

Strategic Glocalisation of E-Commerce Apps

Landscape Preference Methodology for UX Strategists, Designers, and Researchers

Abstract

E-commerce is booming in emerging markets, especially Southeast Asian countries such as Indonesia, The Philippines, and Thailand. Designing UX for different countries often involves not just language translation but also cultural adaptation. Localisation is challenging in that UX professionals need to strike a balance between localisation and maintaining brand identity across markets. This whitepaper describes a systematic methodology for such glocalisation of e-commerce apps, based on our research in three Southeast Asian countries. The **Landscape Preference methodology for Glocalisation (LPG)** helps UX professionals analyse the “Appscape” comprising user preferences influenced by their cultural context, as well as brand identity when making strategic decisions in glocalisation. LPG also facilitates the analysis of emerging UX designs and offers an evidence-based approach for prioritising the use of glocalisation resources. The methodology is illustrated with case studies of Indonesia, The Philippines, and Thailand, in which the potential of live shopping and virtual idols as emerging UX technologies are also explored.

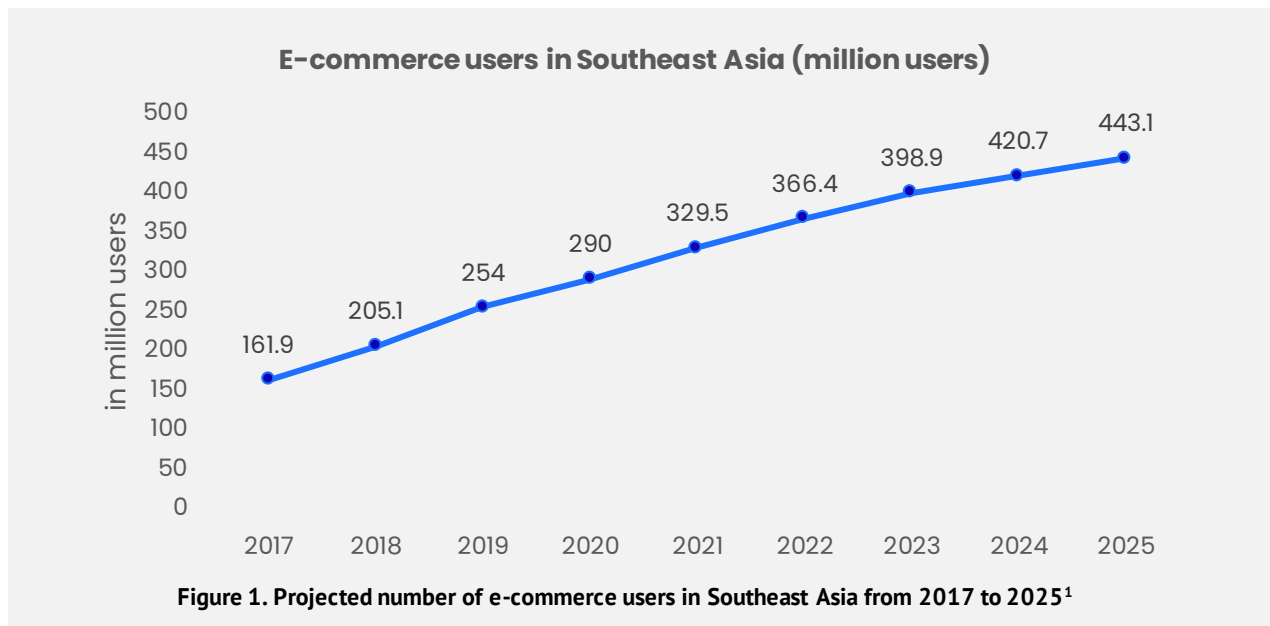
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1. Introduction

The demand for e-commerce increased significantly during the COVID-19 pandemic, and is expected to strengthen worldwide, especially in emerging economies characterized by mobile-first Internet access and growing middle class. For example, in Southeast Asia, the number of e-commerce users is expected to reach 443 million by 2025 (see Figure 1), pushing the e-commerce market to exceed US\$100 billion per year¹.



App localisation is the key to entering emerging markets, which are often diverse in terms of language as well as culture. For example, in **The Philippines**, although the dominant religion is Catholicism, there are over 100 ethno-linguistic groups with distinct traditions and practices. The goal of App localisation is to ensure a positive user experience through interface design that is easy to understand, useful, exciting, and secure (see Figure 2).

"App localisation is the key to entering emerging markets."

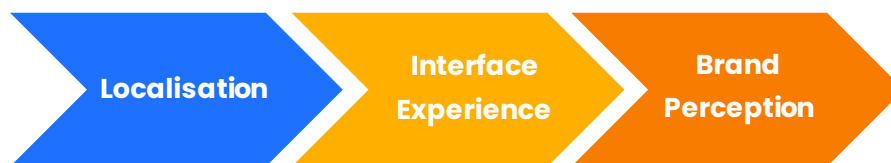


Figure 2. Impact of localisation

¹ Statista. (2021). eCommerce - Southeast Asia. *Outlooks*. Retrieved from <https://www.statista.com/outlook/243/643/e-commerce/southeast-asia>

More specifically, localisation involves translating content as well as adapting interface elements to suit local user habits.

It is important to avoid over-localisation, which can waste UX resources at best and compromise brand identity at worst.

**What is localisation?
Some common examples:**

- Using warm colours in a country that associates warm colours with excitement
- Avoiding the use of controversial local political icons or slogans
- Showing product types relevant to local cultures, such as "Halal" or "Buy local"

Glocalisation refers to localisation that strives to balance, on one hand, globalised approaches that stress standardized user interfaces across countries, and on the other hand, localised approaches that stress tailoring interfaces to domestic conditions and characteristics. Glocalisation harnesses the best of both global and local approaches to ensure that mobile apps will be user-friendly and familiar for local users while allowing UX designers to focus on aspects of the interface that matter to users and the business.

To provide guidance for systematic glocalisation, this whitepaper describes the **Landscape Preference methodology for Glocalisation (LPG)** and illustrates its application in Indonesia, The Philippines, and Thailand.

LPG was developed through empirical research as part of an industry-university collaboration between researchers in Lazada Group and Nanyang Technological University². This whitepaper translates the research findings into pragmatic frameworks and tools for practical use. The LPG methodology helps to ensure that local user needs, the cultural context, brand identity, as well as emerging UX technologies are integrated into strategic glocalisation decisions that contribute to positive interface experience and good brand perceptions (see Figure 3).

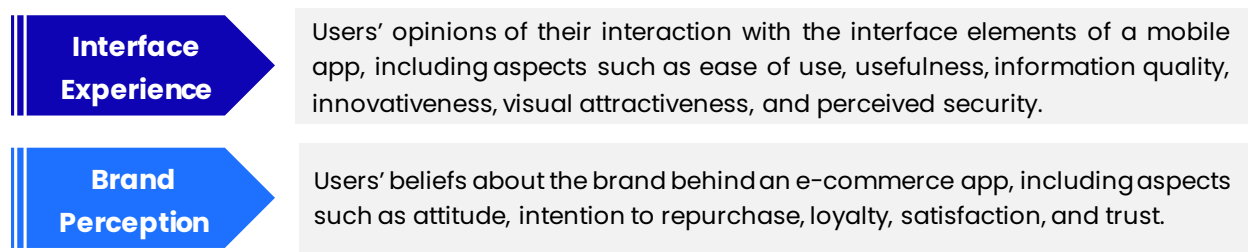


Figure 3. Interface experience and brand perception defined.

² Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of Lazada group or Nanyang Technological University.

2. Landscape Preference Methodology for Glocalisation (LPG)

LPG draws on the concept of landscape preference in environmental psychology, which describes how people explore, navigate, and experience physical environments. According to Kaplan and Kaplan (1989), there are four dimensions in landscape preference: coherence, legibility, complexity, mystery³. These dimensions apply to the mobile app environment as well and we therefore adapted them to the context of "Appscape" (see Figure 4). To capture the social and security aspects of e-commerce Apps, we added two dimensions, namely connectedness and safety.

Dimension	Definition
Coherence	Understanding and sensemaking of an environment (e.g., mobile app's language, functions available, and content)
Legibility	Navigation of an environment (e.g., mobile app's layout, features providing orientation)
Complexity	Engagement with an environment (e.g., mobile app's colorfulness)
Mystery	Discovery of new information within an environment (e.g., new features of a mobile app)
Connectedness	Potential of forming of social relationships and engaging in social interactions within an environment (e.g., chat or forum functions of a mobile app)
Safety	Protection from threats, risks, or injury (e.g., mobile app's security features)

Figure 4. Dimensions of "Appscape".

In the context of e-commerce apps, interface experience elements corresponding to each of the six **Appscape dimensions** are specified in

Figure 5. Each element is further characterised in Figure 6. To illustrate, the Coherence dimension of an Appscape focuses on understanding and sensemaking of app content. These are most directly affected by interface elements related to information quality, such as relevance of information, as well as elements affecting app usefulness, such as search capabilities.

Coherence	Legibility	Complexity	Mystery	Connectedness	Safety
information quality, usefulness	ease of use	visual attractiveness	innovativeness	social value	security

Figure 5. Interface experience within each Appscape dimension.

³ Kaplan, R., & Kaplan, S. (1989). The experience of nature: A psychological perspective. New York: Cambridge University Press.

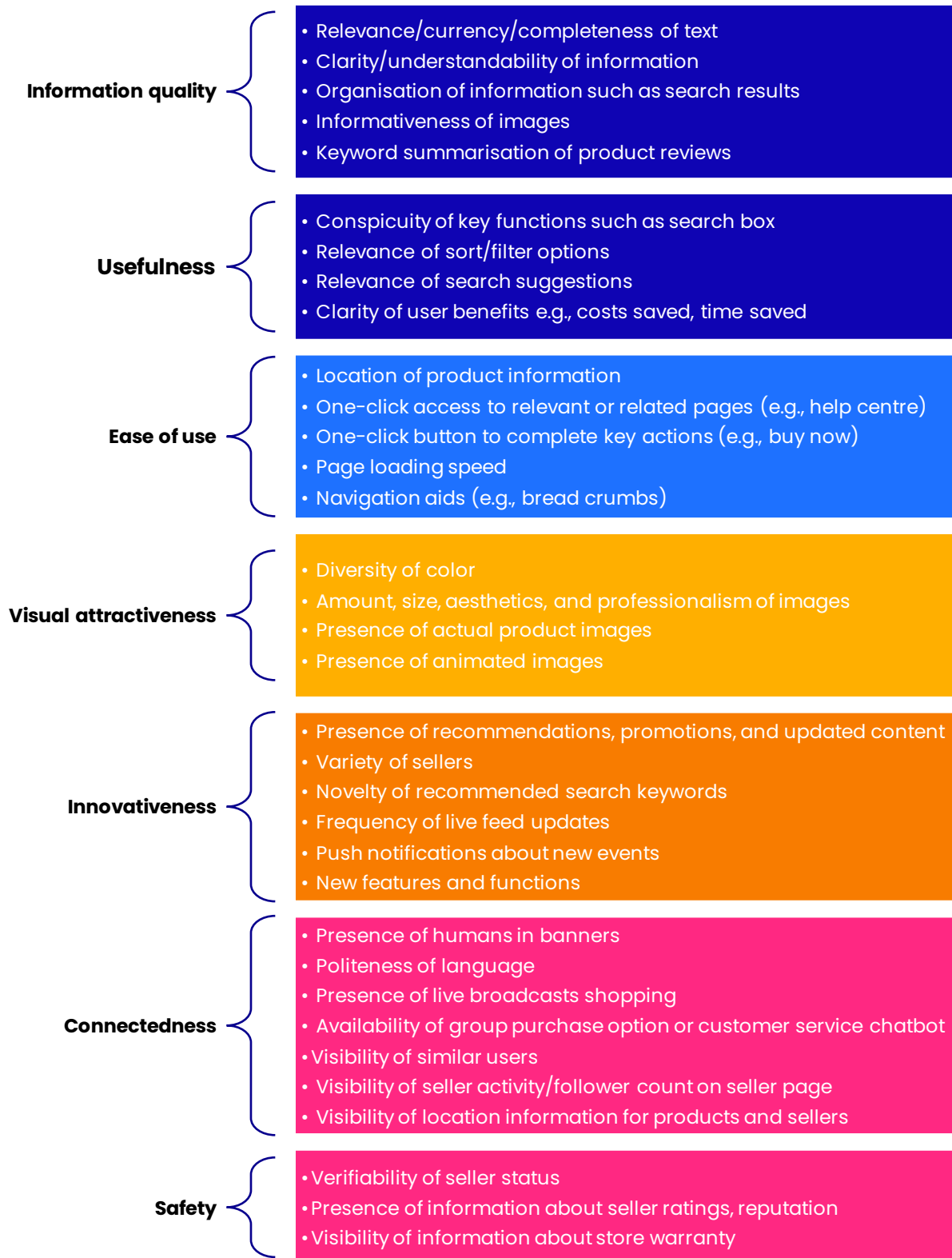


Figure 6. Interface elements affecting interface experience.

Examples of interface elements affecting users' experience with the Appscope of a shopping app (Figure 7):

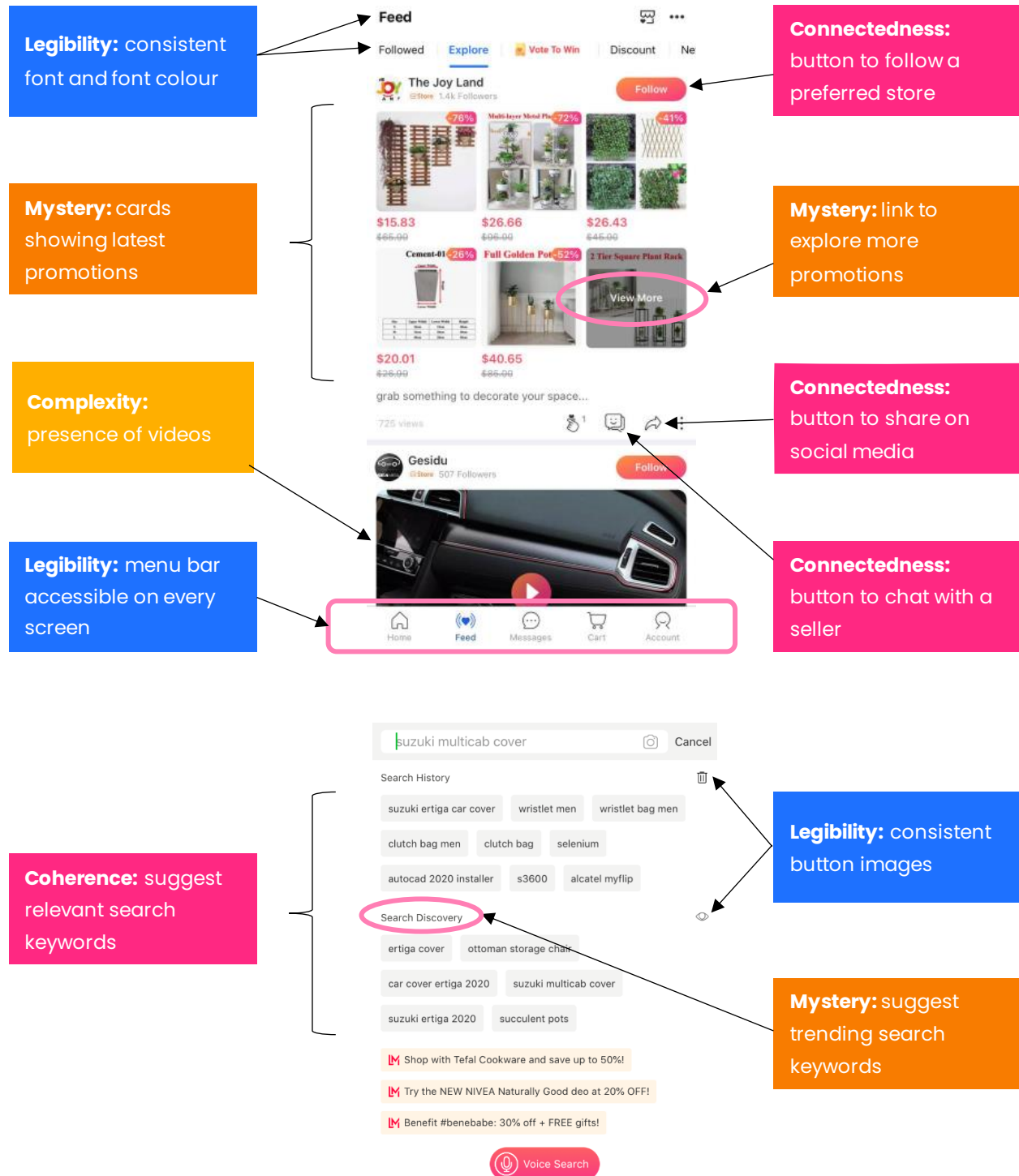


Figure 7. Examples of interface elements within Lazada's Appscope.

Decisions about the design of each interface element in the Appscope should be made based on an understanding of the cultural context.

National culture is commonly characterised in terms of Hofstede's framework, which identifies individualism (versus collectivism), indulgence, long-term orientation, masculinity (versus feminism), power distance, and uncertainty avoidance as the key dimensions of culture⁴. In LPG, national culture is considered alongside cultural preferences and taboos in depicting the cultural context.

For instance, users from more collectivist cultures such as Indonesia tend to prefer content that espouses connection towards one's local community. They also tend to prefer interface elements related to Connectedness such as instant chat and recommendations by similar users. When managing the interactions and social content, however, it is important to be aware of taboos related to political polarization and religious beliefs.

Overall, the LPG methodology offers a systematic approach to collecting and integrating data about the cultural context, Appscope, interface experience and associated interface elements, as well as brand perception to inform glocalisation decisions (see Figure 8).

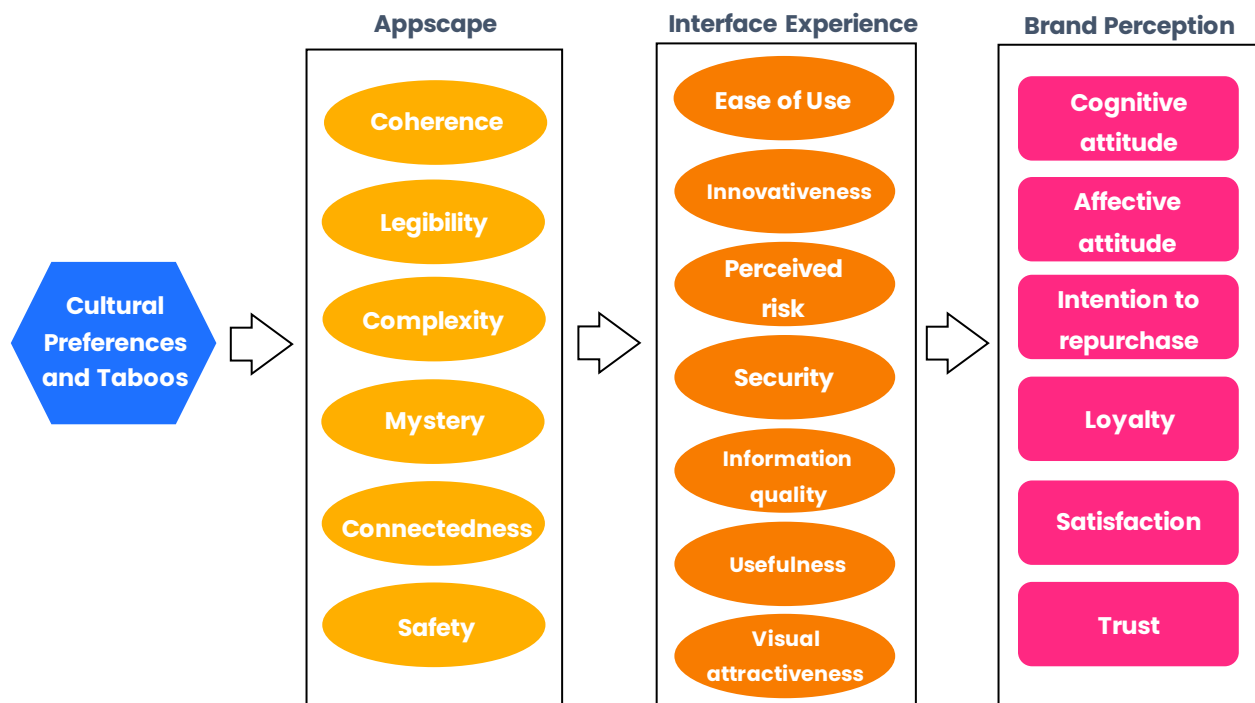


Figure 8. Landscape Preference Framework for app glocalisation.

⁴ Hofstede, G. and M. Minkov. Vsm 2013. Values survey module 2013; <https://geerthofstede.com/research-and-vsm/vsm-2013>.

3. Key Steps in LPG



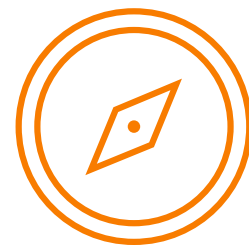
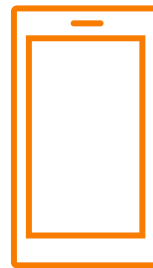
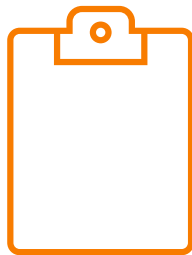
Step 1. Collect data about cultural context.

- **Determine the countries for glocalisation based on business development.**
- **For each country, identify the national culture:**
 - Use sources such as the Hofstede Insights tool to identify the country's culture in terms of individualism, indulgence, long-term orientation, masculinity, power distance, and uncertainty avoidance.
 - Identify the implications for UX design. For example, users from a country with low uncertainty avoidance may prefer app screens with high information density⁵.
- **Understand cultural preferences:**
 - Understand sociocultural norms by consulting online databases such as CultureGrams and Commisceo's Country Guides.
 - Identify e-commerce consumer preferences, such as spending patterns, products of interest, purchase decision criteria, major shopping periods, promotions, and preferred payment modes. Consult reports from sources such as Santander Trade, Euromonitor's Country Reports, Statista or local business news.
 - Identify common linguistic registers, local slangs or dialect use, and local catchphrases by reading customer reviews and collecting slogans used in promotions by local e-commerce platforms. Note whether consumers prefer polite or casual tones in online communication.
- **Learn cultural taboos:**
 - Identify "don'ts" by consulting sources such as Cultural Atlas's Country Profiles or search online keywords like "[country name] do's and don'ts", or "[country name] taboo".
 - Find news or reports of previous e-commerce/marketing missteps or controversies that offended cultural beliefs. Where possible, ask local UX professionals to search in local languages.

⁵ Marcus, A., & Gould, E. W. (2000). Cultural dimensions and global web user-interface design: What? So what? Now what. Paper presented at the Proceedings of the 6th Conference on Human Factors and the Web.

Step 2. Collect data related to Appscape.

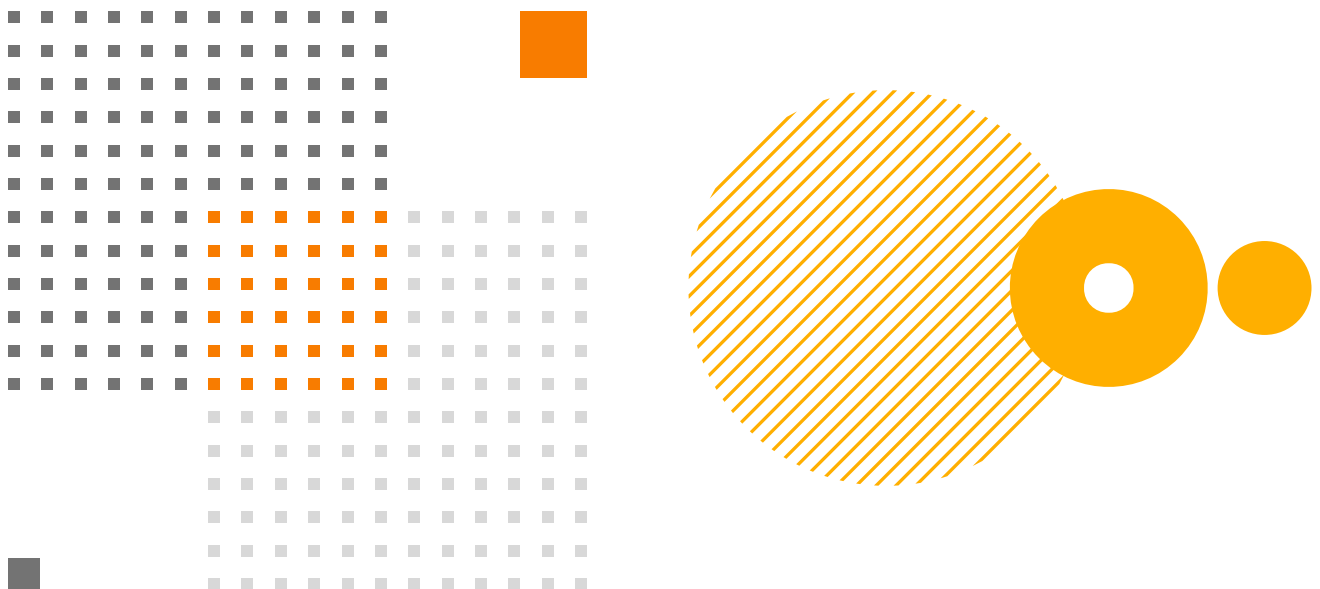
- **Select relevant brand perceptions to focus on (see Figure 8 for a list of common brand perceptions).** Prioritise the brand perceptions to manage by considering business needs. For example, an e-commerce start-up might focus on building customer satisfaction or trust than nurturing loyalty.
- **For each country, analyse how each selected brand perception is affected by interface experience by comparing different apps:**
 - Select one or more e-commerce apps. This can include one's own app (if already available), the most popular local app, and the most popular international app. Focus on apps with significant market share.
 - Identify a representative sample of local users based on purchase behaviour characteristics such as age, gender, education level, frequency of shopping, and their variety of apps used.
 - Collect data about local users' interface experience of each app selected. See Appendix 1 for sample survey measures, which can be adapted for focus groups or interviews as necessary.
 - Collect data about local users' brand perceptions of each app selected. See Appendix 2 for a sample of survey measures which can be adapted for focus groups and interviews as necessary.
 - Identify key interface experience factors by calculating correlations among interface experience factors and selected brand perceptions. Prioritise interface experience factors most strongly correlated with selected brand perceptions. For example, for an e-commerce company focusing on customer satisfaction, the interface experience of usefulness should be prioritized if it is strongly correlated with customer satisfaction.
- **Identify similarities and differences among countries:** Is there any interface experience factor that is significant in some but not all the countries (see Table 1)?



Interface Experience Factor	Brand Perception Factor	Country 1	Country 2	Country 3
Factor 1 (e.g., Visual attractiveness)	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			
Factor 2 (e.g., Innovativeness)	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			
Factor 3 (e.g., Social Value)	...			
...				

Note: Colour cells to indicate a significant correlation between an interface experience factor and brand perception.

Table 1. An example of country comparison.



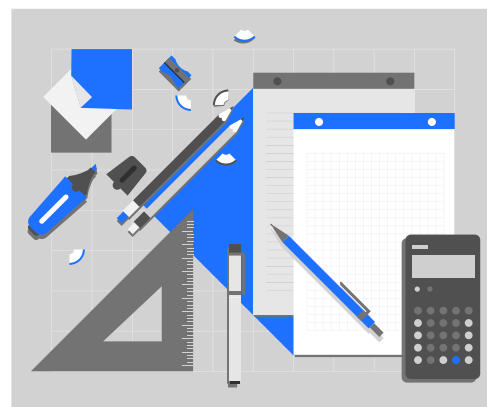
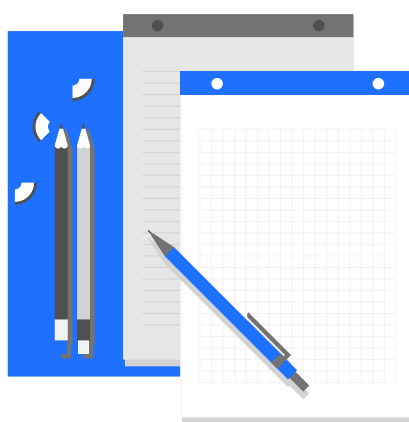
Step 3. Collect data related to interface elements.

- **Collect data about local users' perception of their favourite e-commerce app.**
 - Ask each user to identify their favourite app.
 - Ask the user to indicate their perceptions of the app's key screens, such as the home screen, promotion page, vouchers page, product details, seller details, customer reviews, and search page. For each screen, ask the user to indicate their perceptions of colour, text, images, layout, navigation, interaction etc. as relevant.
 - Include an open-ended question for users to describe why they prefer an app over others.
 - Ask the user to submit a scrolling screenshot of each screen evaluated.
 - Summarise the data. For example, "the majority of users in Country 1 indicated that their favourite app has a home screen with bright colours" (see Table 2).

Home Screen Elements of Favourite App	Design	Country 1	Country 2	Country 3
Text	Amount			
	Ease of reading	Very easy		
	Relevance	Very relevant		
	Newness/currency			
Language	Politeness of language			
Colour	Warmth/brightness		Very bright	
	Colourfulness			
Image/graphics	Amount			
	Aesthetic			
	Professionalism			
	Informativeness			
Banners	Human presence			
	Animation			
Layout	Visibility of search box			
	Ease of access to information			
Navigation	One-click access			
	Access to help centre			
Interaction	Progress notification			Very quick
	Loading time			

Table 2. An example of summary of data about interface elements.

- **Identify key interface elements for each significant interface experience factor found in step 2, by calculating correlations between interface elements and interface experience factors.** For example, if the interface experience of usefulness is found to be strongly correlated with customer satisfaction and hence significant in step 2, interface elements (e.g., amount of text) strongly correlated with perceived usefulness of the favourite app should be prioritized in glocalization.
- **Note that this step asks users to evaluate only one app as the focus is on their reception to different interface elements.** In step 2, users are asked to evaluate multiple apps because the focus is on their brand perceptions.



Step 4. (Optional) Analyse emerging or novel trends

- **Identify trending interface elements/ emerging UX technologies:**
 - Review popular apps in the country to identify interface elements or UX technologies that can potentially be added to own app (e.g., live shopping).
 - Get ideas from latest topics or themes discussed at UX conferences or other industry events (e.g., UX sustainability, virtual idols).
 - Review popular articles shared by industry professionals on social media.
 - Observe discussions at professional forums such as the Interaction Design Foundation and HCI Researchers groups.
 - Review recent research articles published in academic sources such as journals or conference proceedings.
- **Collect data from local users about the trends observed if resources permit.** The questions can focus on how a trend influences interface experience and brand perceptions, how it should be designed, and how it affects the design of existing interface elements. User preferences about a trend can be deduced from the data collected.
- **In cases where data collection is not feasible, conduct an inductive analysis of the data collected in step 2 and step 3:**
 - Identify interface elements comprising or related to the trend. For example, user preference for virtual idols is likely to be related to preferences for animation and human presence in images (interface elements) and importance of innovativeness (an aspect of interface experience).
 - For each relevant interface element, analyse data collected in step 2 or step 3 to make inferences about the trend. For example, users who prefer human presence in images are more likely to enjoy the virtual idol feature. Hence, countries with more such users could be prioritized in the experimentation and implementation of virtual idols.
 - Analyse screenshots collected in step 3 for clues about user preference, especially when direct data is not (yet) available. For example, given the newness of virtual idols, it is likely that few users can respond to questions about them. For an indication of user preference about virtual idols, analyse the screenshots submitted to identify the presence of human-like animated/cartoon characters.

4. Case Studies

The LPG methodology is illustrated with case studies of Indonesia, The Philippines, and Thailand in this section. The three countries were chosen for their growth potential in e-commerce and related infrastructures. Each country was analysed following the first three steps of LPG. We also analysed emerging or novel trends in the three countries to compare the extent to which users are likely to enjoy live shopping and virtual idols (see section 1.5).

1.1 Indonesia

Step 1 – National culture (see Figure 9):

Dimension	Score	Interpretation
Individualism	14/100	Indonesia is a collectivist society. Indonesians value belonging to their community.
Indulgence	38/100	Indonesia has a culture of restraint. Members of its society exert firm control towards their desires and impulses.
Long-Term Orientation	62/100	Indonesians are somewhat long-term oriented and adaptable to changed conditions, showing perseverance and thriftiness in achieving their goals.
Masculinity	46/100	Indonesian culture acknowledges the value of masculine traits like social assertiveness while also valuing the feminine culture of 'gotong royong', which prioritises values of caring, collective actions, and consensus.
Power Distance	78/100	A wide power gap exists between leaders and subordinates. Subordinates expect to accept assigned tasks and responsibilities from leaders.
Uncertainty Avoidance	48/100	Indonesians can reasonably embrace both structured and unstructured situations. Those who have higher uncertainty avoidance will tend to prefer detailed instructions and procedures and clearly written rules.

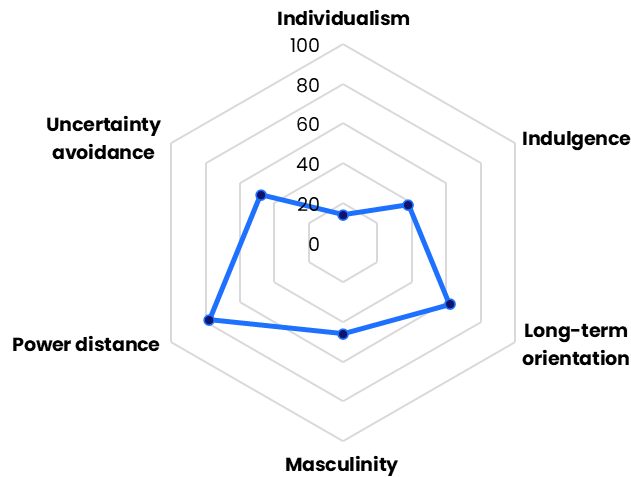
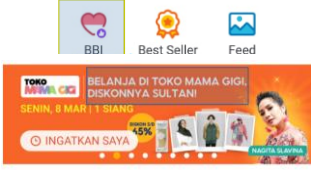
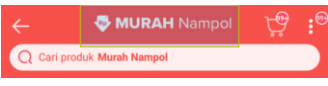


Figure 9. Indonesia's characteristics in terms of Hofstede's cultural framework.

Step 1 – Cultural preferences

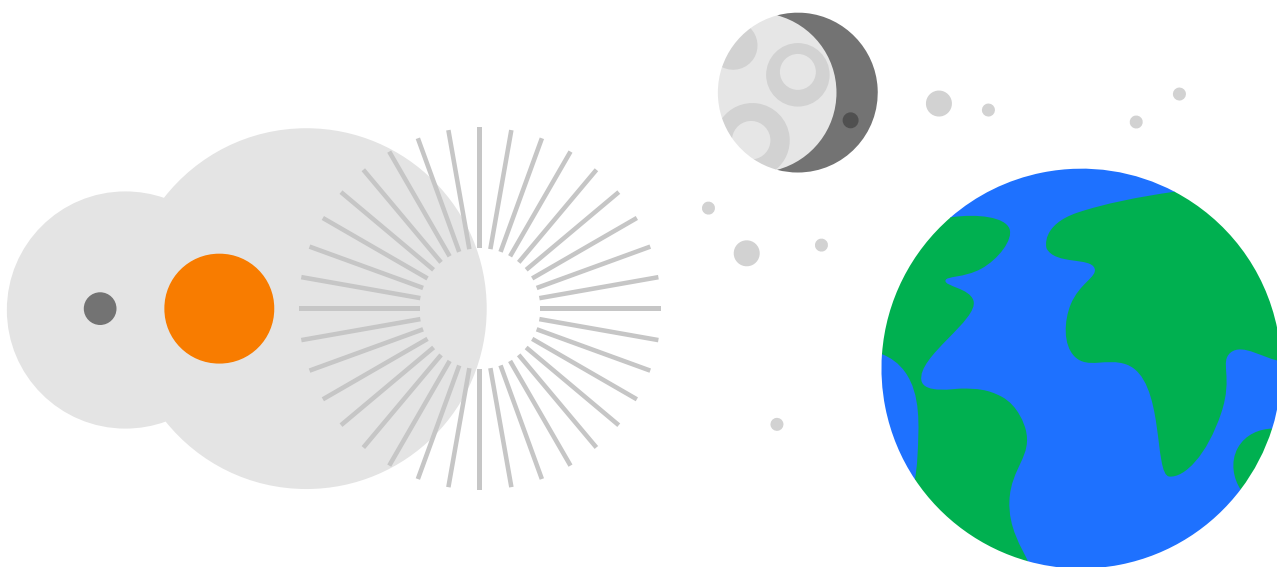
Preference	Description	Real-life example(s)
Popular slang words	<ul style="list-style-type: none"> • <i>BBi</i>: an acronym for "Bangga Buatan Indonesia", meaning "proudly made in Indonesia". • <i>Nampol/Murah Nampol</i>: A phrase that literally means "to punch". "Murah Nampol" refers to prices that are low enough to feel like a punch. • <i>Sultan</i>: a large discount that is unmatched by others. 	 <p>Source: Tokopedia</p>  <p>Source: Lazada</p>
Cultural identity	In Indonesia, collectivist attitudes such as the national concept of <i>gotong royong</i> are encouraged. Acts that oppose caring are unacceptable in Indonesia.	An ad for a transport app in Indonesia depicted violence happening to a girl who used a competitor's transport app. The violence went against the spirit of <i>gotong royong</i> and garnered widespread criticism.
	Batik is a textile pattern made by tying and hand-dyeing cloth. Indonesian batik is recognised by UNESCO as an intangible cultural heritage.	On the national Batik day, Google Indonesia adopted the batik pattern in its search engine display image.

Step 1 – E-commerce-related preferences

Culture	Dominant religion	Consumer preferences	Common payment methods	Popular shopping periods
Highly diverse; contains over 1,340 major ethnic groups Main language spoken is Bahasa Indonesia	Islam	Local or homegrown products (Kreasi Nusantara is a popular campaign to promote local products) Halal products Affordable goods from China or Korea	Mobile wallets Bank/ATM transfers Cash on delivery (banking access is limited in some areas)	12.12 (Dec) Ramadan (third week onwards) Lunar New Year (Jan to Feb) Mother's Day/Hari Ibu (22 Dec)

Step 1 – Cultural taboos

Taboo	Description	Real-life example(s)
Religious taboos	Avoid controversial statements about religious issues. Avoid depicting haram (i.e., forbidden) and suggestive or sexual content.	In 2018, a TV commercial by Blackpink, a K-Pop girl group, was banned as the members' miniskirts were considered 'indecent'.
	The concept of riba is taboo for Muslims. Riba refers to any excess in a debt and sales transaction. Riba is considered a haram financial transaction.	Some Islamic fundamentalist citizens reject the concepts of online payment, e-money, and e-wallet, as they perceive these financial technologies to contain riba.
Social taboos	Lesbian, gay, bisexual, and transgender (LGBT) content is often frowned upon in Indonesia. Be mindful when using symbols associated with the LGBT community, such as rainbows.	The 2018 Bekate Colour Run was cancelled by a city mayor after it was perceived to adopt LGBT community-related symbols (the rainbow).
Politics	Politics is a controversial topic in Indonesia. Avoid supporting particular parties or opposing the incumbent government.	The hashtag #UninstallTraveloka trended in 2017 in Indonesia after Traveloka's Chief Technology Officer indirectly opposed the incumbent Jakarta governor.
	Communism is banned in Indonesia. Avoid using communist slogans or icons, such as the hammer and sickle.	Indonesians protested billboards in Jakarta that showed communist icons as part of a collaboration between Indosat and Iflix.



Step 2 – Brand perceptions, e-commerce app, and sample studied

Our study covered all brand perceptions as listed in Figure 8. The e-commerce apps analysed included Lazada, Shopee, and Tokopedia. Data were collected through a focus group involving 36 local online shoppers. The participants aged 20 to 50 and represented both genders. They shopped online at least twice a month and most spent about US\$65 per month.

Step 2 – Key interface experience factors

Data about interface experience and brand perceptions were collected from focus group participants using questions listed in Appendix 1 and Appendix 2. Their correlations indicate that visual attractiveness, ease of use, and usefulness are the key interface experience factors since they influenced most of the brand perceptions of interest (see Figure 10). Social value is also important because it is the only factor that has a strong influence on Indonesian users' intention to purchase.

In Indonesia, which Aspects of Interface Experience Affect Brand Perceptions?

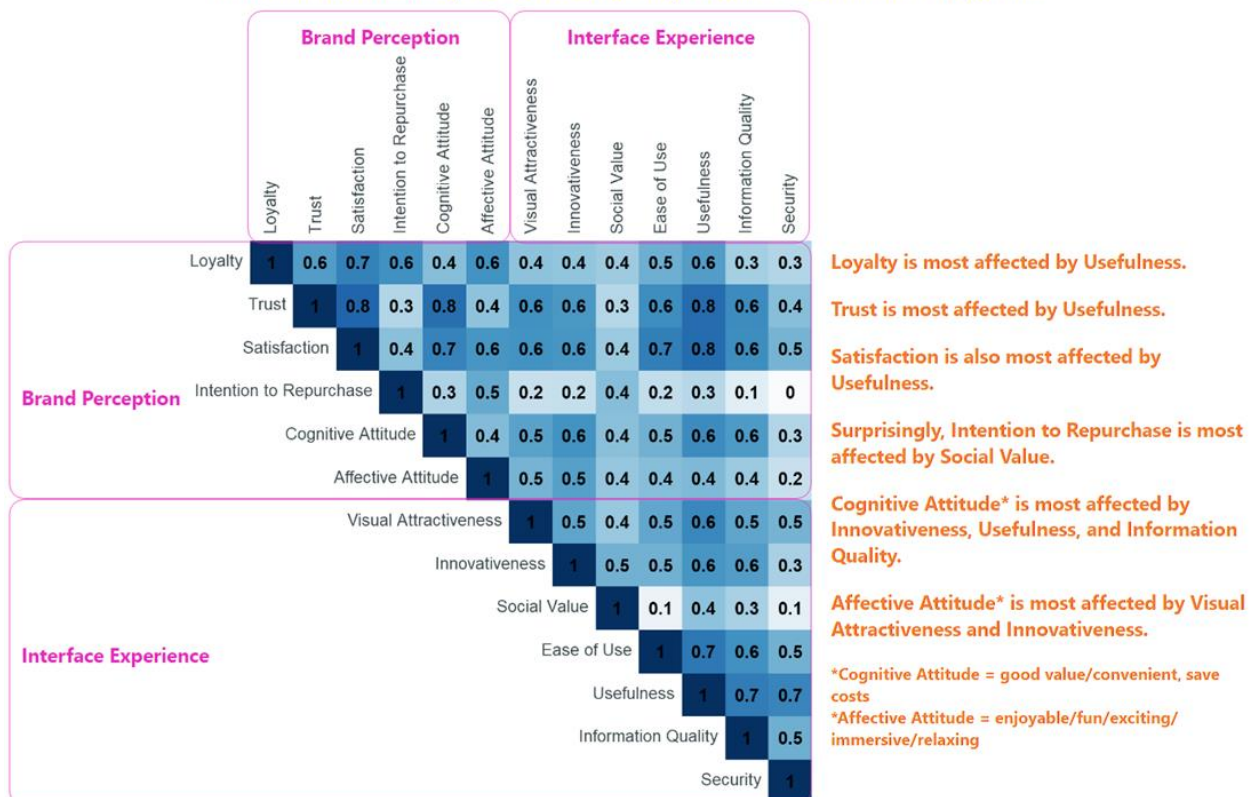


Figure 10. Key interface experience factors in Indonesia.

Step 3 – Data related to interface elements

Each local participant was asked to identify and evaluate their favourite e-commerce app. Following the LPG methodology, participants were instructed to evaluate key screens including the home screen, promotion page, and product details page. We first summarised the findings for each screen (e.g., see Table 3 for the home screen), then identified common preferences across screens (see Table 4) for elements that affected important interface experience factors (found in step 2).

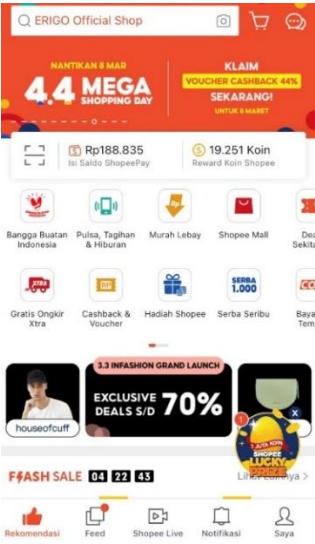

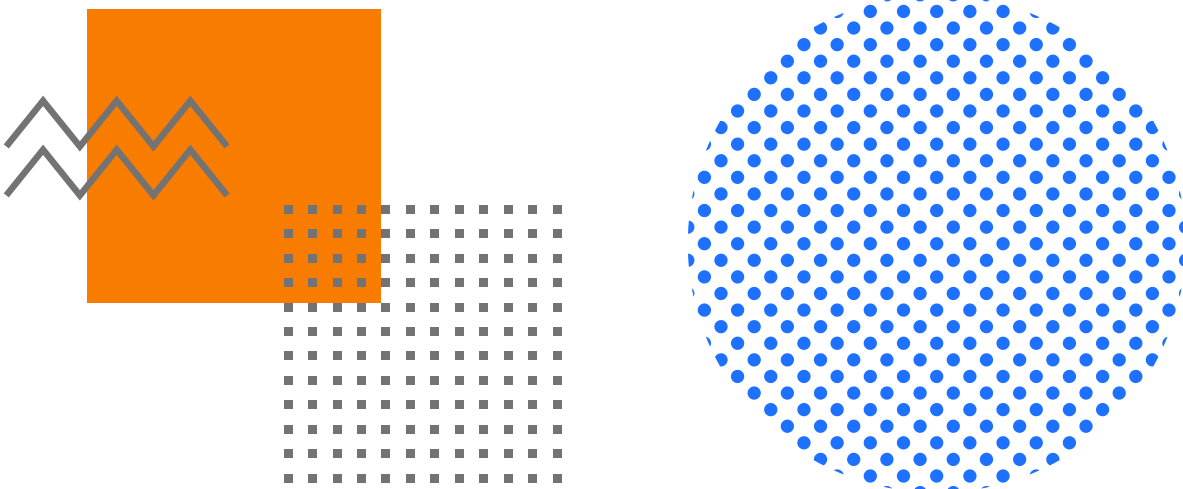
Home Screen Preferences	Apps Preferred by Most Users
<p>Colour (Visual Attractiveness)</p> <ul style="list-style-type: none"> Overall colour combination is clean, not tiring to look at Contrasting colours help focus on the important information 	 <p style="text-align: center;">Shopee</p>
<p>Images (Visual Attractiveness)</p> <ul style="list-style-type: none"> Less images Clear, professional, high-quality 	
<p>Information (Perceived Usefulness)</p> <ul style="list-style-type: none"> Shows a variety of products Highlight relevant products/categories Shows member benefits 	
<p>Promotions (Perceived Usefulness)</p> <ul style="list-style-type: none"> Large banners Shows current, ongoing promotions 	
<p>Navigation (Perceived Ease of Use)</p> <ul style="list-style-type: none"> All key features (e.g., chat, shopping cart, search, user profile) are accessible from one screen "Help" is accessible from the home screen 	
	 <p style="text-align: center;">Tokopedia</p>

Table 3. Indonesian users' preferences for interface elements in the home screen

Key Interface Experience Factor	Interface Element	Preference
Visual attractiveness	Colours	Very warm/bright colours; colourful schemes
	Images	Clear, professional, signals high quality, aesthetically pleasing; use less images
	Banners	<ul style="list-style-type: none"> Conspicuous, consistent in size; colours are aligned with brand Reduce the number of animations
Social value	Slangs	Presence of slangs in banners
	Live feeds	More live feeds and social shopping content
	Membership	Presence of membership tiers
	Reviews	Show reviews left by similar users
	Recommendations	Provide "people like you bought" recommendations
Ease of use	Layout	<ul style="list-style-type: none"> Neat, organized, key information should be visible or easily accessible Show relevant product categories first on pages such as product category pages, and seller/store details pages
	One-click access	<ul style="list-style-type: none"> Provide one-click "buy again"/"complete purchase" buttons Provide a one-click button for choosing/redeeming a voucher on voucher/cashback pages. Provide one-click access to customer reviews on product details pages, and shop promotions/vouchers on seller details pages.

Table 4. Indonesian users' preferences for interface elements across screens



1.2 The Philippines

Step 1 – National culture (see Figure 11):

Dimension	Score	Interpretation
Individualism	32/100	The Philippines is a collectivist society. Filipinos feel a strong sense of belonging and commitment to their families, extended families, and extended relationships.
Indulgence	42/100	The Philippines has a culture of restraint to some extent. Practicality and frugality are valued.
Long-Term Orientation	27/100	Filipino cultural attitudes include a strong regard for traditions, low drive to save for the future, and preference for short-term results.
Masculinity	64/100	People within The Philippines 'live to work'. Decisiveness, assertiveness, and competition are valued somewhat, especially among Filipino managers. There is less emphasis on 'feminine' activities such as caring for one's community.
Power Distance	90/100	The Philippines is a highly structured and hierarchical society.
Uncertainty Avoidance	44/100	In The Philippines, deviation from the norm is relatively easily tolerated and innovation is not considered threatening.

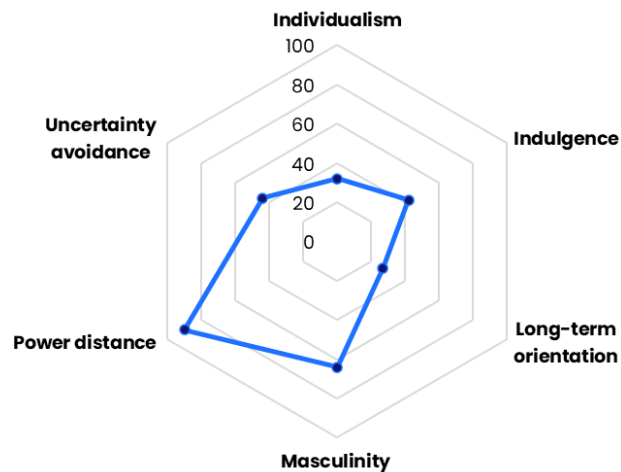
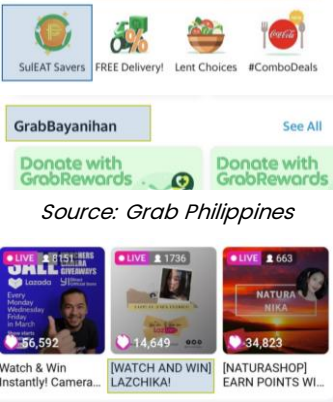


Figure 11. The Philippines' characteristics in terms of Hofstede's cultural framework.

Step 1 – Cultural preferences

Preference	Description	Real-life example(s)
Popular slang words	<ul style="list-style-type: none"> • <i>Sulit</i>: value for money, worth it • <i>Chika</i>: chit chat or gossip • <i>Bayanihan</i>: a customary spirit of communal unity, work, and cooperation to achieve a particular goal. 	 <p>Source: Grab Philippines</p> <p>Source: Lazada</p>
Cultural identity	<p>Filipinos value tradition and belongingness to their culture. Content depicting Filipinos connecting with their local culture or community can be well-received.</p>	<p>In 2016, McDonalds Philippines created a well-received ad where overseas Filipino workers return home and reunite with their families for Christmas. The ad also used a local 70's hit song called 'Handog' ('offering'), which evoked sentiments of heart-warming familial relationships.</p>
Social preferences	<p>Action stars are popular in The Philippines. A number of Filipino politicians are former action stars.</p>	<p>The well-known Honda Airblade ad features Coco Martin and leading lady Yassi Pressman in an action-packed advertisement on board a motorcycle on the streets of Manila.</p>
Holidays and traditions	<p>There are Christmas traditions specific to the Philippines.</p>	<p>Christmas typically starts in September, and local elements such as a <i>Belen</i> and a <i>parol</i> are common in the Philippines. <i>Simbang Gabi</i> (night mass) is also a common practice during this time.</p>
Holidays and traditions	<p>Filipinos celebrate "Holy Week" (beginning from Palm Sunday until Easter Sunday) where they abstain from vices and luxuries.</p>	<p>Filipinos abstain from meat as a form of fasting (usually on Good Friday) during this time. Visita Iglesia (church visits) and the staging of the Senakulo (the life and passion of Jesus Christ) are also common practices. The Holy Week public holiday is a peak period for domestic travel.</p>

Step 1 – E-commerce-related preferences

Culture	Dominant religion	Consumer preferences	Common payment methods	Popular shopping periods
Over 130 ethnic groups (largest are Tagalog, Bisaya or Binisaya, Cebuano and Ilocano groups) Main languages are English and Filipino	Catholicism	Less price-conscious than other Southeast Asian countries Value product quality as well as price	Bank/ATM transfers Cash on delivery * Digital payment methods are less popular due to low trust in online payment security	After paydays (middle of each month) Holy Week (Mar/Apr) Online Revolution campaign (11.11 to 12.12) Christmas (Nov to Dec)

Step 1 – Cultural taboos

Taboo	Description	Real-life example(s)
Religious taboos	Most Filipinos are uncomfortable with excessive sexual content, and sexual innuendo.	In 2006, Bayantel, a telecommunications company, posted a sexualised photo of a woman with the text "Satisfaction Guarantee". The ad attracted negative attention and Bayantel took it down.
Racism	Filipinos frown upon colourism (discrimination based on skin tone) in ads.	A 2012 Belo Men campaign featured a successful young man with fair skin and attributed his success to his complexion. It read "100% lighter. 100% more sosyal" ("100% lighter, 100% more affluent"). The ad was criticized by netizens for its racist message.
Classism	Filipinos frown upon discrimination directed at overseas foreign workers and working parents.	Lucky Me Instant Noodles claimed in an ad that "studies show that the less often we eat with our children, the more likely they are to smoke, drink and use drugs when they grow up." The ad was accused of discriminating against parents who have to work late or overseas.
Politics	Controversial divisions exist between Filipino president Duterte's supporters and detractors. Avoid supporting particular parties and the president.	After the shutdown of Filipino broadcast company ABS-CBN, many local celebrities who criticised Duterte on social media were condemned by Duterte's supporters. However, celebrities who were employed by ABS-CBN and supported Duterte were also criticised by the other camp for their support of Duterte's policies.

Step 2 – Brand perceptions, e-commerce app, and sample studied

To facilitate the comparison of countries, the brand perceptions and sample characteristics studied in The Philippines were similar to those in Indonesia. The e-commerce apps analysed included Lazada, Shopee, and GCash. Filipino users in our sample shopped online at least twice a month and most spent about US\$125 per month.

Step 2 – Key interface experience factors

Correlations between brand perceptions and interface experience factors indicate that perceived usefulness of an app is a critical interface experience factor since it influences all brand perceptions of interest (see Figure 12).

In the Philippines, which Aspects of Interface Experience Affect Brand Perceptions?

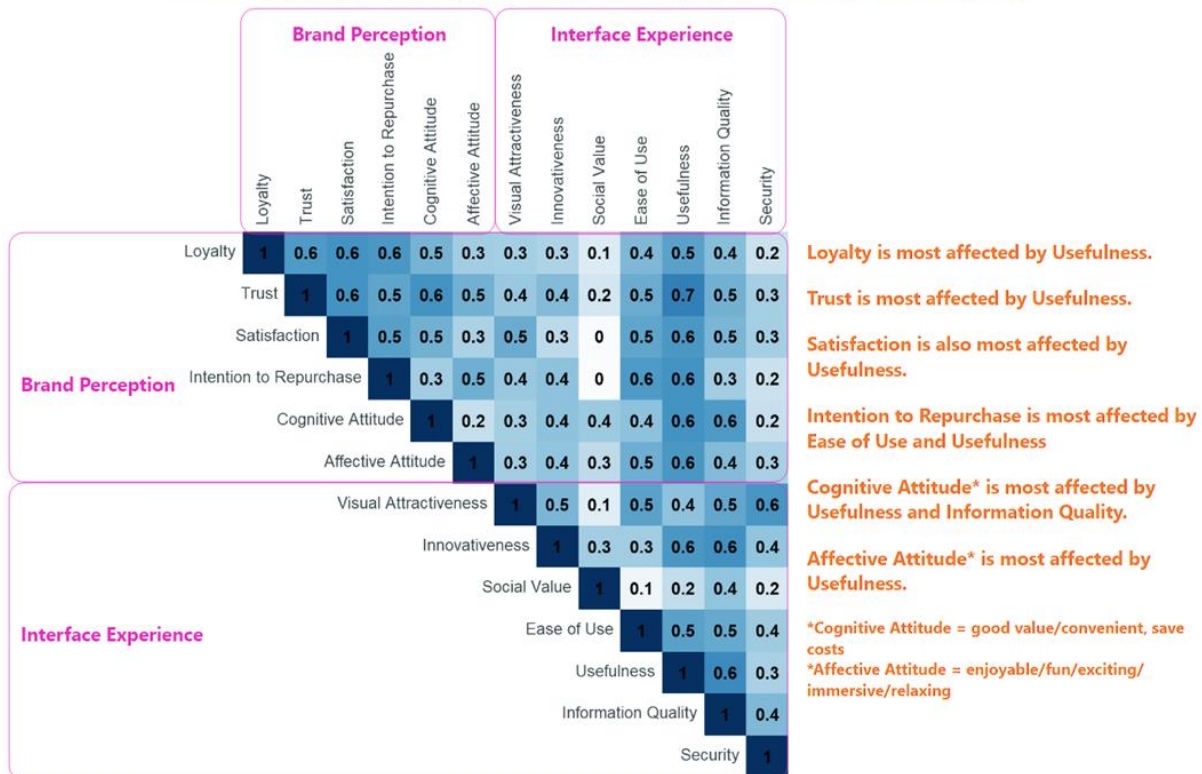


Figure 12. Key interface experience factors for The Philippines.

Step 3 – Data related to interface elements

Similar to the study of Indonesia, each local participant was asked to identify and evaluate their favourite e-commerce app. The findings for each screen were summarised (e.g., see Table 5 for the home screen). Common preferences across screens affecting perceived usefulness were then identified (see Table 6).

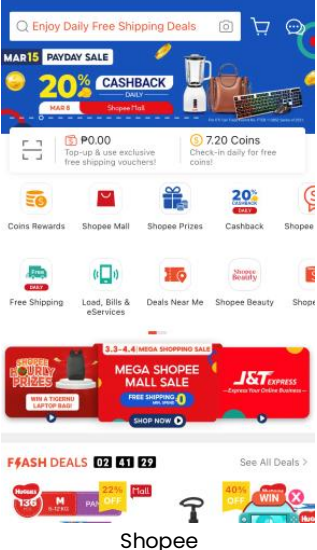
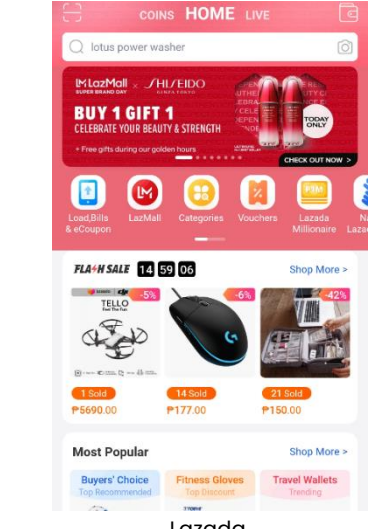
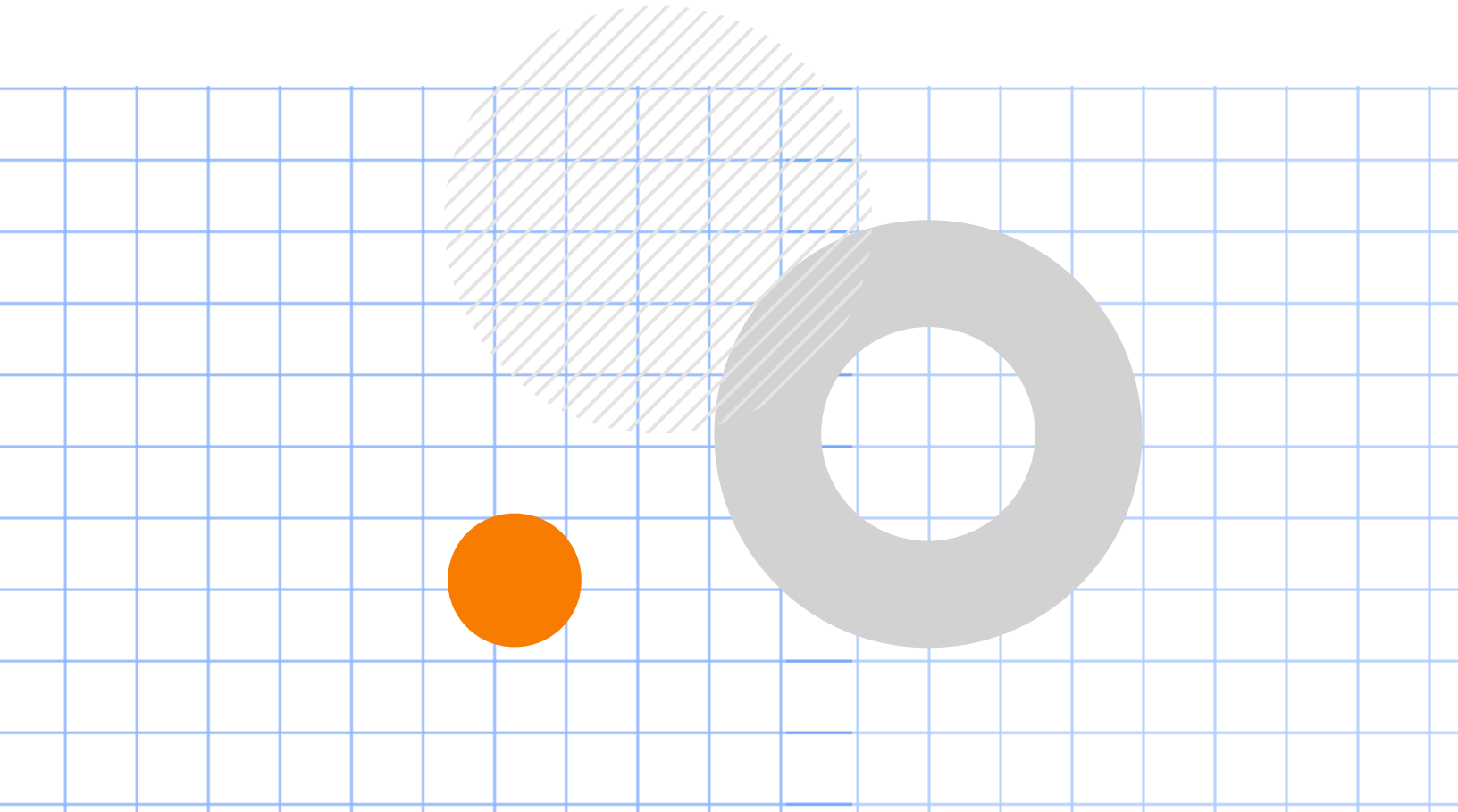
Home Screen Preferences	Apps Preferred by Most Users
<p>Colour (Visual Attractiveness)</p> <ul style="list-style-type: none"> • Consistent and therefore pleasing to the eye • Uses punchy, attractive colours but limit the number of colours • Limit the number of different colours 	 <p>Shopee</p>
<p>Layout (Perceived Ease of Use, Visual Attractiveness)</p> <ul style="list-style-type: none"> • Uses neat, uncluttered layout • Shows all the relevant products, but the screen is not crowded and not overwhelming with ads • Shows the trending products for "window shopping" • Products are organized into categories • Shows the help/customer service button • Limited animations/pop-ups 	
<p>Information (Perceived Usefulness)</p> <ul style="list-style-type: none"> • Shows a wide variety of sellers • Highlight flash sales or current promotions • Highlights relevant products/categories • Limit the number of notifications 	 <p>Lazada</p>
<p>Navigation (Perceived Ease of Use)</p> <p>One-click to buy again</p>	

Table 5. Filipino users' preferences for interface elements in the home screen.

Key Interface Experience Factor	Interface Element	Preference
Usefulness	Product information	<ul style="list-style-type: none"> • Show "arrived n days earlier" information • Show amount saved in purchasing products • Show a variety of sellers
	Recommendations	<ul style="list-style-type: none"> • Show relevant "for you" recommendations • Show related products and bundles on home screens, product details pages, etc.
	Search	Suggest related keywords in search function
	Reviews	Summarise reviews using keywords

Table 6. Filipino users' preferences for interface elements across screens.



1.3 Thailand

Step 1 – National culture (see Figure 13):

Dimension	Score	Interpretation
Individualism	20/100	Thailand is a collectivist society. Its members feel a strong sense of belonging to their families and communities.
Indulgence	45/100	People in Thailand are not opposed to indulgence, and focus on happiness in the here-and-now.
Long-Term Orientation	27/100	People in Thailand exhibit great respect for traditions, a relatively small propensity to save for the future, and a focus on achieving quick results. Thais tend not to think about the future or worry too much about unpredictable situations..
Masculinity	64/100	Thailand is considered a 'feminine' society. Thai people value caring for one's community and living in harmony with others.
Power Distance	90/100	Thailand is a hierarchical society in which inequalities are accepted, and a strict chain of command and protocol are observed. The Thai royal family is given great importance in the societal order, although this has recently changed as some Thai students begin to hold protests against the monarchy.
Uncertainty Avoidance	44/100	People in Thailand are less willing to accept changes and take risks. Online shopping is generally regarded by Thais to be riskier than offline shopping. Creating a trustworthy brand will help build trust among Thai users.

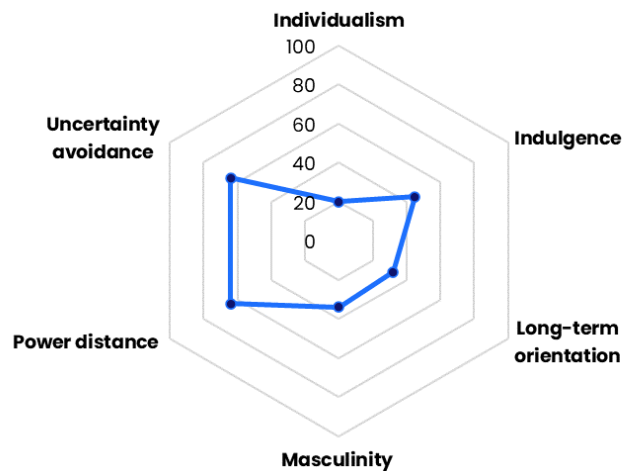


Figure 13. Thailand's characteristics in terms of Hofstede's cultural framework

Step 1 – Cultural preferences

Preference	Description	Real-life example(s)
Cultural identity	The typical Thai personality includes cherishing the monarchy, subscribing to the "mai pen rai" ("never mind") mentality to save face, and enjoying festivals.	Thailand is known as the "land of smiles". Service industries also thrive in Thailand.
Holidays and traditions	The Songkran festival in mid-April is Thailand's biggest and most well-known festival.	During Songkran, Thai people prefer to visit temples and family than to shop. However, domestic travel is popular, and travel shopping rises in volume in this period.

Step 1 – E-commerce-related preferences

Culture	Dominant religion	Consumer preferences	Common payment methods	Popular shopping periods
~15% of the population is Chinese. Chinese cultural practices and festivals (e.g., Chinese New Year) are popular	Buddhism	Prefer international to local brands for many product categories, except for clothing and footwear products	Cards, bank transfers, digital wallets, and cash * Credit card use is low due to low trust in banks	11.11 (Nov) 12.12 (Dec) Songkran Festival (April; marks the start of the Thai New Year) Lunar New Year (Jan to Feb)

Step 1 – Cultural taboos

Taboo	Description	Real-life example(s)
Religious taboos	It is illegal to insult a religion in Thailand. Monks should not be criticised. Excessive sexual content in media is frowned upon.	There are laws against defaming religion or causing disturbances at places of worship. Nudity in TV shows is often censored or controversial.
Social taboos	The Thai royal family should not be criticised. Lese-majeste acts (acts of insult against the royal family) are illegal.	In 2017, the Thai government threatened to ban Facebook in 2017 for failing to block illegal content including alleged lese-majeste posts.
Racism	Socially conscious Thais frown upon colour-shaming or racist discrimination in advertisements.	In 2016, Seoul Secret put out an ad claiming, "Just being white, you will win" that garnered criticism and was eventually removed from online platforms.

Step 2 – Brand perceptions, e-commerce app, and sample studied

The brand perceptions and sample characteristics studied in Thailand were similar to those in Indonesia and The Philippines. The e-commerce apps analysed included Lazada, Shopee, and Kaidee. Thai users in our sample shopped online at least twice a month and most spent about US\$45 per month.

Step 2 – Key interface experience factors

Correlations between brand perceptions and interface experience factors indicate that visual attractiveness and ease of use are the key interface experience factors since they influence all of the brand perceptions of interest (see Figure 14). In comparison, factors such as innovativeness only affected three of the brand perceptions.

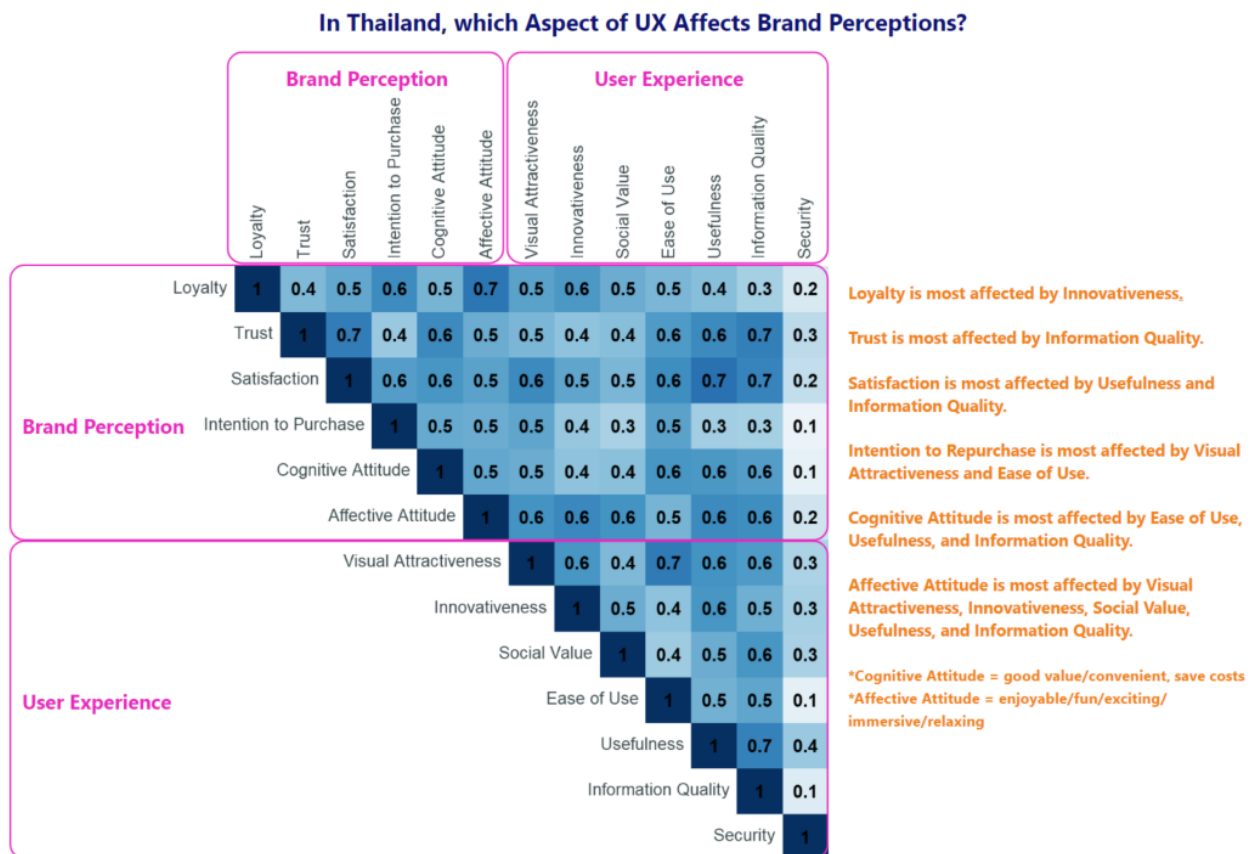


Figure 14. Key interface experience factors for Thailand.

Step 3 – Data related to interface elements

Similar to the study of Indonesia and The Philippines, each local participant was asked to identify and evaluate their favourite e-commerce app. The findings for each screen were summarised (e.g., see Table 7 for the home screen). Common preferences across screens affecting the key interface experience factors found in step 2 were then identified (see Table 8).

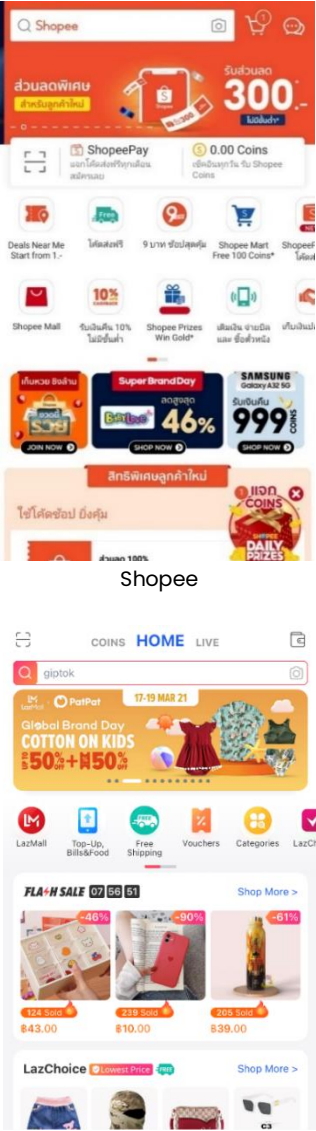
Home Screen Preferences	Apps Preferred by Most Users
<p>Colour (Visual Attractiveness)</p> <ul style="list-style-type: none"> • Colourful/not monotonous, attractive • Contrasting colours with white background 	 <p>The image shows two screenshots of e-commerce app home screens. The top screenshot is from Shopee, featuring a search bar, a large promotional banner for 'ShopeePay' with '300' coins, and a grid of category icons. The bottom screenshot is from Lazada, showing a search bar, a 'Global Brand Day' banner for 'COTTON ON KIDS' with '50%+H50%' discount, and a 'FLASH SALE' section with product cards.</p>
<p>Images (Visual Attractiveness)</p> <ul style="list-style-type: none"> • Less images • Smaller images • Minimizes animations 	
<p>Information (Perceived Usefulness)</p> <ul style="list-style-type: none"> • Shows a variety of products • Highlights current promotions/ discounts • Highlights relevant banners 	
<p>Layout (Perceived Ease of Use, Visual Attractiveness)</p> <ul style="list-style-type: none"> • Menu is easily accessible • Categories are organized and simple/cohesive • Remove/minimize pop-ups to reduce distractions/annoyances • Vary the layout so that the App does not feel boring 	
<p>Navigation (Perceived Ease of Use)</p> <p>One-click to buy again</p>	

Table 7. Thai users' preferences for interface elements in the home screen.

Key Interface Experience Factor	Interface Element	Preference
Visual attractiveness	Colours	Use warm/bright colours for home and promo pages, but limited, clean, or simple colours in others
	Images	<ul style="list-style-type: none"> • Larger and greater number of images • Presence of actual product images • Show icons within category listings
	Banners	Fewer and smaller banners; show dates first
Ease of use	Layout	Neat, organised; information should be easy to find
	One-click access	<ul style="list-style-type: none"> • Provide one-click access to key functions on each page • Provide one-click access to select/redeem vouchers
	Search	Easy for users to search and compare products/reviews

Table 8. Thai users' preferences for interface elements across screens.



1.4 Key Differences Among Countries

Based on the correlations, Ease of Use, Perceived Usefulness, and Visual Attractiveness are the most important aspects of interface experience, because they affect most aspects of brand perception across the three countries (see Table 9).

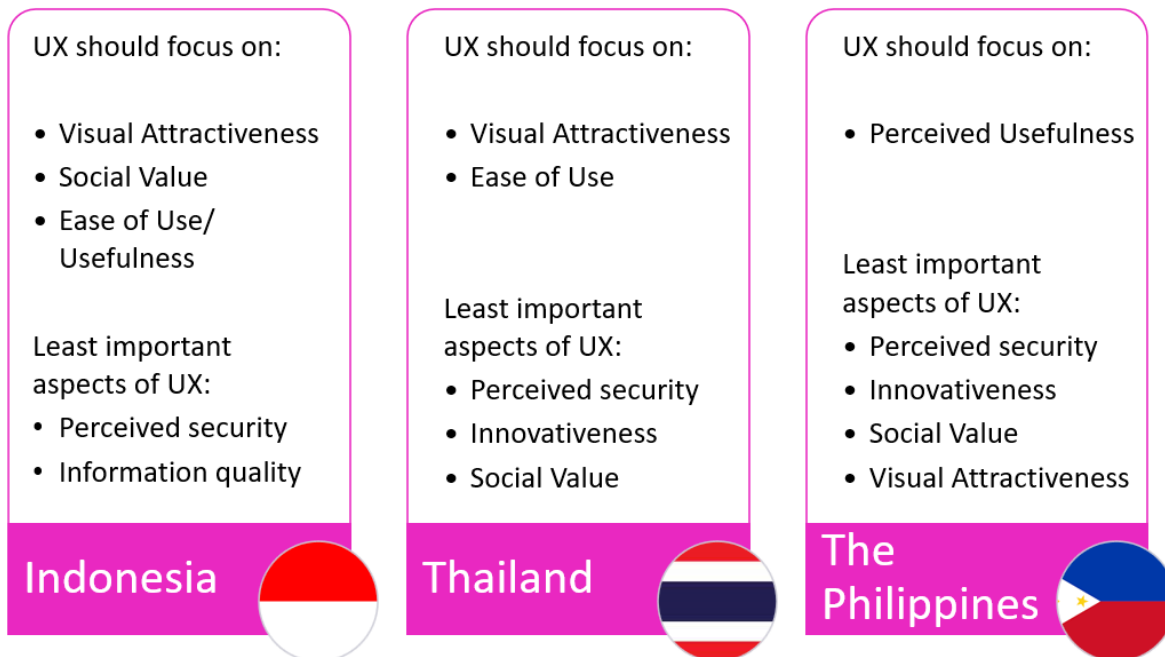
Perceived Security has the least impact on Brand Perception. In Indonesia, however, Security has a significant influence on Satisfaction.

Across the three countries, interface experience has the least impact on the Intention to Repurchase – In Indonesia, only Social Value has a weak effect on Intention to Repurchase; In Thailand, only Visual Attractiveness and Ease of Use have significant effects; In the Philippines, only Ease of Use and Usefulness have significant effects.

In Indonesia, interface experience design needs to focus on Visual Attractiveness, Social Value, as well as Ease of Use/Usefulness to improve all aspects of Brand Perception.

In Thailand, Visual Attractiveness and Ease of Use are the most important aspects of interface experience. In combination, they affect all aspects of Brand Perception.

In the Philippines, Perceived Usefulness is the most important aspect of interface experience, as it affects all aspects of Brand Perception.



Interface Experience	Brand Perception	Indonesia	Thailand	The Philippines
Visual Attractiveness	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			
Innovativeness	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			
Social Value	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase	*Weak impact		
	Cognitive Attitude			
	Affective Attitude			
Ease of Use	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			
Usefulness	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			
Information Quality	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			
Security	Loyalty			
	Trust			
	Satisfaction			
	Intention to Repurchase			
	Cognitive Attitude			
	Affective Attitude			

Note: A coloured cell indicates that a factor of interface experience (first column) has a significant effect on a Brand Perception (second column) in the country; A blank cell indicates very weak or no effect.

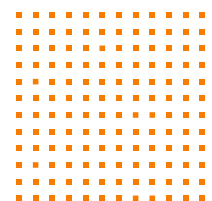
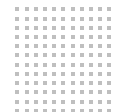
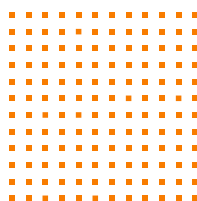
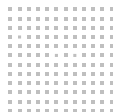
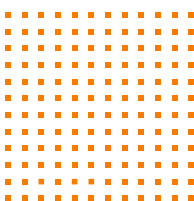
Table 9. Similarities and differences in interface experience across the three countries.

We also compared the three countries to identify similarities and differences in terms of the design of interface elements. For example, for the promotion page, Indonesian users have a much stronger preference for warm/bright colours, visually pleasing images, layout that highlights relevant promotions, and quick loading page (see Table 10).

Interface Design Element	Design	Indonesia	Thailand	The Philippines
Text	Amount			
	Ease of reading			
	Relevance			
	Newness/currency			
Language	Politeness of language			
Colour	Warmth/brightness	Very warm/bright	Warm/bright	
	Colourfulness			
Image/graphics	Amount			
	Aesthetic	Very visually pleasing	Visually pleasing	
	Professionalism			
	Informativeness			
Banners	Human presence			
	Animation	Less animated	Animated	
Layout	Visibility of different promotions			
	Visibility of relevant promotions	Very easy to see relevant promotions	Easy to see	
Navigation	One-click access			
Interaction	Progress notification			
	Loading time	Very quick loading	Quick loading	

* **Orange:** Country that is significantly more demanding than others; **Grey:** No significant difference

Table 10. Preference for interface elements on the promotion page across countries



1.5 Emerging/Novel Trends (LPG Step 4)

As a planned part of the study, we collected data on users' preference for live (streaming) shopping and analysed them deductively for insights. Although we did not collect data for virtual idols specifically, we used an inductive approach to draw implications for the design and implementation of virtual idols. The two analytical approaches are summarised in Figure 15 and detailed in the following pages.

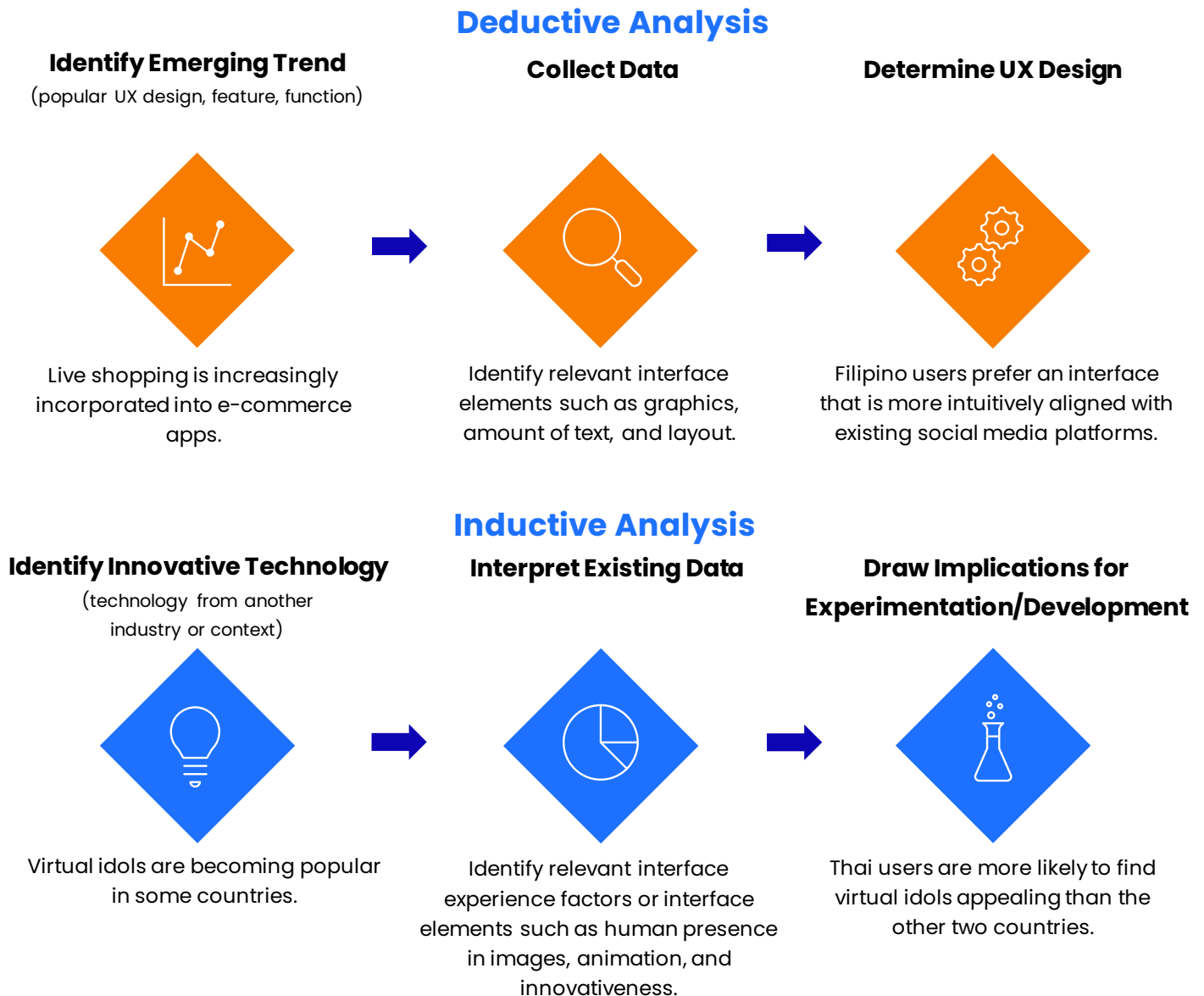


Figure 15. Steps involved in deductive analysis and inductive analysis of emerging trends.

Deductive analysis of live shopping

The live e-commerce sector is expected to be worth over US\$600 billion in worldwide revenue by 2023.⁶ In all the three countries studied, live shopping, which allows sellers to promote products through real-time videos, was increasingly incorporated into e-commerce apps. We therefore collected data to understand the need for glocalisation of live shopping.

Collect data about live shopping – Interface experience factors relevant to live shopping include visual attractiveness, social value, ease of use, and usefulness. Relevant interface elements include graphics, amount of text, and layout (see Figure 16). Accordingly, we asked users to evaluate the live shopping feature of their favourite app in terms of these factors and elements. There was also an open-ended question asking users to describe what they like and dislike about live shopping.

The text/content provided on the live/social shopping page is:	<ul style="list-style-type: none"> • 1 (too little) or 5 (too much) • 1 (easy to read) to 5 (difficult to read) • 1 (relevant) to 5 (irrelevant)
Overall, the layout or organisation is:	<ul style="list-style-type: none"> • 1 (Neat/clear) to 5 (Cluttered/confusing)
The overall colour combination is:	<ul style="list-style-type: none"> • 1 (Warm/bright) to 5 (Cool/dark)
Overall, most images/graphics look:	<ul style="list-style-type: none"> • 1 (Visually pleasing/beautiful) to 5 (Awful/ugly) • 1 (Professional) to 5 (Amateur) • 1 (Attractive) to 5 (Boring)
I can see different live/social shopping events easily:	<ul style="list-style-type: none"> • 1 (Agree) to 5 (Disagree)
Consider the live shopping feature of your favourite app:	<ul style="list-style-type: none"> • Which page do you prefer? Screenshot and upload it. • List two or more reasons why you prefer this page. • How can the live shopping feature improve?

Figure 16. Close- and open-ended questions about live shopping.

Analyse data to determine UX design – Preferences of each country was first analysed, followed by a comparison across countries to identify differences. For instance, we observed that Indonesian users prefer one-click access to live shopping events of interest (see Table 11). Compared to users in other countries, Indonesian users are more demanding in that they prefer text that is very easy to read and very relevant, images that are more colourful and aesthetically pleasing, and layout that is very neat and clearly visible (see Table 12).

⁶ Koetsier, J. (2022). Livestream Shopping: A \$500 Billion Market In 2022 As Amazon, Google, Facebook, TikTok Jump In? Retrieved from <https://www.forbes.com/sites/johnkoetsier/2022/01/22/livestream-shopping-a-500-billion-market-in-2022-as-amazon-google-facebook-tiktok-jump-in/>

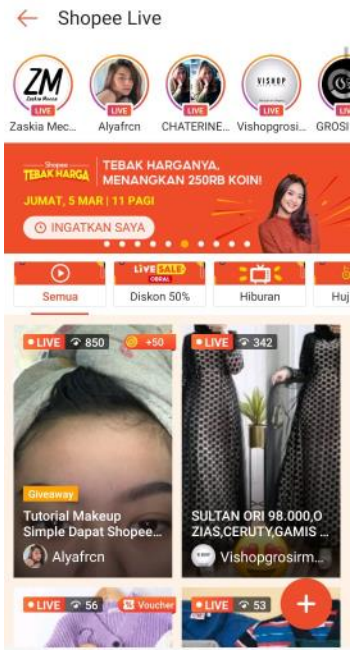
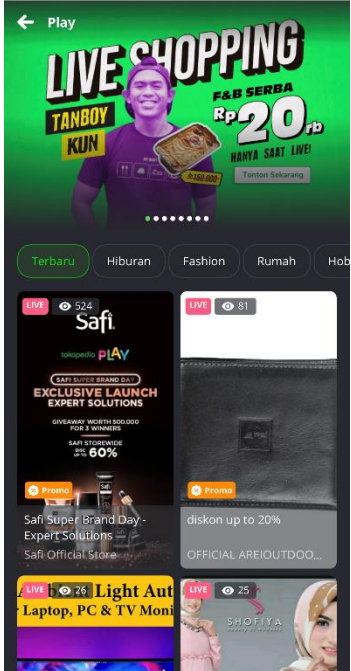
Preferences for Live Shopping Interface Elements	Apps Preferred by Most Users
<p>Text/Content (Perceived Usefulness)</p> <ul style="list-style-type: none"> Shows product stock, available promotions/discounts, promotion deadlines, sellers who are online, highlights, number of viewers Shows relevant live events first Shows variety of sellers Signal innovativeness with words like "new" or "latest" Categorize live events 	 <p style="text-align: center;">Shopee</p>
<p>Images/Videos (Visual Attractiveness)</p> <p>Large and can be easily seen</p>	 <p style="text-align: center;">Tokopedia</p>
<p>Layout (Perceived Ease of Use, Visual Attractiveness)</p> <ul style="list-style-type: none"> Clean, simple Organized 	
<p>Interaction (Perceived Ease of Use, Social Value)</p> <ul style="list-style-type: none"> One-click to select desired event One-click to pay for item directly from event More live events 	

Table 11. Indonesian users' preferences for live shopping.

UX Element	Design	Indonesia	Thailand	The Philippines
Text/content	Ease of reading	Very easy to read	Easy to read	
	Relevance	Very relevant	Relevant	
Images and graphics	Colour	Very warm/bright	Warm/bright	
	Aesthetic	Very visually pleasing	Visually pleasing	
Layout	Neatness	Very neat and clear	Neat and clear	
	Visibility of various events	See different events very easily	See different events easily	

Orange cells indicates a strong preference for a UX element among that country's users.

Table 12. UX preferences across Indonesia, Thailand, and the Philippines for live shopping pages.

As found in Step 2, users in Indonesia and Thailand prioritise visual attractiveness and ease of use while Filipino users prioritise usefulness. Accordingly, the design of live shopping in Indonesia and Thailand should focus on graphical elements and layout, while the design in The Philippines should focus on text/content (see Table 13).

Country	Key interface experience factors	Design focus
Indonesia	Visual attractiveness	Include very visually pleasing images; use warm/bright colours; ensure text is very easily readable
	Ease of use	Ensure layout is very neat and clear; ensure users can see different events very easily
Thailand	Visual attractiveness	Same as Indonesia
	Ease of use	Same as Indonesia
The Philippines	Usefulness	Ensure live feeds recommended are relevant; ensure different events can be seen easily

Table 13. Design focus for live shopping-related interface elements for Indonesia, Thailand, and the Philippines.

The open-ended responses indicate that Filipino users feel less enthusiastic about live shopping compared to users in the other countries in that they provided more negative comments:

"I am aware but I don't use live shopping."
"I don't like live shopping"
"Should add a social aspect."
"Can use a social-media-like interface."

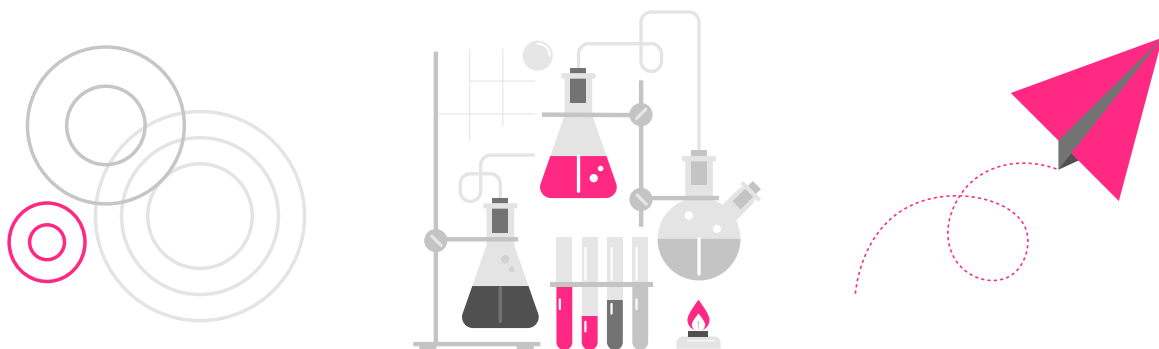
This is surprising considering that social media penetration is higher in The Philippines. The comments suggest that they are likely to enjoy live shopping more if the interface design becomes more similar to the social media platforms that they are already familiar with.

Inductive analysis of virtual idols

Virtual idols are digital avatars that use real human voices and behave like real-life celebrities. Many of them also "maintain" social media accounts that share stories about their "social life". They are increasingly used as an alternative to real-life celebrities in advertising. For instance, in 2020, China's virtual idol industry was worth about US\$540 million⁷. Would virtual idols appeal to users in Southeast Asia? We conducted an inductive analysis of the data we collected to draw implications for the experimentation and future development of virtual idols.

Interpret relevant existing data – Virtual idols are often designed to be humanoid or resemble humans. Therefore, the data we collected about human presence in images and animated banners are likely to be useful. We can expect virtual idols to affect the interface experience of visual attractiveness, innovativeness, and social value since it is a new form of graphical element and can have a social aspect. Therefore, we analysed these data and compared the three countries. We also analysed the favourite screenshots uploaded by users to identify the presence of human or human-like graphical elements

Draw implications for experimentation/development – The comparison indicates that Thai users are more likely to find virtual idols appealing than the other two countries (see Table 14). Thai users have noted that they "like that a celebrity is on a banner" and their favourite screenshots are more likely to have human images and animations. Thai users also value innovativeness more than the other two countries. In contrast, Indonesian users are least likely to find virtual idols appealing. These suggest that any experimentation and development of virtual idols can begin with Thai users.



⁷ IQ Magazine (2022). Modern Sky plans virtual version of China's biggest festival. Retrieved from <https://www.iq-mag.net/2022/01/modern-sky-virtual-edition-strawberry-music-fest/>

Positive Indication	Negative Indication
Indonesia	
<ul style="list-style-type: none"> • Visual attractiveness significantly affects brand perception • Most likely (64%) to have images with human presence on favourite home screens, promo screens, and banners 	<ul style="list-style-type: none"> • Least likely (56%) to have images with animations on favourite home screens, promo screens, and banners • Less likely to enjoy seeing local celebrities in advertisements: "Lee Min Ho is cool ... but Verrel and Agnes ... boring." (focus group response)
Thailand	
<ul style="list-style-type: none"> • Innovativeness significantly affects brand perception • Most likely (70%) to have images with animations on favourite home screens, promo screens, and banners • Enjoy seeing celebrities on banners: "Ads on TV that use Agnes Mo and Lee Min Ho as brand ambassadors which make it really cool." (focus group response) 	<p>Less likely (50%) to have images with human presence on favourite home screens, promo screens, and banners</p>
The Philippines	
<ul style="list-style-type: none"> • Enjoy seeing celebrity endorsers: "I think celebrities are still good endorsers. Somehow you seem to trust the brands." (focus group response) • More likely (64%) to have images with animations on favourite home screens, promo screens, and banners 	<p>Less likely (50%) to have images with human presence on favourite home screens, promo screens, and banners</p>

Table 14. User preferences for interface elements and interface experience factors related to virtual idols.

5. Benefits to UX Professionals and App Glocalisation

The LPG methodology described and illustrated in this whitepaper offers a systematic, evidence-based approach to app glocalisation in e-commerce.



6. Appendices

Appendix 1: Sample measures for brand perceptions.

Factor	Sample Measures
Loyalty	<ul style="list-style-type: none">• This app is my first choice among shopping apps• I am reluctant to switch to other shopping apps• I would recommend this app to others
Trust	<ul style="list-style-type: none">• This app can handle transactions correctly (e.g., payment, refund)• This app is fair in their customer service policies• This app makes good efforts to address most customer complaints
Satisfaction	<ul style="list-style-type: none">• This app meets my online shopping needs/expectations
Intention to Repurchase	<ul style="list-style-type: none">• I expect to shop/make a purchase on this app again soon
Cognitive Attitude	<ul style="list-style-type: none">• Shopping on the app is convenient and helps save money/time• The app provides good after-sale service
Affective Attitude	<ul style="list-style-type: none">• Shopping on the app is enjoyable/fun/exciting/relaxing/immersive

Appendix 2: Sample measures for interface experience factors.

Factor	Sample Measures
Information quality	<ul style="list-style-type: none"> The app provides sufficient product/seller/promotion information The textual information on the home screen/page/banner of this mobile app is: too little or too much/easy to read or difficult to read
Ease of use	<ul style="list-style-type: none"> The app can be used without written instructions I find it easy to complete a purchase on this app.
Usefulness	<ul style="list-style-type: none"> The app provides useful recommendations (e.g., relevant products, deals) The app is useful for finding/comparing/cancelling/returning/refunding products
Visual attractiveness	<ul style="list-style-type: none"> There are moving/animated images/banners. I like the overall look and feel of this mobile app. Overall, most images/graphics look: visually pleasing/beautiful or awful/ugly. The overall colour combination of this page is: attractive or boring.
Innovativeness	<ul style="list-style-type: none"> New information/features/functions are often added to this mobile app. I am often pleasantly surprised when using this mobile app.
Social value	<ul style="list-style-type: none"> I feel socially connected/engaged with others when shopping on this mobile app. I feel a sense of belonging/membership when shopping on this mobile app.
Security	<ul style="list-style-type: none"> I feel safe providing my personal/credit card information to this app.

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