

Minimalist Design in Academic Presentations: Impacts on Structured Speech Delivery among Malaysian Undergraduates

Reka Bentuk Minimalis dalam Pembentangan Akademik: Kesan terhadap Penyampaian Ucapan Berstruktur di kalangan Pelajar Ijazah di Malaysia

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ABSTRACT

Students often struggle engaging slides that enhance their speech delivery. This study extends previous research on presentation methods by exploring the role of minimalist presentation design in supporting structured speech delivery within an academic context. While earlier research focused on traditional presentation methods with lengthy slides and heavy texts, the impact of minimalist presentation design in structured speech remained underexplored in recent literature. To fill in the gap, the study investigates how minimalist design influences students' structured speech delivery, the common challenges they face, and the strategies to make better presentation designs that help with structured speech delivery. A mixed-methods approach was used for the study. Data were collected from 40 undergraduates in an English for Informative Speech course, which included rubric-based evaluation of student slides and a post-presentation survey. Findings indicate that minimalist visual designs significantly improve speech clarity, audience engagement and language performance, and adherence to the visual design principles. However, students faced challenges in designing and template selection, balancing visual-text balance, content organisation, and creativity and resourcefulness. The study proposes SPARKLE strategies—structured guidelines for minimalist presentation design in structured speech presentation. Future research should explore broader contexts of visual-based delivery across diverse disciplines and cultural settings and its long-term impact on students' academic presentation skills.

Keywords: oral presentation; minimalist presentation design; academic presentation; structured speech delivery; language classroom

ABSTRAK

Pelajar sering menghadapi kesukaran dalam menghasilkan slaid pembentangan yang sesuai dengan penyampaian ucapan mereka. Kajian ini melanjutkan penyelidikan terdahulu mengenai kaedah pembentangan dengan meneliti peranan reka bentuk minimalis dalam menyokong penyampaian ucapan berstruktur dalam konteks akademik. Kajian lepas lebih menumpukan pada kaedah pembentangan tradisional yang menggunakan slaid yang panjang dan sarat teks, manakala kesan reka bentuk minimalis terhadap ucapan berstruktur masih kurang diterokai dalam literatur semasa. Bagi mengisi jurang ini, kajian ini meneliti bagaimana reka bentuk pembentangan minimalis mempengaruhi penyampaian ucapan berstruktur di kalangan pelajar, cabaran utama yang mereka hadapi, serta strategi untuk menghasilkan slaid pembentangan yang lebih berkesan dalam menyokong ucapan berstruktur. Kajian ini menggunakan pendekatan kaedah metodologi campuran. Data diperolehi daripada 40 pelajar prasiswazah dalam kursus English for Informative Speech, merangkumi rubrik penilaian slaid pelajar dan soal selidik selepas pembentangan. Dapatan menunjukkan reka bentuk secara minimalis meningkatkan kejelasan ucapan, penglibatan audiens, prestasi bahasa, dan pematuhan terhadap prinsip reka bentuk visual. Namun, pelajar turut menghadapi cabaran dalam aspek pemilihan templat, keseimbangan visual dan teks, pengurusan kandungan, serta kreativiti dan kebolehan menyesuaikan diri. Kajian ini mencadangkan strategi SPARKLE, satu garis panduan berstruktur untuk mengaplikasikan reka bentuk pembentangan minimalis dalam penyampaian ucapan berstruktur. Penyelidikan akan datang boleh meneroka keberkesanannya dalam pelbagai disiplin dan konteks budaya, serta kesan jangka panjang terhadap kemahiran pembentangan akademik pelajar.

Kata kunci: pembentangan lisan; reka bentuk pembentangan minimalis; pembentangan akademik; penyampaian ucapan berstruktur; kelas bahasa

INTRODUCTION

Delivering an impactful presentation is significantly important in today's academic and professional landscapes. Students still face difficulties in language acquisition, especially in developing speaking and listening skills needed for effective communication (Nurhidayati et al., 2021, Azman et al., 2022). Good presentation skills require good English command, which is one of the requirements among other soft skills like communication, analytical thinking, and computer skills that lead to better employment marketability (Noor Azina, 2011; Wijayanti et al., 2025). For students and researchers, presenting their works confidently in front of others is essential, and in a professional environment, being able to pitch ideas or deliver reports requires strong presentation skills.

Research highlights that presentations combining both strong oral delivery with well-designed visuals are more effective, as they leave lasting impacts and better comprehension while maintaining audience engagement (Medina et al., 2015; Mohamed, 2025). However, many students still struggle to align effective speech delivery with visual design principles, resulting in ineffective presentations (Naelufah et al., 2023). This creates a pedagogical gap, especially when students are expected to master both verbal and visual modes of presentations.

This study therefore intends to investigate the impact of minimalist presentation design on students during structured speech delivery. Specifically, it seeks to 1) examine how minimalist presentation designs impact students during structured speech delivery; 2) identify the challenges the students face when integrating minimalist presentation design into their structured speech delivery; and 3) propose practical guidelines to help students in creating effective presentation designs that enhance structured speech delivery.

This study is important for pedagogical relevance, especially in language and communication courses, which aim to develop students' academic presentation skills. The integration of minimalist design and structured speech helps the students in delivering clearer and more effective presentations. The insights from this study will also contribute to the curriculum development, which will refine the course content, learning objectives, and assessment methods. In addition, this supports the development of digital literacy, where the students have the urgency to equip themselves with the digital knowledge needed to use the presentation tools effectively. Ultimately, the students will gain confidence from having a clear guideline on how to prepare and deliver the presentations successfully. Be it classroom or online, the students will be able to overcome the gap between visual design and verbal delivery.

MINIMALIST PRESENTATION DESIGN

The emergence of minimalist presentation design has generally received positive reactions due to its ability to communicate effectively and engage audiences without overwhelming the audiences. This type of presentation design emphasises some constraints, such as limiting text, reducing the number of slides, and prioritising visuals (Garner (Garner & Alley, 2013). Nonetheless, the purpose of organising the ideas in such ways aids the presenter in conveying the information effectively (Toy, 2018). In addition, using visuals to minimise the presentation design saves time and increases the presenter's focus on clear and concise content (Garner & Alley, 2016). However, overcrowded and disorganised slides may lead to information overload and reduced comprehension, thus leaving a negative impression on the speaker and presentation (Mayer, 2014; Wijayanti et al., 2025). Poor summarising and prioritising of significant information are other

shortcomings that most students have when preparing the slide presentations (Wan Najmiyyah et al., 2023).

Even though students often use various digital tools to produce visually engaging presentations, these tools also have limitations, such as potential over-reliance on the templates or on the speech texts (Barrett et al., 2022). While digital tools offer accessibility and creative options, the lack of resources can restrict students' opportunities for design exploration, and students can be more passive (Macfarlan & Hook, 2022). Without proper access and flexibility, this limitation may hinder creative and critical thinking (Kim & Park, 2016), and lead students to depend heavily on pre-existing template structures or scripted speech (Barrett et al., 2022). Having to split the focus on the verbal and visual delivery of the presentation makes it more difficult for the audience to follow and retain the information (Wijayanti et al., 2025).

DUAL CODING THEORY

Dual coding theory highlights that human cognition operates by combining verbal and visual representations, where both strengthen memory and comprehension for better recall of information (Paivio, 2006). If both visuals and words can complement each other, students can integrate the two into a more cohesive mental model (Barrett & Liu, 2018; Naelufah et al., 2023). In contrast, poor combinations of text and visuals can minimise the learning advantages outlined in the theory.

For this theory to be effective, the visuals used must be supported by quality content. Hence, proper design training is highly encouraged during the learning process, as students may create disjointed or cluttered visuals that hinder rather than help comprehension. Thus, the implementation and training of basic design principles is critical, as they help ensure that visuals used are clear, cohesive, and supportive of the presentation's content (Barrett & Liu, 2019). It is also noted that previous research often highlights these common errors and the gap between visual usage and verbal elements (Naelufah et al., 2023). This highlights the importance of providing students the practical guidelines and proper resources to scaffold their abilities to the spoken content and visuals.

Previous research also highlights that this persistent gap in how visual and verbal coherence in student presentations can limit creative autonomy and integration of digital design tools in structured speech (Naelufah et al., 2023). Thus, these findings collectively point to the need for improved instructional support and encouraging both creative autonomy and effective integration of digital design tools in academic presentation tasks.

MAYER'S COGNITIVE THEORY OF MULTIMEDIA LEARNING (CTML)

Previous studies have emphasised the integration of visuals, speech, and text to enhance the learning process (Harrison, 2021; Yi et al., 2022). This aligns with Mayer's cognitive theory of multimedia learning (CTML), which indicates that students learn more effectively when information is presented both verbally and visually, as it can avoid overloading of information during delivery of presentations (Mayer, 2014). This principle has gained prominence in educational contexts due to its alignment with how learners process and internalise information, and that active learning requires active engagement, namely selecting, organising, and integrating information into prior knowledge (Mayer, 2024). FIGURE 1 shows Mayer's cognitive theory of multimedia learning.

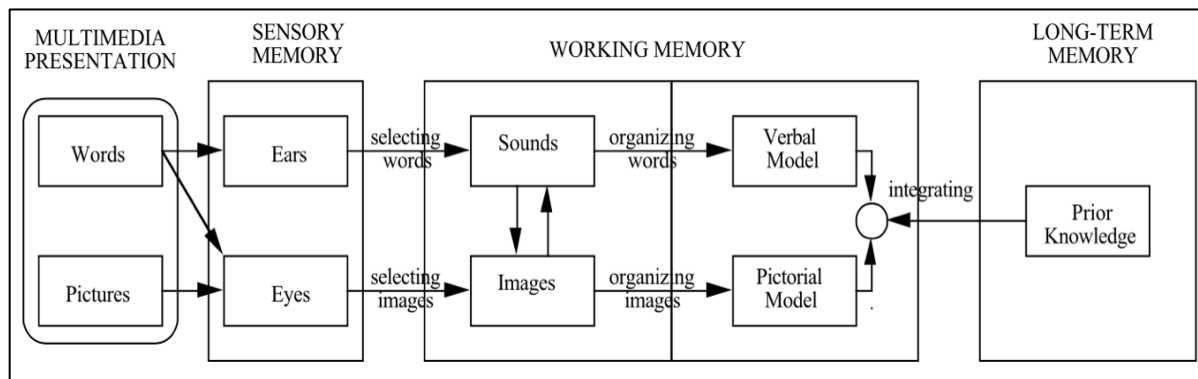


FIGURE 1. Mayer's Cognitive Theory of Multimedia Learning (Mayer, 2024)

Mayer (2024) proposed principles for effective multimedia learning design, such as the multimedia principle (using dual channels rather than words alone), the coherence principle (removing unnecessary information to improve learning), the modality principle (using graphics with narration rather than graphics with on-screen text), the redundancy principle (avoiding repetition of information in multiple forms), and many more. In addition, previous research had proven that using both verbal and visual information can improve cognitive processing and retention (Naelufah et al., 2023; Singh et al., 2022). This is also especially valuable in structured speeches or presentations in classrooms, in which it requires clear and engaging information delivery. Yet, Mayer's theory is found to be more theoretically driven and has yet to expand on the applicability of those designs in practice. Therefore, this points to a gap: there remains a pressing need to link cognitive principles with minimalist design strategies for teaching visual literacy.

IMPACTS OF VISUAL COMMUNICATION IN EDUCATION

It is important to note that visual elements in minimalist design do support the structured speech delivery (Pole & Parashar, 2020). Previous studies indicated that presentation slides that are well-designed can make new information more accessible and engaging (Konchiab & Munpanya, 2021; Naelufah et al., 2023; Park, 2023). Since minimalist design is based on the CARP principles of Contrast, Alignment, Repetition, and Proximity (Williams, 2005), understanding the context would help students organise visual information in a way that important parts can stand out, the content is balanced, and the aesthetics strengthens thematic coherence (Irasuti et al., 2024).

The use of visual elements in speech delivery helps organise and recall information more efficiently, especially in making the audience understand complex information (Abdelmajdid & Mohd Radzuan, 2022; Wolfe et al., 2024). The applications of design principles such as typography, alignment, framing, and others are also some of the ways to ensure the visuals can support the speech delivery (Dzhumanova & Daribaeva, 2022). The findings from these studies indicate that the success of multimodal approaches in structured speech delivery depends not only on their modes of communication but also on their purposeful and aesthetic integration.

Nevertheless, there are difficulties with appropriate utilisation of presentation design, especially in cases when students find it difficult to match simple presentation design with their structured speech. This would lead to confusion or distraction (Wecker, 2012). This can also relate to schema theory (Anderson & Pearson, 1984), which suggests that learners interpret new

information by integrating it into pre-existing cognitive frameworks or “schemas.” Effective minimalist slides support schema activation by organising content in ways that align with how information is typically structured and understood, like through hierarchy, categorisation, or familiar visual cues (Yalçın, 2016). Poorly designed slides, by contrast, may overwhelm the working memory, thus preventing the audience from effectively integrating new information with existing knowledge structures (Bhargava & Awan, 2021). Hence, this gap underscores the need to identify the challenges in integrating visual design with oral presentation for better guidance in developing cohesive and impactful presentation designs.

FIGURE 2 shows the conceptual framework of the study. The conceptual framework is based on dual coding theory, CTML, minimalist presentation design, and the impacts of visual communication in education.

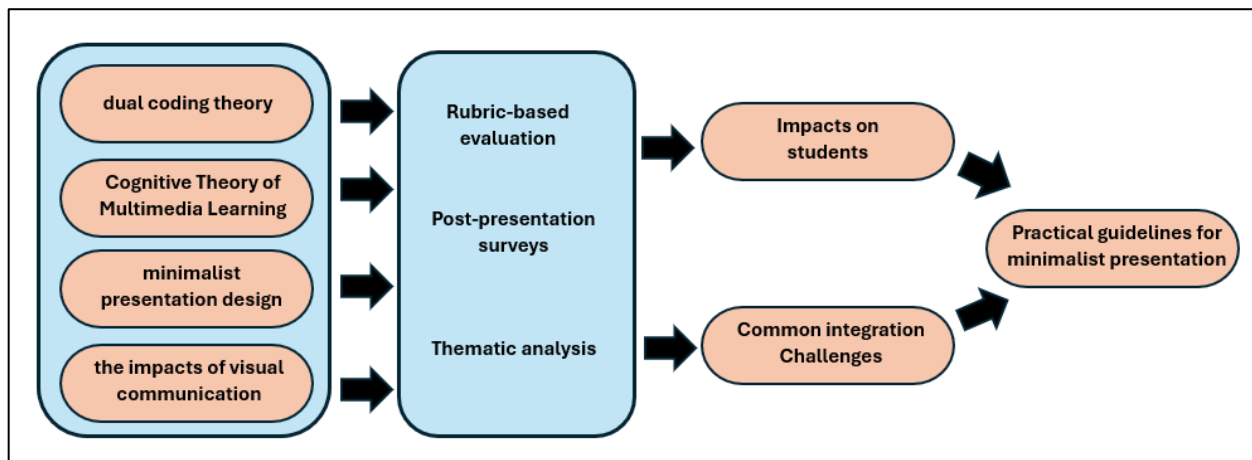


FIGURE 2. Conceptual framework of the present study

The framework demonstrates a comprehensive approach to investigating the impact of minimalist presentation design on structured speech delivery. By combining theoretical background and quantitative and qualitative data collection, the study aims to provide valuable insights into effective presentation practices and develop practical guidelines for minimalist presentation in the classroom. The practical guideline would emphasise minimalist design principles and the strategic integration of visual, language and structured speech elements.

RESEARCH QUESTIONS

To guide the study, three research questions are generated:

- 1) How do minimalist presentation designs impact students during structured speech delivery?
- 2) What are the common challenges students face when integrating a minimalist presentation design into their structured speech delivery?
- 3) What practical guidelines can be developed to help students create effective presentation designs that enhance structured speech delivery?

RESEARCH METHODOLOGY

RESEARCH DESIGN

This study followed a mixed-methods approach, combining both quantitative and qualitative strands to gain a well-rounded view of how minimalist slide design affects students' structured speech delivery. The quantitative component involved the use of a survey that captured students' reflections and perceptions on minimalist design elements, while the qualitative component drew from a rubric-based evaluation of students' slides and a thematic analysis of the open-ended survey responses.

For data collection, student presentation slides (created using tools such as Canva or PowerPoint) were submitted via Google Classroom and evaluated using a structured rubric. The rubric, adapted from Chen et al. (2014), Pérez-Torregrosa et al. (2022), and Sudario et al. (2022), assessed three dimensions: (i) clarity and engagement, (ii) language use, and (iii) visual design principles. Each dimension was rated on a 5-point Likert scale (1 = Unsatisfactory, 5 = Excellent). To establish reliability, two independent raters conducted the evaluations, and inter-rater agreement was tested using Cohen's Kappa. Discrepancies were resolved through discussion, ensuring consistency and rigour in scoring. Validity was supported by aligning rubric descriptors with established frameworks and pilot-testing the rubric on a subset of slides.

The survey instrument, adapted from Alrwele (2017), included both Likert-scale and open-ended items designed to capture students' experiences with minimalist design. A total of 27 out of 40 students responded (67.5% response rate), which is considered acceptable in voluntary classroom-based surveys. Quantitative survey responses were analysed using descriptive statistics (means, frequencies, and percentage agreement) and inferential tests (t-tests and ANOVA where appropriate) to examine differences across groups. Qualitative responses were analysed thematically following Braun and Clarke's (2006) six-phase process, with coding conducted to identify recurring themes related to clarity, language, and visual design.

The use of a pragmatic research paradigm allowed for flexibility in method selection and the integration of numerical data with narrative insights. This approach was especially suited to a classroom-based investigation, where student experience, design decisions, and learning outcomes are intricately connected and benefit from a more layered analysis.

RESEARCH CONTEXT AND PARTICIPANTS

The study was conducted at Universiti Teknologi MARA (UiTM) Cawangan Terengganu, Kampus Dungun, involving 40 undergraduate students enrolled in the Bachelor of Science in Food Service Management programme. These students were taking English for Informative Speech (LCC400), a university course aimed at equipping learners with the linguistic and delivery skills necessary for effective public speaking.

One of the primary assessments for the course was a structured informative speech presentation lasting between 6 and 8 minutes, during which students were expected to deliver either an explanatory or definitional speech. As part of the assessment, students were required to prepare minimalist slides to support their speech, following instructional briefings on design principles.

A non-probability convenience sampling method was employed, which is suitable for small-scale classroom research where the objective is to explore specific pedagogical interventions in a practical and accessible setting (Merriam, 2009).

DATA COLLECTION METHODS

The data collection process involved multiple methods to gather comprehensive insights. First, the researchers analysed student presentation slides which were created using tools like Canva or PowerPoint. Students were briefed on the submission guidelines, which include the deadline, the format for the structured presentation outline, and the requirement to include a link to their presentation slides (e.g., Google Slides, PowerPoint Online). The submission was done using Google Classroom. FIGURE 2 shows the examples of students' presentation slides using minimalist presentation design.



FIGURE 3. Examples of students' presentation slides

Following their presentations, students were invited to complete a survey that sought to capture their experiences and perspectives on minimalist slide design. The instrument was adapted from Alrwele (2017) and consisted of both Likert-scale items and open-ended questions. These helped to explore what students found effective, what they struggled with, and what strategies they believed worked best. The survey link was then shared with the students after the students had completed their presentations. The responses were then collected and analysed to identify common themes. Out of 40 students, only 27 students responded to the survey, with a response rate of 67.5%. Nevertheless, a response rate above 50% is generally accepted in educational research, given that surveys are voluntary. The 27 responses still provided valuable insights into the students' experiences with minimalist slide design. In order to ensure comprehensive analysis, findings from the survey were triangulated with rubric-based evaluations of all the 40 presentation slides.

DATA ANALYSIS PROCEDURES

To evaluate the impacts of minimalist presentation design in structured speech delivery, the study employed both quantitative and qualitative data analysis methods. Two primary sources of data were used, namely rubric-based evaluation of student slides and the students' survey responses. TABLE 1 shows the data collected and the description of the data.

TABLE 1. Data Collection and Analysis

Data collected	Description of data
Rubric-based evaluation (2 raters)	Evaluation of clarity and engagement, language use and visual design principles using 5-point Likert scale (1 = Unsatisfactory, 5 = Excellent)
Survey	Centralised responses with separate quantitative and qualitative data Key themes from qualitative survey responses

For rubric-based evaluation, the presentation slides of 40 students were evaluated by two independent raters using a 5-point Likert Scale (1 = Unsatisfactory, 5 = Excellent). The rubric was adapted and adopted based on Chen et al. (2014), Pérez-Torregrosa et al. (2022) and Sudario et al. (2022). The evaluation was focused on three main areas: clarity and engagement, language use, and visual design principles. Clarity focused on readability, organisation, and highlighting key points, while engagement ensured slides were free of clutter and easy to follow. Language use was assessed for precision, tone, and grammar to ensure alignment with the visuals. Visual design principles like alignment, contrast, and whitespace were also evaluated. Descriptive statistics were applied to generate mean scores and p-values for each rubric category. The inter-rater reliability test was conducted using Cohen's Kappa. The consistency was ensured through standardisation of the rubric, and discrepancies in scoring were discussed and resolved through consensus.

For the survey analysis, the post-presentation survey was completed by 27 out of 40 students, with a 67.5% response rate. The survey contained quantitative items using a 5-point Likert scale (e.g., agreement with statements about design clarity, ease of use, and audience engagement) and qualitative open-ended questions prompting students to reflect on their experiences with minimalist presentation design. The quantitative survey responses were analysed using percentage agreement to identify trends in student perceptions of clarity, effectiveness, and engagement. For the qualitative responses, thematic analysis was used by applying coding and grouping similar themes to uncover key insights. The summary of the analysis was then presented in tables, and comparative analyses were conducted to cross-verify the results.

RESULTS AND DISCUSSIONS

IMPACTS OF MINIMALIST PRESENTATION DESIGNS ON STUDENTS DURING STRUCTURED SPEECH DELIVERY

Research Question 1 explored the impact of minimalist presentation design on students' structured speech delivery. Three main themes were identified: clarity and engagement, language use, and visual design principles. The findings were derived from two data sources, namely from quantitative data (rubric-based evaluation by two independent raters) and qualitative data (post-presentation student survey). TABLE 2 presents the results from the rubric evaluation, highlighting how raters assessed each theme. TABLE 3 provides a summary of students' survey responses, reflecting their perceptions and experiences. While the level of agreement between raters and students varied across the three themes, all findings were statistically significant ($p < 0.05$), suggesting that the observed outcomes were not due to chance and provide meaningful insight into the role of minimalist design in academic presentations.

TABLE 2. Summary of quantitative findings: rubric-based evaluation findings from two raters (n=40)

Criteria	Rater 1 Mean	Rater 2 Mean	Overall Mean	Cohen's Kappa value)	p-value	Statistical Significance
Clarity and engagement	4.03	4.03	4.03	0.566 (Moderate to good)	0.000	Significant
Language use	3.68	3.73	3.71	0.398 (Fair)	0.004	Significant
Visual design principles	3.83	3.83	3.83	0.374 (Fair)	0.001	Significant

TABLE 3. Summary of qualitative findings: post-presentation student survey

Criteria	Key findings
Clarity and engagement	75% of responses rated 4 or 5. Visual clarity: 40% rated 4, 35% rated 5.
Language use	80% of responses rated 4 or 5. "Delivery of ideas": 45% rated 4, 30% rated 5.
Visual design principles	85% of responses rated 4 or 5. "Minimalist design improved clarity": 50% rated 5, 35% rated 4.

THEME 1: CLARITY AND ENGAGEMENT

The quantitative findings indicated that the rubric-based evaluation of clarity and engagement showed moderate to good inter-rater agreement (Cohen's Kappa = 0.566, $p = 0.000$), indicating a shared interpretation of the criteria by both raters. The overall mean score was 4.03, suggesting that the student slides were generally effective in supporting speech clarity and engaging the audience. In the context of structured speech delivery, this level of clarity contributes to smoother message flow and improved audience comprehension.

Meanwhile, the qualitative survey results supported the rubric findings, with 75% of student responses rating clarity and engagement at Level 4 or 5. Specifically, 40% of students rated visual clarity at 4, and 35% at 5, reflecting high satisfaction with the minimalist layout. Students appeared to value the simplicity of slides, which likely reduced distractions and allowed them to maintain better focus during delivery.

While both data sources reflect positive perceptions, the rubric results were slightly more uniform, suggesting that raters maintained a consistent standard across all presentations. The slight differences between evaluator and student perspectives may indicate that students were confident in their design choices, though possibly less aware of subtle weaknesses in delivery integration.

These findings support existing research on the pedagogical benefits of minimalist visual design. As previous studies have noted, when visual clutter is reduced, audience engagement often increases due to improved cognitive processing and speaker-audience connection (Alrwele, 2017).

THEME 2: LANGUAGE USE

In the quantitative rubric-based evaluation, language use received a Cohen's Kappa value of 0.398 ($p = 0.004$), indicating fair agreement between the two raters. This relatively lower level of agreement may reflect the inherent challenges of evaluating language use in live speech contexts, where judgements are shaped by subjective perceptions of fluency, grammatical accuracy, pronunciation, and delivery under time constraints. Such variability often stems from raters' differing linguistic backgrounds, assessment experience, and focus, with some prioritising structural accuracy and others placing greater emphasis on coherence and delivery (Ishikawa, 2023). These factors likely contributed to the variation in scoring observed in this study.

Despite these discrepancies in expert evaluation, students demonstrated high levels of confidence in their language performance. The qualitative post-presentation survey revealed that 80% of respondents rated their language use at Level 4 or 5, with the criterion of “delivery of ideas” receiving particularly strong scores, with 45% rating it 4 and another 30% rating it 5. This suggests that many students believed they expressed their points clearly and effectively. One possible reason for this confidence is the use of minimalist slides may have encouraged better preparation and reliance on internalised content. This likely contributed to smoother and more confident delivery.

The contrast between rubric evaluations and student self-assessments highlights a fundamental difference in how language performance is interpreted. While students equated effective language use with delivering ideas smoothly, raters evaluated a broader set of linguistic features, such as grammar, vocabulary, and sentence structure. This gap mirrors previous findings that students often overestimate their spoken performance, particularly when they are unaware of formal assessment criteria (Abdelmajdid & Mohd Radzuan, 2022). These findings show the importance of aligning student understanding with rubric expectations, particularly in assessments that blend communication skills with linguistic precision.

These findings point to the potential pedagogical value of minimalist slides in supporting language delivery by reducing distractions and encouraging better preparation. With less reliance on reading, students were likely encouraged to internalise their ideas and structure their responses more naturally. This aligns with cognitive principles suggesting that simplified visuals enhance focus and message clarity (Mayer, 2024). In second language contexts, such design choices can prompt more spontaneous and structured speech, contributing to more effective and confident language use.

THEME 3: VISUAL DESIGN PRINCIPLE

The quantitative data indicated that among the three evaluated dimensions, visual design principles yielded the lowest inter-rater agreement (Cohen’s Kappa = 0.374, $p = 0.001$), reflecting the inherent subjectivity in assessing visual elements such as layout, aesthetic coherence, and functionality. While the mean score of 3.83 suggests that students generally applied minimalist principles effectively, the variability in ratings points to differences in interpretation and application quality.

Meanwhile, the qualitative student survey data revealed a high level of appreciation for minimalist visual design, with 85% rating this component at Level 4 or 5. The statement “Minimalist design improved clarity” was particularly well-received, indicating that students recognised the value of reducing text, simplifying layout, and using clean visual structures to support their spoken delivery. These design choices were perceived to enhance focus and comprehension during presentations.

Despite this positive perception, several students noted challenges in implementation. Open-ended responses indicated difficulty in achieving a balanced use of text and visuals, with some expressing concern that overly minimal designs might appear incomplete or ineffective. These responses suggest that while students understood the conceptual value of minimalist design, they lacked the technical knowledge to apply it confidently and consistently.

These findings align with Mayer’s (2024) updated Cognitive Theory of Multimedia Learning, which emphasises that reducing extraneous visual input supports more effective cognitive processing during learning tasks. By limiting distractions and simplifying visual design,

learners can better focus on the speaker's message, leading to improved comprehension and retention. While students in this study recognised the benefits of minimalist slides, their inconsistent application suggests that an appreciation for design principles alone may not be sufficient. Incorporating explicit instruction on visual design into presentation-based courses may help students apply these principles more effectively and consistently.

SUMMARY OF FINDINGS AND IMPLICATIONS

The analysis of Research Question 1 reveals a consistent convergence between both quantitative and qualitative data. Rubric-based evaluations and student survey responses both indicated overall positive impacts of minimalist presentation design on structured speech delivery. Across all three themes—clarity and engagement, language use, and visual design principles—students demonstrated a strong preference for minimalist visuals, frequently rating their performance at Levels 4 and 5. However, discrepancies emerged in comparison to rater assessments, particularly in language use and design execution, suggesting that student self-perceptions were more favourable than expert evaluations.

Among the aspects of structured speech delivery, clarity and engagement appeared most positively affected by minimalist slide design. Simplified visuals supported message flow, reduced distractions, and encouraged better audience connection. Language use also benefitted, as students reported increased fluency and idea coherence, potentially due to greater reliance on rehearsed and internalised content. However, the theme of visual design principles revealed a gap between conceptual understanding and technical application, with many students appreciating minimalist aesthetics but struggling to implement them effectively.

These findings carry important implications. The consistent optimism in student self-assessments, despite noted limitations in execution, suggests a need for structured reflection activities to align self-perception with performance standards. For educators, the results underscore the importance of integrating guided visual literacy training into oral presentation instruction, ensuring students understand not just the value of minimalist design but also how to apply it. At the curriculum level, embedding slide design modules within academic speaking courses could enhance students' ability to communicate ideas visually and verbally with greater coherence. Collectively, these pedagogical strategies can help bridge the gap between students' design intentions and their actual communicative impact.

COMMON CHALLENGES STUDENTS FACE WHEN INTEGRATING MINIMALIST PRESENTATION DESIGN INTO THEIR STRUCTURED SPEECH DELIVERY

Research Question 2 investigated the qualitative data from post-presentation student survey responses to identify common challenges students face when integrating minimalist presentation design into their structured speech delivery. Based on the thematic analysis of the student survey responses, the findings for Research Question 2 are organised into four themes: design and template selection, visual-text balance, content organisation, and creativity and resourcefulness.

TABLE 4 shows the challenges when integrating minimalist presentation design into structured speech delivery. The findings were drawn from the survey by the students.

TABLE 4. Challenges when integrating minimalist presentation design into structured speech delivery

Themes	Responses
Design and template selection	<i>Choosing a suiTABLE design with my theme</i> <i>To find the best and suiTABLE slide for the certain topic</i> <i>Find a suiTABLE design</i> <i>To get the nice template</i> <i>I had no idea what template should I use in Canva</i> <i>There are too many templates until I don't know what I'm going to choose</i>
Visual-text balance	<i>Finding a balance between text and visuals</i> <i>Finding the most suiTABLE visual for the slide</i> <i>Balancing text and visuals</i> <i>What the key word that I need to put in the slide</i> <i>To include content in a simple way that can be understood by lecturers and listeners</i> <i>How much inputs I can put in the slides</i>
Content organisation	<i>A little bit difficult to enter the point in my slide</i> <i>Organizing content clearly and concisely</i> <i>Choosing the right content</i> <i>Hard to decide what information is important and what to leave out</i> <i>Information that I want to list in the slides</i>
Creativity and resourcefulness	<i>To get the idea on how to make the slide interesting</i> <i>Searching for the suiTABLE topic</i> <i>So hard to choose the best one</i> <i>There are many materials that I want to use to make my slides so interesting, but there are many that I have to pay for.</i> <i>Internet problems cause study materials to be unable to be found perfectly</i>

Generally, the findings revealed that students encountered various difficulties in aligning slide aesthetics with the structured speech. While conceptually students understood the principles of minimalist presentation design, they still struggled with the actual practical application. Students still require further support, particularly in selecting the appropriate slide design, structuring content effectively, and achieving the right balance between the use of visuals and text in the presentation slides. The gap between awareness and actual execution is consistent with past studies on visual literacy and communication design, in which they emphasise that knowledge of principles cannot ensure a smooth knowledge transfer without proper scaffolding (Arlwele, 2017; Mayer, 2024). This further emphasised the need for structured guidance to help students create effective presentation design that can enhance structured speech delivery. These challenges underscore the importance of structured guidance and proper instructions to bridge the gap between design theory and practical application. The challenges students face in minimalist presentation design were grouped into four main themes, namely design and template selection, visual-text balance, content organisation and creativity and resourcefulness.

In **design and template selection**, students faced difficulties in choosing appropriate slide templates, with many expressing confusions and being overwhelmed over the wide range of options available. Many voiced their confusion and uncertainties, as reflected in comments such as “*Finding a balance between text and visuals*”, “*I had no idea what template should I use in Canva*” and “*There's too many templates until I don't know what I'm going to choose*”. This difficulty not only arises from the volume of options available but also from the need to align the

design principle with the structured speech without sacrificing its coherence or clarity. These responses also indicated a type of decision fatigue and the need for visual literacy among students. This issue extends Mayer's principles of multimedia learning, which emphasised the value of coherence and guidance in instructional design (Mayer, 2024), by showing that students require scaffolding support in evaluating design options. The findings are also consistent with previous findings indicating that students often struggle with making visual design decisions unless they are explicitly taught how to evaluate and apply them (Barrett et al., 2022; Macfarlan & Hook, 2022). To address this gap and lessen students' cognitive load, educators should consider offering a curated template that corresponds to different presentation types to help students make better design decisions.

In terms of **visual-text balance**, students reported difficulties in a balanced integration of visuals and texts in the presentation slides. Despite previous practice given and general understanding of the minimalist design principles, many still struggled to identify the appropriate amount of texts and visuals to use. The comments, such as *"What the key word that I need to put in the slide"*, *"to include content in a simple way that can be understood by lecturers and listeners"* and *"How much inputs I can put in the slides"* indicated that there might still be issues in synthesising spoken content with visual elements. Again, this suggests the necessity for more structured guidance in visual-verbal coordination, which is consistent with Dual Coding Theory. The theory asserts that learning would be enhanced when information is presented through both visual and verbal forms (Paivio, 2006; Naelufah et al., 2023; Singh et al., 2022), provided the integration is well executed (Paivio, 2006). To address this, educators should consider designing clear instructions or guidelines that help students in the better usage of visual-text combinations in academic presentations.

In **content organisation**, students reported the challenges in structuring content, identifying essential information, and deciding what to include and omit. Many have shared difficulties in content organisation, especially in comments like *"A little bit difficult to enter the point in my slide"*, *"Organizing content clearly and concisely"*, *"Choosing the right content"* and *"Hard to decide what information is important and what to leave out"*. This type of challenge indicated that students struggled not only with summarising but also with sequencing ideas in a logical and impactful manner. Similar to previous studies (Wan Najmiyyah et al., 2023; Wolfe et al., 2024), the findings add that minimalist presentation design can accentuate the issue when forcing students to compress their content further and making the weaknesses more profound. This metacognitive gap in prioritising and structuring content hence indicated the relevance of Schema Theory (Anderson, 1984), which emphasises the importance of mental frameworks to help learners categorise and organise information. To support students in this area, there need to be strategies that can help and guide students to streamline their content while maintaining coherence and relevance of the presentation.

Lastly, **creativity and resourcefulness** identify the structural constraints often overlooked in minimalist design research. Findings indicated that the challenges lie in generating unique ideas while struggling with external constraints. For example, limitation of resources, such as cost barriers for premium templates and internet connectivity issues, was also affecting access to producing good presentation designs. These constraints are also related to digital divide issues – as not all students have equal access to resources. Students stated they struggled *"to get the idea on how to make the slide interesting"* and to *"search for the suiTABLE topic"* as *"there are many materials that I want to use to make my slides so interesting, but there are many that I have to pay for."* This can be seen as reflecting both internal creativity barriers and external resource

limitations. Creativity can be constrained by fear of judgement, lack of examples or limited access to good tools (Macfarlan & Hook, 2022; Kim & Park, 2016). Our study also supports these findings but also reveals another constraint to those of Barrett et al. (2022): the hesitations students have when it comes to exploring digital creativity in minimalist contexts may impact the creative autonomy in presentation design. Thus, educators are encouraged to support students to be more creative in their risk-taking, but with low-stakes practices.

Overall, these findings on common challenges students face when integrating minimalist presentation design into structured speech delivery confirm the existing evidence that students are mostly aware of minimalist design principles but struggle with the practical application (Garner & Alley, 2013; Mohamed, 2025; Wijayanti et al., 2025). The four identified themes were found to be interconnected to one another, as design choice affects content organisation, and in turn, content organisation impacts visual balance and perceived creativity. Hence, these findings contribute to the literature by showing that minimalist presentation designs alone are not sufficient, and they must be paired with good scaffolding activities, practical guidelines and equiTABLE access to support digital creativity. These insights directly inform Research Question 3, which focuses on developing practical guidelines to help students create effective presentation designs that enhance structured speech delivery.

PRACTICAL GUIDELINES TO HELP STUDENTS CREATE EFFECTIVE PRESENTATION DESIGN THAT ENHANCE STRUCTURED SPEECH DELIVERY

Based on the results from the rubric-based evaluation and survey, this study offers practical guidelines called the SPARKLE Strategies to help students create effective presentation designs for structured speech delivery (see FIGURE 3). SPARKLE is a mnemonic-based framework designed to assist students in creating visually effective, well-structured academic presentations. Its purpose is to simplify the process of learning presentation design. SPARKLE represents seven essential strategies, namely (S) synchronise speech and slides, (P) polish text, (A) apply visual and language principles, (R) relate visual to speech, (K) know your audience, (L) limit animation and effects, and (E) enhance with practice and feedback. Each component of SPARKLE addresses a key area in structured speech delivery to help students systematically plan and execute engaging academic presentations.

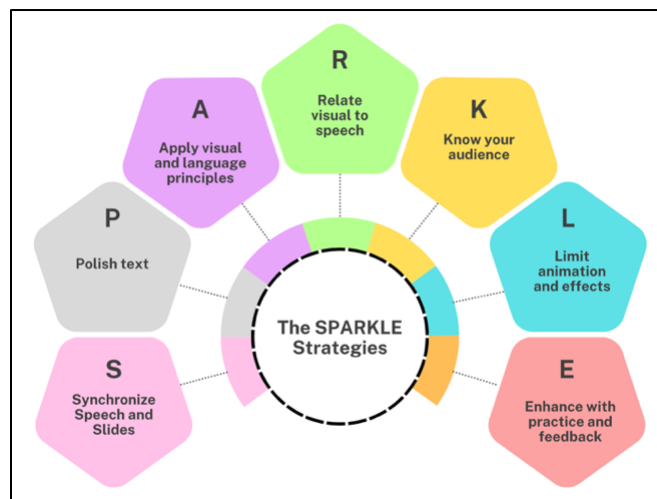


FIGURE 3. The SPARKLE Strategies

From a pedagogical perspective, SPARKLE illustrates the effectiveness of mnemonic frameworks in the classroom. It helps reduce cognitive load by breaking down complex tasks into manageable parts and making them effective for supporting cognitive scaffolding (Anderson & Pearson, 1984). Not only does it teach presentation design, but it also supports deep learning, metacognition, and communication literacy in the classroom. TABLE 5 provides a concise summary of these strategies, their purposes and practical actions/examples.

TABLE 5. Summary of SPARKLE Strategies

Strategy	Purpose	Practical Actions/Examples
S – Synchronise speech and slides	Align slide progression with the speech flow to ensure logical delivery	Outline the speech (introduction, body, conclusion) → Assign each key point to a corresponding slide
P – Polish text	Keep slides text-light and focus on keywords.	Use bullet points or keywords → Use colour and font variations for emphasis.
A – Apply visual and language principles	Enhance clarity and readability through CARP design (contrast, alignment, repetition, proximity) and accurate language.	Apply consistent font sizes → Use high-contrast colours → Proofread for grammar, spelling, and tone alignment.
R – Relate visual to speech	Use visuals as an extension of the speech to clarify points.	Choose images, charts, or diagrams that explain or exemplify speech content → Avoid decorative-only visuals.
K - know your audience,	Tailor content, tone, and visuals to audience needs and expectations.	Identify audience background → Adjust vocabulary and design → Conduct mock presentations for feedback.
L - limit animation and effects	Maintain audience focus by avoiding distracting transitions or overuse of motion.	Use simple transitions (e.g., fade) → Avoid sound effects and minimise animation
E - enhance with practice and feedback	Improve delivery and design integration through rehearsal and critique.	Rehearse timing between speech and slides → Practise tone, pace, and pronunciation → Seek feedback for refinement.

The SPARKLE strategies begin with **(S) synchronising speech and slides**. Students would outline their structured speeches into clear sections, namely the introduction, body, and conclusion, and then identify the key points to ensure that the speech would flow logically. This approach supports systematic preparation and delivery by organising content into logical sections and thus promoting effective presentation performance (Barrett et al., 2022; Barrett & Liu, 2019).

(P) Polish text refers to keeping it simple with minimal text and focusing only on bullet points or keywords. Students would be advised to use the right colour and font to highlight the critical points without overloading visuals. The limitation of sentences per slide is also advised to keep up with the minimalist presentation design (Dzhumanova & Daribaeva, 2022).

Next, students should **(A) apply visual and language principles** by designing the presentation slides using alignment, contrast, repetition, and proximity (CARP) principles for readability and clarity (Williams, 2005). Proofreading the language on the slides helps to ensure that the language use is precise, grammatically correct, and in line with the speakers' tone. Hence, clear visual design and language use can indirectly contribute to audience engagement (Pole & Parashar, 2020; Wolfe et al., 2024).

After that, students should **(R) relate their visuals to the speeches**. Visuals can be used as an extension of the speech, either to complement or to reinforce the structured speech delivery (Pole & Parashar, 2020); thus, the use of suitable images or diagrams can be used to clarify complex ideas. The use of diagrams, charts or relevant images can further relate audience comprehension.

Students should also **(K) know their audience** by tailoring their tone, language, and visual use to suit the audience (Wolfe et al., 2024). Knowing the audience helps to ensure that the presentation is engaging and accessible to the right audience. Additionally, the students are also encouraged to conduct a mock presentation to test their delivery and make necessary adjustments, if required (Singh et al., 2022).

Consequently, students have to **limit animations and effects**. Excessive transitions or flashy effects can distract the audience from the content of the speech. They also need to prioritise simplicity and functionality without overwhelming the audience (Barrett & Liu, 2019).

Lastly, students should **enhance their presentations with practice and feedback**. The practice should emphasise the synchronisation between speech and slides (Naelufah et al., 2023), language use, tone, pace, and pronunciation to ensure clear and confident delivery. Feedback from peers or lecturers would be helpful to refine both the content and delivery.

The SPARKLE framework is a systematic approach to teaching and evaluating presentation design skills in classroom learning. It can be incorporated into the curriculum, formative assessments and lesson plans. For example, educators may utilise SPARKLE by assigning students with micro-presentation tasks, in which they can apply each of the seven strategies in simple speaking practices. Educators can also create rubrics that match each SPARKLE component and develop precise standards for formative and summative evaluations. Furthermore, SPARKLE can also be incorporated into communication modules or speaking workshops. The workshops can sharpen students' analytical and design skills, promote collaboration, and encourage shared responsibility for better communication quality. SPARKLE is a flexible and transferable teaching tool that can be customised for different presentation genres from different fields. Hence, SPARKLE is an ideal addition to curricula focused on academic literacy, digital communication, and professional readiness among educators.

CONCLUSION

Despite these contributions, this study's conclusion should be interpreted with caution, as it used a relatively small sample size of 40 students from a single-institution context. These factors limit the generalisability of the result beyond the specific course and cultural setting examined. Nevertheless, the findings provided valuable evidence that minimalist presentation design has significantly enhanced the presentation clarity, improved the language use and led to improved audience engagement. Moreover, developing well-designed presentations intensifies the effectiveness of structured speech delivery. However, challenges remain, particularly in balancing the visuals and text, selecting appropriate templates and incorporating creativity. To address the issues, the study offers the SPARKLE strategies, the practical guidelines for creating effective minimalist presentation design, which represents the novelty of the study.

The findings carry different implications for different stakeholders. Educators and curriculum developers could integrate the visual design training into communication courses, modules, professional development workshops or even policies on digital literacy to ensure the users can develop practical skills beyond verbal delivery. Students also need to improve their design-thinking skills and align the visuals and spoken content to deliver an impactful presentation. It is also suggested that minimalist design needs to be included as a core component in assessing presentations.

Consequently, future research should test the SPARKLE model across different institutions and disciplines and investigate the impacts of emerging digital tools and AI technologies on multimodal communication, as well as the effectiveness of different instructional methods for learning minimalist presentation design and presentation skills. It can also go further by investigating longitudinal studies to see if such practices with minimalist presentation design are effective over time and whether they can be sustained. Future work could also explore its application in professional settings like workplace trainings or corporate communication and investigate how AI presentation technologies can be integrated with minimalist design principles in order to support diverse learners. This would provide a more comprehensive understanding of how to best support students and professionals in developing these critical multimodal communication competencies.

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