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Redesigning Hair Care Packaging for Generation Z Through a Student-Led Case Study of a Slovenian Cosmetic Brand

ABSTRACT

The cosmetic packaging market is increasingly influenced by Generation Z, whose purchasing decisions are shaped by visual identity, functionality, environmental responsibility, and brand authenticity. This study investigates the redesign of packaging for hair-care products produced by a Slovenian cosmetic brand, with a particular focus on the preferences and expectations of Generation Z consumers. The research combined an analysis of the Slovenian hair-care packaging market with a student-led design process. Existing products were evaluated according to packaging format, materials, visual communication, functionality, sustainability claims, and differentiation at the point of sale. Based on the market analysis and the defined characteristics of the target group, students developed alternative packaging concepts for selected hair-care products. The proposed solutions were subsequently analysed and compared in terms of visual identity, usability, material selection, environmental considerations, and suitability for the existing brand. The results showed that the student concepts introduced greater visual differentiation and stronger alignment with Generation Z preferences than many existing products identified on the Slovenian market. Recurring design directions included contemporary and simplified graphics, clearer product information, more distinctive colour systems, improved ease of use, and greater emphasis on recyclable, reusable, or refillable packaging solutions. The analysis also revealed that sustainability communication must be clear, credible, and integrated into the overall packaging design rather than presented only as an additional marketing claim. The study demonstrates the value of involving students as representatives of the target generation in packaging development. Their concepts provide relevant insights for cosmetic brands seeking to modernise their packaging, strengthen consumer engagement, and respond to changing environmental and communication expectations.

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Generation Z, cosmetic packaging, hair care, packaging redesign, sustainability, student-led design, visual communication

1. Introduction

Packaging is one of the most immediate interfaces between a cosmetic brand and the consumer. In crowded retail and digital environments, it must attract attention, communicate product purpose, distinguish variants within a product family, and support the practical use and disposal of the product. Visual features such as colour, shape and contrast can influence early-stage visual attention during product search (Clement, Kristensen & Grønhaug, 2013), while packaging colours and textual claims can also shape young consumers' perceptions of

sustainability and product qualities (Hallez et al., 2023). In cosmetics, these functions are particularly important because the package frequently carries symbolic meanings associated with identity, lifestyle, quality and trust. Generation Z is an especially relevant audience for contemporary cosmetic brands. This group has grown up with visually intensive digital communication, rapid trend cycles and continuous comparison between products and brands. At the same time, environmental concern, eco-labelling, social media content and perceived authenticity can influence green purchase intentions among Generation Z consumers (Panopoulos et al., 2023). Research on green cosmetics similarly indicates that product knowledge, attitudes and social influences are associated with purchase intention among younger consumers (Limbu, Pham & Nguyen, 2022). Consequently, packaging for this audience cannot rely only on aesthetic novelty; it must also provide understandable information and credible sustainability cues. The beauty-care sector is under increasing pressure to reduce packaging impacts while maintaining the visual and tactile characteristics that support brand recognition and premium perception. A recent systematic review of eco-friendly beauty packaging emphasizes that consumer perceptions, expectations and barriers must be considered alongside technical sustainability improvements (Del Greco et al., 2024; Vrabič-Brodnjak & Jestratijević, 2024). Likewise, research on cosmetic packaging attractiveness shows that visual and tactile elements, materials and reusability can contribute to the perceived value of cosmetic packaging among younger consumers (Wang et al., 2024). These findings support a design approach in which sustainability, usability and visual identity are treated as interconnected rather than separate objectives.

This paper presents a practice-based case study in which university students developed redesign proposals for an existing line of hair-care products produced by a Slovenian cosmetic company. The aim was to examine how a student-led design process can reveal design directions that are relevant to Generation Z while remaining compatible with an established product family. The study focused on three questions: (1) which characteristics of existing hair-care packaging limit differentiation and communication at the point of sale; (2) which visual and structural directions recur across student redesign proposals; and (3) how can sustainability be integrated into packaging communication without becoming a detached marketing claim.

2. Materials and methods

2.1. Case-study framework

The study used a qualitative case-study approach combining market observation, design development and comparative analysis. The case concerned a hair-care line from a Slovenian cosmetic manufacturer. The educational design brief asked students to reconsider the visual communication and packaging system of products such as shampoo, conditioner, hair oil and hair-care cream while preserving sufficient continuity for recognition as a coherent product family. The work was developed as a student project under academic mentorship and was used as the empirical material for the present analysis.

Three completed student design directions were selected because they represented clearly different visual strategies and included sufficiently developed applications across several products. The first concept used a saturated pink colour field and bold contemporary typography; the second used a restrained light background with colour-coded organic graphic forms; and the third applied a high-contrast brown-and-white system with expressive illustration and large typographic elements. The attached project documentation includes ideation, label development, dielines and rendered product applications.

2.2. Market analysis and design criteria

Before redesign, students reviewed hair-care packaging available on the Slovenian market. The observation was qualitative rather than a statistically representative audit. Products were compared according to packaging format, dominant materials, colour and typography, hierarchy of product information, differentiation between variants, perceived ease of use, sustainability-related cues and expected shelf visibility.

The market material indicated a broad use of plastic bottles, tubes and smaller bottles, together with highly variable colour systems and information density. This visual diversity provided the reference context for identifying opportunities for stronger brand coherence and more immediate product differentiation.



» **Figure 1:** *Example of the student market-analysis material used to benchmark hair-care packaging formats and visual approaches in the Slovenian market*

2.3. Student-led redesign process

The redesign process followed an iterative sequence: market observation, definition of the communication problem, target-group interpretation, inspiration and mood-board development, initial sketches, label layout, refinement of the graphic system, and application to a family of products. Students (9 students) considered front-panel hierarchy, product naming, colour, typography, graphic motifs, label coverage, secondary packaging and the relationship between product variants. The process was not constrained to one predefined visual style, which allowed different interpretations of a Generation Z-oriented hair-care brand to emerge.

The target-group perspective was embedded through the direct involvement of students as designers who are close in age and media habits to the intended consumer group. This does not replace formal consumer research, but it provides a form of participatory insight: students simultaneously interpreted the market as users, design students and potential purchasers. In the project materials, target-group definitions varied slightly between teams; this variation was retained rather than retrospectively standardized.

2.4. Comparative evaluation

The final concepts were compared using five categories derived from the design brief and the literature: visual identity, product differentiation, information clarity, functional suitability, and sustainability communication. Evaluation was interpretive and based on the submitted design documentation rather than on consumer preference scores. The analysis therefore identifies design tendencies and strengths, not statistically significant differences between concepts.

3. Results and discussion

3.1. Market-level observations

The market review suggested that hair-care packaging competes in a visually saturated environment in which colour, claims, imagery and product-specific terminology frequently overlap. Many products rely on familiar bottle and tube formats, meaning that differentiation is largely achieved through surface graphics and label systems. This is consistent with the importance of contrast and other physical design cues in guiding early visual attention (Clement, Kristensen & Grønhaug, 2013). For an established brand, redesign therefore needs to balance recognizability with sufficiently distinctive cues to interrupt routine shelf scanning.

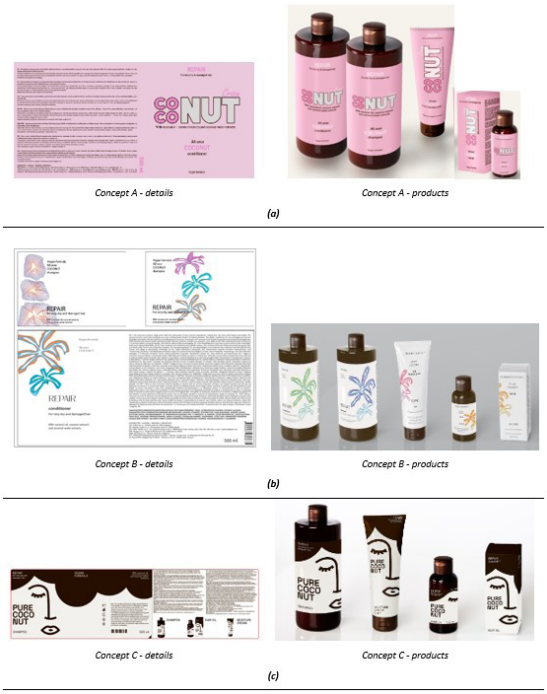
A second observation concerned information density. Hair-care products typically communicate function, hair type, ingredients, marketing claims, use instructions and regulatory information within a limited surface area. The student work repeatedly responded by simplifying the front panel and strengthening the hierarchy between product family, product type and benefit. This direction is relevant to younger consumers who often encounter the same packaging both in-store and as small digital images, where legibility and rapid recognition are particularly important.

3.2. Student redesign concepts

Figure 2 presents the three principal redesign directions. Concept A developed a playful pink identity centered on large, condensed product lettering and a youthful visual tone. The strong colour field creates immediate family recognition, while the enlarged 'coconut' wording functions as the dominant recognition element. The proposal is visually assertive and likely to perform well in digital communication, although extensive use of a single saturated colour may require careful coding of individual product variants.

Concept B adopted a more restrained, premium-oriented approach. A white base and relatively fine typography were combined with large organic motifs that change colour between product types. This concept directly addressed the problem of weak differentiation within visually similar hair-care families: the graphic language remains consistent, while colour acts as a clear variant code. The submitted work explicitly identified difficulty distinguishing shampoo, conditioner and related coconut-based products as a problem and proposed a common graphic element combined with different colours as the solution.

Concept C used the strongest contrast of the three concepts. Brown and white areas, oversized typography and stylized facial elements produce a recognizable editorial aesthetic. The student documentation described the objective as modernization, stronger consumer connection, shelf stand-out and a natural, minimalist, professional appearance. The concept also retained the existing plastic packaging format and specified matte, soft-touch labels, demonstrating a pragmatic approach in which the visual redesign could be implemented without immediately changing all primary packaging components.



» **Figure 2:** *Student-generated redesign directions: (a) Concept A: bold pink typographic concept; (b) Concept B: light, colour-coded organic-form concept; and (c) Concept C: high-contrast illustrated concept*

3.3. Cross-concept comparison

Despite their visual differences, the three concepts converged on several principles. First, each concept reduced reliance on complex decorative information and instead established a stronger dominant visual cue. Second, all three created clearer relationships between the individual product and the product family. Third, the proposals treated colour as a strategic communication tool: as an overall brand field, as a product-variant code, or as a high-contrast identity system. This finding aligns with experimental evidence that packaging colour and claims can shape perceptions among young consumers (Hallez et al., 2023).

The concepts also demonstrate that Generation Z-oriented design does not correspond to a single aesthetic. One solution is bright and playful, another restrained and premium, and another bold and illustrative. What they share is not a specific style but stronger intentionality: clearer hierarchy, more immediately recognizable systems and a visual language designed for both physical and digital exposure. This is important for brands seeking to modernise without simply imitating short-lived trends.

Table 1

Qualitative comparison of the three redesign concepts based on the project documentation and the evaluation criteria used in the case study

Criterion	Concept A	Concept B	Concept C
Visual identity	Bold pink typography	Minimal white base; colour-coded organic forms	High contrast brown/white illustration face motif
Product differentiation	Strong colour unity; product name hierarchy	Distinct colour coding by product type	Distinctive form/graphics; strong shelf contrast
Information clarity	Simplified front panel	Clear hierarchy; more restrained layout	Large product naming; compact information zones
Brand fit	Youthful, playful	Premium, contemporary	Editorial, expressive
Sustainability direction	Potential for simplified labels and material communication	Supports clear separation of material and product information	Retains existing plastic format; matte/soft-touch label noted

3.4. Sustainability and credibility of communication

Sustainability emerged as both a material and a communication issue. The student proposals and the subsequent comparison considered recyclable, reusable and refillable directions, but the case also shows the limitations of treating sustainability as a decorative claim. A visual signal such as a green colour, a natural illustration or a short environmental statement can shape perception, yet it does not by itself demonstrate lower environmental impact. The systematic review by Del Greco et al. (2024) similarly highlights the need to understand consumer expectations and barriers when developing eco-friendly beauty packaging.

For future development, sustainability information should be linked to verifiable packaging attributes, for example the type and share of recyclable material, mono-material construction where technically possible, refill availability, instructions for separation, or quantified packaging reduction. Clear eco-labelling can influence Generation Z green purchase intention (Panopoulos et al., 2023), but credibility depends on the relationship between the claim and the actual packaging system. The implication for the case brand is that visual redesign and packaging engineering should proceed in parallel.

3.5. Value of student-led co-creation

The student-led process generated a broader range of ideas than would be expected from a narrowly prescribed redesign exercise. Students challenged the existing visual hierarchy, proposed new colour systems, experimented with premium and playful positioning, and considered how the product family would appear across bottles, tubes and cartons. Their proximity to the target generation was particularly useful for identifying visual conventions that feel contemporary in social and digital contexts.

However, student participation should be viewed as an exploratory co-creation method rather than as direct evidence of market acceptance. The strongest application of this approach is as an early-stage innovation tool: student concepts can expand the design space and help a company formulate hypotheses that can subsequently be tested with consumers, production specialists and sustainability experts. In this sense, the project creates a bridge between design education and industrial packaging development.

4. Limitations

The study is qualitative and based on one brand case. The market review was exploratory and did not use a fixed, statistically representative sample of all hair-care products sold in Slovenia. Consumer testing, eye-tracking, shelf simulation and willingness-to-pay measurements were not performed. In addition, the student teams interpreted the target audience with some flexibility, and not every proposal developed material and end-of-life aspects to the same level of technical detail. The findings should therefore be interpreted as design insights and hypotheses for further validation rather than as population-level evidence about Generation Z preferences.

Future research should test selected redesigns with Generation Z consumers using structured preference studies, visual-attention methods and usability tasks. Environmental evaluation should also compare alternative packaging scenarios through measurable indicators such as packaging mass, recycled content, recyclability, refill performance and, where appropriate, life-cycle assessment. Such validation would allow the visual, functional and environmental dimensions identified in this case study to be converted into evidence-based design requirements.

5. Conclusions

The case study demonstrates that involving students in the redesign of hair-care packaging can provide relevant, contemporary directions for brands seeking stronger engagement with Generation Z. Across three distinct concepts, the most consistent improvements were clearer information hierarchy, stronger product-family coherence, more deliberate use of colour, greater shelf differentiation and visual systems suitable for digital communication. The results also show that there is no single 'Generation Z style'; effective solutions can range from playful and saturated to minimal and premium, provided that the design communicates quickly and coherently.

Sustainability should be integrated into this redesign process as a design and packaging-system requirement rather than added as a final claim. For cosmetic brands, the most promising route is therefore to combine student-led or user-near co-creation with technical packaging development and subsequent consumer validation. This approach can support packaging that is visually current, usable, credible and better aligned with changing environmental expectations.

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