by figures such as Ferdinand de Saussure and Charles Sanders Peirce. By utilizing platforms such as Canva and PowerPoint, educators and learners not only produce visual presentations, but also participate in the semiotic process of constructing meaning with various representational sources.

Previous studies have examined the integration of digital technology in education primarily from the perspective of instructional design and teacher readiness. For instance, Shute and Rahimi (2021) emphasize that online assessments and learning analytics can significantly personalize learning pathways, but their research is limited to quantitative analysis without deeply exploring how semiotic resources shape meaning-making in the classroom. Similarly, Koehler and Mishra (2009) propose the TPACK framework to highlight the role of teachers' technological and pedagogical knowledge in optimizing learning outcomes; however, their focus rests on teacher competence rather than on how digital artifacts such as Canva or PowerPoint function as semiotic tools in communication.

The objective of this study is to explore the semiotic potential of digital learning artifacts in fostering meaningful and student-centered education, with benefits that are both theoretical—contributing to the development of semiotics-informed pedagogy—and practical—providing educators with strategies to design more engaging, adaptive, and culturally responsive learning experiences.

Materials and Methods

This research employs a qualitative approach with a comparative study design to deeply analyze three digital presentation platforms: Prezi, Canva, and PowerPoint. Data was collected through the systematic observation and documentation of the features, user interfaces, and functionalities of each platform. Using a multimodal semiotics analysis framework, the collected data was interpreted to understand the 'affordances' or semiotic potential offered by each platform in utilizing various modes—visual, textual, spatial, gestural, and audio. The final stage involved a systematic comparison of the three platforms to identify the unique characteristics and respective strengths of each in facilitating the process of meaning construction.

Results and Discussion

Prezi, Canva, and PowerPoint act as platforms for designing persuasive and highly pedagogical visual materials (Jewitt, 2008). By combining elements such as text, color, typography, images, animation, and layout, these platforms help create cohesive visual narratives and produce meaningful semiotic artifacts, both in terms of aesthetics and communication.

Round mapping: the integration between semiotic with technology

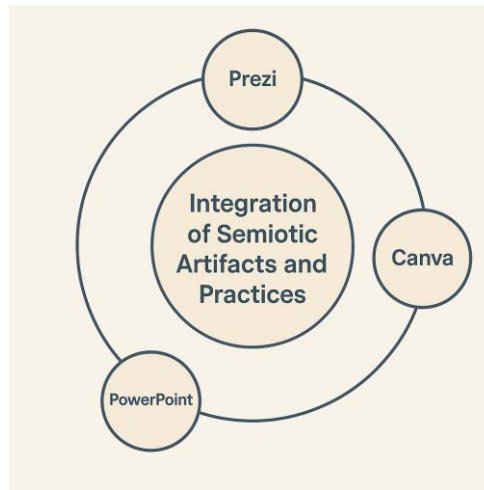


Figure 1 Round mapping: the integration between semiotic with technology

The use of digital platforms allows educators to integrate semiotic theory into practice, enhancing students' critical and creative thinking skills. Students learn about design and how certain design choices, such as iconography in Canva or animation in PowerPoint, contribute to the construction of meaning, for example by strengthening rhetoric or building narrative cohesion. This makes semiotic principles more concrete and understandable, translating abstract concepts into practical, multimodal design experiences (Bezemer & Kress, 2016).

Prezi application: the content works

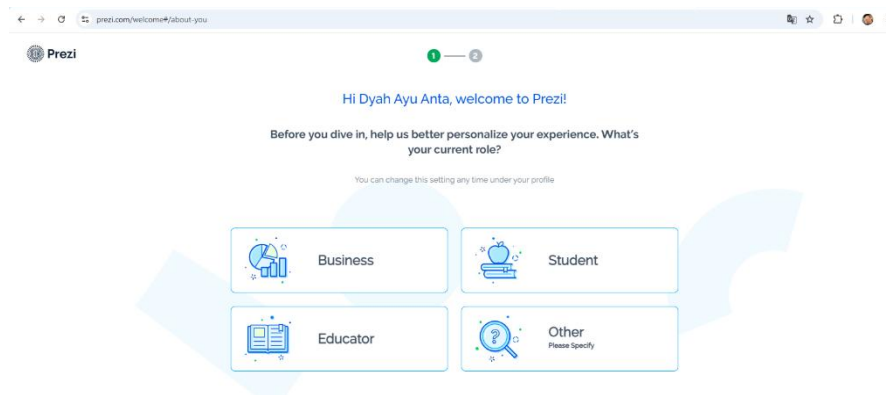


Figure 2 Prezi application: the content works.

Prezi, a dynamic web-based presentation tool, offers an alternative to the linear, slide-by-slide format of traditional software like PowerPoint. With a zooming user interface (ZUI), Prezi allows users to pan across a virtual canvas and zoom in and out of different frames, enabling a more interactive and visually engaging experience (Sabol, 2011).

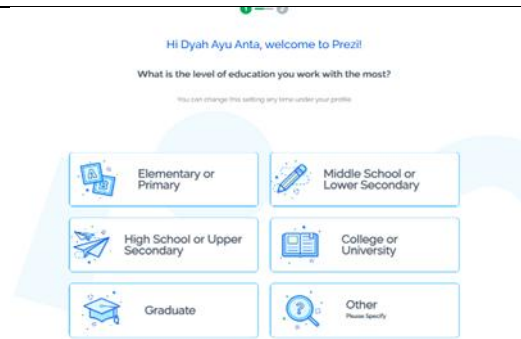


Figure 3 Opening cover

Starting your Prezi journey begins with the sign-up process or logging in to prezi.com. After that, users are presented with the option to utilize a variety of pre-made templates or design an innovative presentation from a blank canvas. Information is structured and visualized through a hierarchical approach, where main "topics" branch out into more specific "subtopics," allowing for a comprehensive and easy-to-understand presentation of ideas.

Bellow, are the step to use Prize nicely!

a. Step one: Log in.

First, you have to visit <https://prezi.com> to get started. Second, the next step is to sign up: sign in with your email or Google account. Then, choose your preferred plan (free or premium).

b. Step two: Create a New Presentation.

Click "Create from template" to use a ready-made template, or "Start from scratch" for a blank canvas.

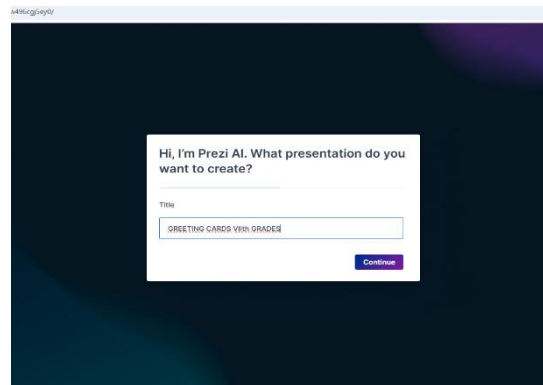


Figure 3 Presentation Colom

c. Step three: Understand the Prezi Canvas.

Instead of conventional slides, Prezi presents an interactive canvas with dynamic zoom capabilities. This facility allows for the visual hierarchy of topics and subtopics. The integrated use of zoom and rotation not only simplifies content navigation but also facilitates the creation of an engaging and interactive narrative flow. The use of smooth transitions between different zoom levels results in a more dynamic and understandable presentation, increasing the audience's appeal and retention of information.

d. Step four: Edit Content.

Click the topic or subtopic you want to edit. Content that can be inserted includes text, images, videos, diagrams, icons and shapes. Toolbars are available to change font, color, and layout.

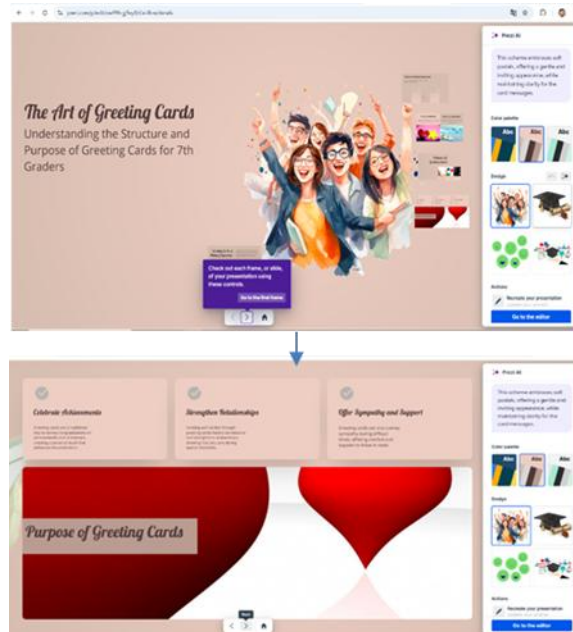


Figure 4 Presentation Flow

e. Step five: Determine the Presentation Flow.

The zoom order and transitions can be set via "Edit Path". The narrative flow can be controlled by shifting and rearranging topics or frames.

f. Then, step six: Preview and Present.

The presentation preview can be accessed via the "Present" button. Navigation through the presentation can be done with the arrow keys or clicks.

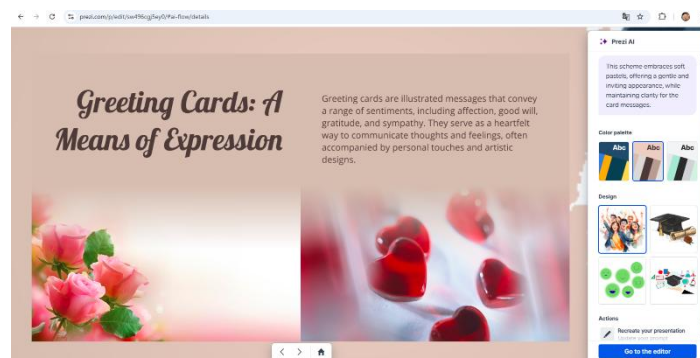


Figure 5 Presentation preview

g. Last, Step seven: Saving and Export.

Easily share your presentations via a link accessible with a single click on the "Share" button. For offline presentations, you can download or export your project to PDF format. Please note that the PDF export feature is part of our premium package and you can export as a PDF or offline file for later use. Facilitate more effective collaboration by adding your colleagues or coworkers directly to the project.

Mayer (2009) and Yapp (2021) showed that delivering visual and non-linear information through Prezi is beneficial in educational and professional settings, particularly for increasing comprehension and engagement.

Canva application: the content work.

Canva offers an intuitive and easy-to-use web design platform, empowering users to create compelling visual content. From effective presentations and eye-catching posters to informative infographics, dynamic videos, and engaging social media graphics, Canva provides a variety of simple drag-and-drop tools and an extensive library of modifiable templates. This allows anyone, regardless of their design expertise, to produce professional visual materials easily and efficiently.

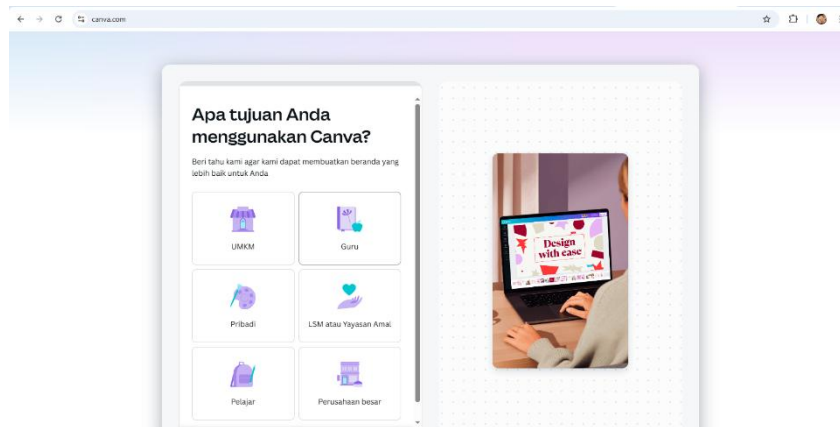


Figure 6 Canva First-Cover

To identifying how to use Canva, it can be done several steps.

a. Step one: Log in.

Beginning your creative journey with Canva, please register at <https://www.canva.com>. Once registered, you will be greeted with a variety of design formats that can be tailored to your specific project needs. Explore the extensive collection of templates and find the ones that best align with your vision and goals. When the main screen opens, users will be presented with the option to determine the purpose of the user using Canva.

Whether he is a Teacher, Student, Worker, or a Professional in a particular field. This, Canva with all its easy access, support for visual literacy, and wide space for creative freedom, has become a very powerful instrument in the modern communication and multimodal learning landscape. This platform is not just a tool, but a vehicle that empowers individuals to articulate ideas visually, bridge communication gaps, and enrich learning experiences through various modes. Canva's flexibility and intuitiveness allow users, regardless of their design expertise background, to weave

compelling visual narratives and convey messages effectively in a world that increasingly prioritizes visual content. The integration of various multimedia elements, from images and illustrations to video and audio, further emphasizes Canva's ability to facilitate holistic learning that is oriented towards deep understanding.

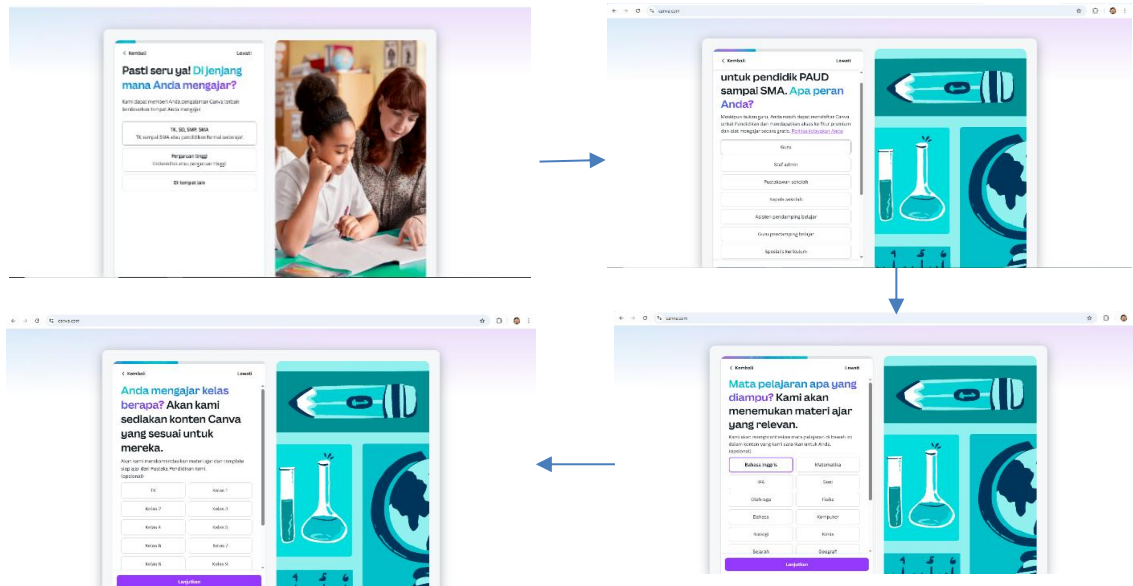


Figure 8 How to save Canva files

b. Step two: Content editing.

Users have access to thousands of templates, both free and paid, within our design editor. There, they can personalize their projects by integrating elements such as text, images, icons, audio, video, and animations to enrich and enhance their creations

Canva makes it easy to customize color schemes, typography, layout, and composition through its layered editing interface. It supports a variety of semiotic modes that result in effective multimodal communication (Jewitt, 2008). The evaluation of Canva's effectiveness includes an in-depth study of its ease of use and semiotic potential. The platform facilitates visual and textual messaging, allowing both novice and experienced users to act as semiotic designers. By utilizing Canva, they can design and manage various visual and textual elements to direct the audience's understanding of the message they want to convey (Bezemer & Kress, 2016).

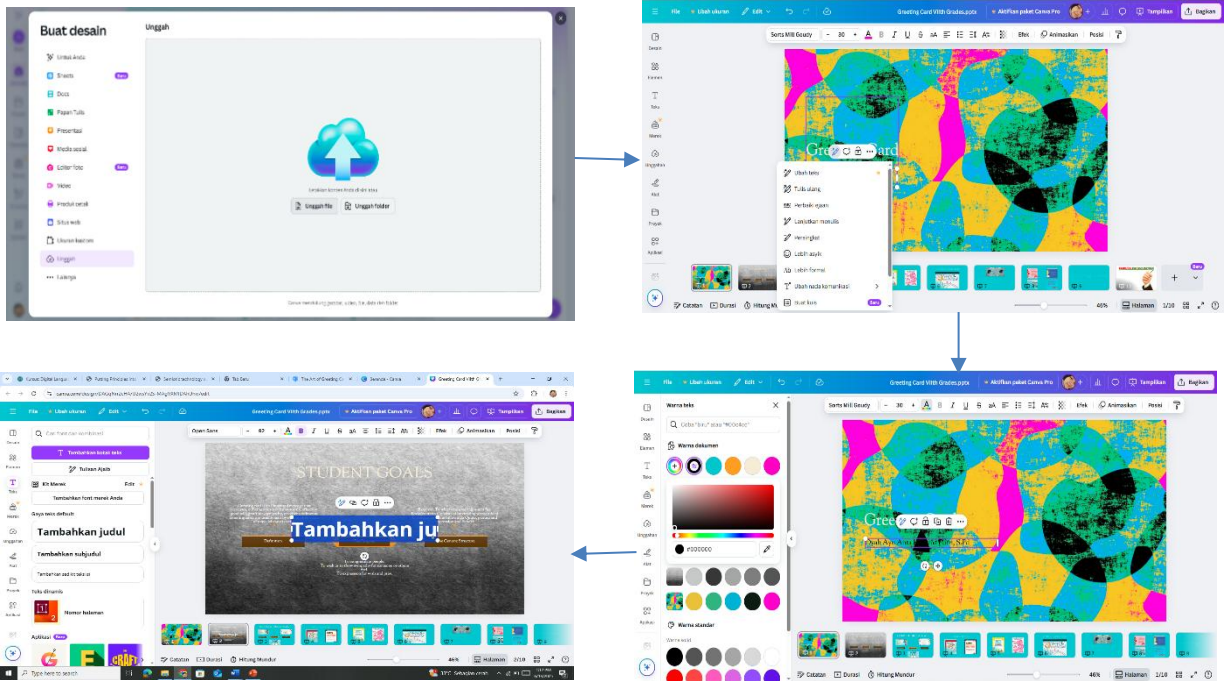


Figure 9 Editing Canva Tools

Canva's ability to bridge this creative process makes it a very effective tool in visual communication. Users, regardless of their skill level, are empowered to construct coherent and impactful visual narratives. This shows that Canva is not just a graphic design tool, but a platform that facilitates the expression and interpretation of messages through visual language.

c. Last, Step three: Saving Document.

After designing their designs, users are given a range of options to utilize their creations. They can preview the final product to ensure it matches their vision. Furthermore, sharing the design is easy through a shareable link. Users also have the flexibility to download their work in a variety of file formats, including PDF for printing purposes, PNG for high-quality images, and MP4 for dynamic presentations, among others. Finally, for those who want to publish their work immediately, the platform provides the option to publish designs directly to various online platforms.

PowerPoint Application: the content works.

PowerPoint, as a popular digital presentation software, offers its users a dynamic canvas to design, modify, and present slides in sequence. The creation process begins with the launch of the application, where users are greeted with the option to start from a blank canvas waiting for their imagination to be touched, or utilize a professionally designed template as the foundation for their presentation. These templates, with a variety of styles and layouts, provide a solid foundation for users to build compelling and informative presentations. This creative freedom allows users to transform information and ideas into a series of visuals that are engaging and easy for the audience to understand.

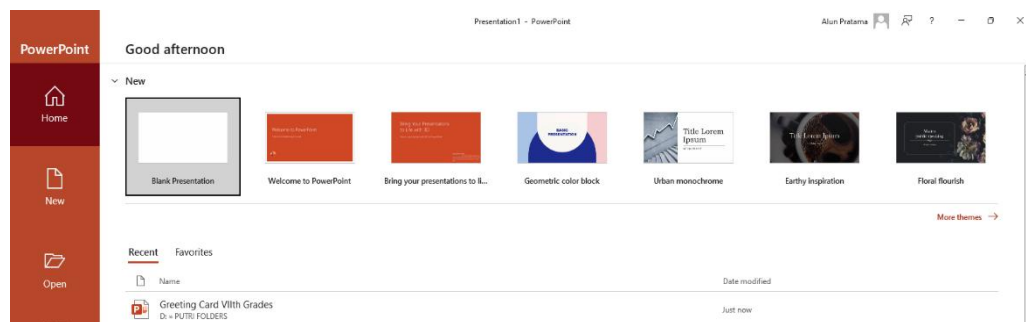


Figure 10. PowerPoint Layout

PowerPoint presentations, which are composed of a series of slides, support the sequential organization of ideas, making them ideal for teaching, business, and academic purposes. PowerPoint effectiveness is assessed based on its technical quality and semiotic richness. Aspects assessed include visual acuity, message continuity, font and color harmony, appropriate use of multimedia, audience engagement strategies, and how well the presentation supports understanding (Mayer, 2009; Bezemer & Kress, 2016).

a. Step one: Editing content.

Slide layouts offer extensive modification flexibility, allowing the integration of a variety of multimedia elements, including text, images, video, and audio. The use of dynamic slide transitions and smooth element animations can significantly increase the interaction and appeal of a presentation. The ability to combine these elements provides the opportunity to create a presentation that captivates the audience.

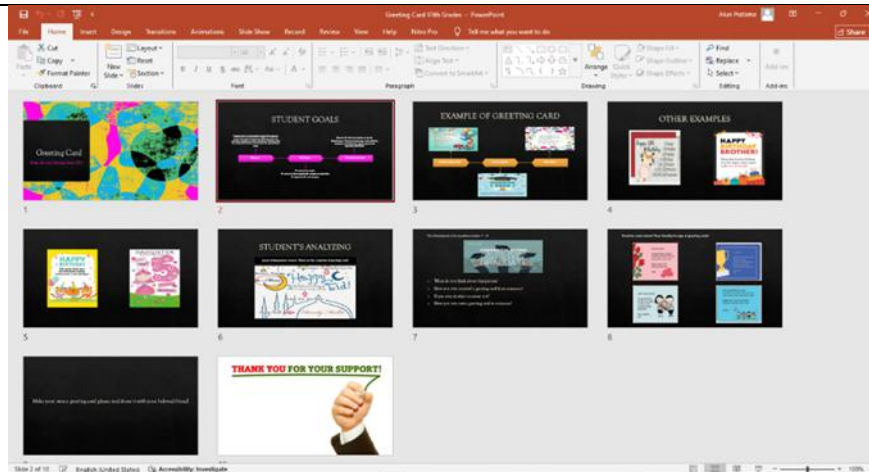


Figure 11. Editing PowerPoint

b. Step two: Saving document.

The finished presentation can be displayed using "Slide Show" and shared as a file (such as PDF, video, or PowerPoint Show) or shared online via cloud services such as OneDrive. Analysis of PowerPoint usage includes evaluation of its technical quality and semiotic depth. Some factors considered include clear visuals, coherent message, appropriateness of fonts and colors, multimedia effectiveness, strategies for engaging the audience, and how well the presentation facilitates understanding (Mayer, 2009).

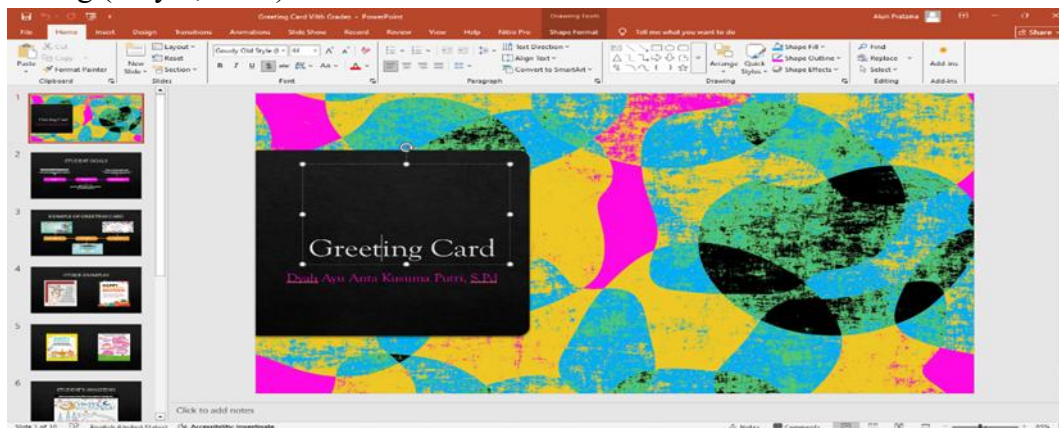


Figure 12. Document Saving

The finished presentation can be shown through the "Slide Show" feature and then distributed in various file formats, such as PDF, video, or PowerPoint presentation format. This facility provides flexibility in sharing presentations, both offline through physical files and online through cloud-based access. The choice of various file formats, such as PDF for portability, video for dynamic presentations, and PowerPoint format for further editing, gives full control to the presenter. Integration with cloud services such as OneDrive further expands the reach of distribution and collaboration, allowing real-time accessibility and sharing of presentations with a wider audience.

Evaluation

Prezi, Canva, and PowerPoint has unique characteristics. Prezi utilizes spatial navigation and a zoom to visualize connections between concepts, Canva emphasizes visual aesthetics and clear graphic design, while PowerPoint supports linear and structured information delivery with multimedia support. With a semiotic approach, we can understand how these platforms shape meaning-making practices through interface design, user interactions, and communication goals. This analysis is crucial for educators, designers, and communicators in selecting and utilizing these platforms not only as a medium for delivering content, but also to facilitate deeper cognitive and communicative engagement through a multimodal approach (Jewitt, 2008; Bezemer & Kress, 2016).

Table.1. The differences evaluations of Three Applications

Criteria of Semiotic	Prezi	Canva	PowerPoint
1. Visual Semiotic Mode (Color, images, icons, layout)	Priority is given to spatial layout and navigation with zoom; this encourages the use of visual metaphors and relational mapping.	Using visual design templates, the platform supports aesthetic styling with icons, photos, fonts, and graphic elements.	It has a slide-based display with rich media features; it is flexible but tends to be linear in its visual structure.
2. Textual Semiotic Mode (Font style, size, text hierarchy)	The minimal text space in each frame demands concise, punchy text, with typography that emphasizes the narrative.	The extensive font collection and flexibility of typographic design encourage synergy between graphics and text.	Capable of handling flexible text, including bullet points, notes, and outlines; however, less integrated with visual storytelling.
3. Spatial/Temporal Mode (Arrangement, transition, sequencing)	Non-linear spatial arrangements, enriched with zoom and rotation transitions, reveal the interrelationships between elements.	Linear or grid format; limited spatial and kinetic dimensions, beyond page transitions.	Transitions and animations complement the progressive slide presentation.
4. Gestural Mode (Movement, interactivity, animation)	Navigation that facilitates interactive storytelling is achieved through the ability to zoom and rotate, simulating gestures that resemble human interaction.	Minimize the use of animation; prioritize static visual compositions.	Provides customizable animations, motion paths, and triggers; click-based interactions are also supported.
5. Audio Mode (Sound integration, narration)	Suitable for immersive narratives as it is equipped with voice features and background music.	While audio narration is supported, the current implementation focuses on still visuals.	Equipped with comprehensive audio such as voiceovers, background music, and sound effects.
6. Semiotic Practices (Design decision-making and meaning-making process)	Emphasizes conceptual mapping and diverse navigation; facilitates exploratory discussions.	Encouraging a design-centric approach, prioritizing clear	Supports structured content creation, standardized communication, and is

Criteria of Semiotic	Prezi	Canva	PowerPoint
		communication and compelling aesthetics.	ideal for academic and corporate environments.
7. Collaboration Features	Work together in real-time through a cloud platform that supports co-editing and change history.	Live collaboration with commenting, version history, and template features.	OneDrive and SharePoint can be used for collaborative editing, although their direct syncing isn't as fast as some of the other alternatives.
8. Learning Curve & Accessibility	Moderate learning curve due to spatial logic and motion controls.	Easy to use, especially for beginners, thanks to its drag and drop interface.	An interface that is easily recognizable to most users; simple for basic use, while animations increase its complexity.
9. Applicability in Semiotic-Based Pedagogy	Ideal for non-linear narratives, mind mapping, and zoom-based argument development.	Ideal for visual literacy, poster design and multimodal texts.	Ideal for linear presentation of information and media-enhanced displays.

The comparative analysis of Prezi, Canva, and PowerPoint reveals how this digital presentation platforms utilize unique semiotic modalities to shape educational experiences and foster meaning-making among users. As educators and communicators increasingly integrate these tools into their practices, understanding the nuanced characteristics of each platform is essential for optimizing learning and engagement.

Prezi distinguishes itself through its emphasis on spatial navigation and non-linear presentation styles. The zooming interface allows users to create presentations that mimic human cognitive processes, such as associating related ideas through spatially driven metaphors. Research indicates that presentations designed with Prezi can lead to reduced cognitive load and improved recall, particularly in complex topics such as computer networks, enhancing conceptual understanding compared to traditional slide-based formats (Akgün et al., 2016). This feature not only facilitates exploratory learning but also aligns with findings that suggest learner engagement increases when the organization of content resonates with the cognitive architecture of the audience (Divayuda et al., 2021; Jamilah et al., 2022).

Canva stands out for its design-centric approach. By providing users with an extensive range of visually appealing templates, icons, and graphic elements, Canva enhances the aesthetic quality of presentations, thus promoting visual literacy among users. The flexibility in text hierarchy offered by Canva encourages effective integration of graphics and text, ultimately fostering clear communication of ideas (Kumi-Yeboah et al., 2020). Furthermore, studies underscore that multimedia presentations, including those made with Canva, significantly stimulate student motivation and promote collaborative learning experiences in online environments (Howell et al., 2023).

PowerPoint, the traditional cornerstone of presentation software, supports a structured, linear mode of information delivery. Its capacity to incorporate multimedia elements, such as audio and animations, makes it a versatile tool for various educational contexts. However, PowerPoint's linear nature often limits the dynamic interconnectivity between ideas, potentially reducing engagement in comparison to platforms like Prezi (Duffy et al., 2014; Špernjak, 2014). Nonetheless, PowerPoint remains widely used due to its familiarity and robust support for various presentation types, particularly in academic and corporate settings (Kumi-Yeboah et al., 2020).

A semiotic analysis of these platforms offers valuable insights into their design decisions and implications for teaching and learning. Prezi, by promoting non-linear navigation, encourages innovative presentations that foster deeper cognitive engagement through visual storytelling (Akgün et al., 2016; Edge et al., 2013). In contrast, Canva's emphasis on aesthetics supports the creation of visually compelling content—crucial in fields requiring design expertise—while PowerPoint's structured format excels in scenarios needing clear, linear communication (Ménard et al., 2025).

Importantly, the selection of a presentation tool should also consider factors such as user accessibility and the learning curve associated with each platform. While Canva is heralded for its user-friendly interface, making it accessible for beginners (Howell et al., 2023), Prezi may present a moderate learning curve due to its spatial navigation intricacies, which may initially challenge users unfamiliar with non-linear presentation styles (Üstün, 2019). In contrast, PowerPoint's familiarity tends to enhance its accessibility among diverse users, although its complexity can increase when more advanced features, such as animations, are employed (Akgün et al., 2016).

Given the current educational landscape, leveraging the strengths of each platform requires a nuanced understanding of their capabilities. Educators must consider not just the delivery of content but also the potential for cognitive and communicative engagement provided by these tools. This analysis exemplifies the value of adopting a multimodal approach to teaching, aligning technological capabilities with pedagogical goals to foster richer educational experiences (Sungkono et al., 2024).

Ultimately, this comparative assessment of Prezi, Canva, and PowerPoint highlights the importance of aligning technological choices with educational objectives, ensuring that the potential of these digital presentation tools is fully harnessed to enhance student learning outcomes.

Conclusion

A comparative study of Prezi, Canva, and PowerPoint through the lens of semiotics reveals the richness of how each platform facilitates multimodal meaning construction. While all three presentation software tools utilize key semiotic modes, such as visual, textual, spatial, gestural, and auditory, the fundamental differences lie in their organization and user interaction. Prezi, with its dynamic spatial navigation, offers strengths in spatial and gestural semiotics, making it ideal for non-linear presentations and concept map visualizations. Canva, on the other hand, has expertise in both the visual and textual domains, providing ease in designing aesthetic and communicative multimodal texts. PowerPoint, with its familiar linear structure, offers flexibility in incorporating audio elements, animations, and conventional slide formats. Understanding the semiotic

affordances of each platform empowers educators, learners, and professionals to choose the tool that best suits their communication needs. Furthermore, this analysis underscores the importance of critically evaluating digital platforms, not only based on their functionality, but also on their capabilities in supporting semiotic practices that enhance engagement, learning processes, and meaning construction in the digital age.

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