Behavioural Study, Combined Metrics Score & Additional Topics

UX-271 -Research in User Experience Design

INSTAGRAM & VSCO (Assignment Three)

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Study Design:

Experiment Systems:

Instagram:

Instagram is a popular social media tool used to share photos or videos. It launched on October 6th in 2010 and was recently bought by Facebook Inc, another social media platform. Users can direct message, post 24-hour story highlights, shop online, and save media. Other main features include following friends, liking posts, editing photos, and tagging friends.

VSCO:

VSCO is another social media platform that lets users take images, edit them using presets or filters, and share them online. The mobile app used to be called

VSCO Cam which was initially released in 2011. People can send direct messages, apply filters, edit multiple photos at once, re-publish or favorite media. However,

these features only work on mobile devices, the desktop version only allows users to see their existing published feed.

Features Being Tested:

The first feature being tested is the ability to copy a link to an existing post image. The specific feature is finding the desired photo and accessing its sharing options. This feature allows the user to copy a link that can be pasted and sent to another user on another system. On both Instagram and VSCO, users can access this by finding the image first and then visiting more options.

The second feature that I aim to test is the ability to view all liked images. This feature allows users to like or favorite an image that appears on the homepage or feed. On both systems, users can view a collection of all their previously liked images. This feature will be tested to evaluate both systems' accessibility by the researcher, not participants.

Tasks & Subtasks:

Copy an Image Link

Instagram:

Find System Account

Click the search icon in the bottom navigation bar

Tap the search field bar located at the top of the screen

Using the keyboard, type "Instagram"

Select the search result "Instagram"

Select Image

Select the first image in the feed located on the left of the

screen Find Share Options

Select the three horizontal dots located on the right of the screen above

the image and beside the account username

Copy Link

Tap the option "Copy Link"

VSCO:

Find System Account

Click the search icon in the bottom navigation bar

Tap the magnifying glass icon on the top left of the screen

Select the search bar located under the top navigation bar

Using the keyboard type "VSCO"

Select the search result "VSCO"

Select Image

Tap the first image in the feed on the left side of the screen

Find Share Options

Choose the three horizontal dots at the top of the screen in the right

corner Copy Link

Tap the icon and text "Copy Link"

Tasks & Subtasks:

View Liked Images Collection

Instagram:

View Setting Options

Click on the profile icon located on the right of the bottom navigation bar Tap the options menu with the three horizontal lines located in the top right of the screen

View Account Activity

Select the text and option "Your Activity"

Tap the menu option "Interactions"

Find Liked Images

Select the option "Likes"

Scroll and view the collection

VSCO:

View Setting Options

Click on the profile icon found on the right of the bottom navigation bar

Find the star located at the top left of the screen

View Account Activity

Tap on the star icon

Find Liked Images

Scroll and view the collection labeled "Favourites"

Scenario:

The first and second scenarios that are being tested will involve the user to have an account on Instagram and VSCO with the mobile app on their devices. The first scenario that is being tested is using the sharing options on the app as if the user wanted to share an existing post with someone. This

scenario involves the users wanting to share a photo with someone who is not a user of that system and therefore needs a direct link.

The second scenario that will be tested is viewing a collection of liked posts as if the user wanted to revisit and find a post they previously liked. This involves the user to have previously liked images or favorites posts. Both scenarios are typical behaviors and tasks that a social media user would complete. Overall, the general scenario is copying a link and viewing a collection. Participants will be tested using scenario one and scenario two will be used by the researchers for A/B testing.

Type of Research:

The type of research for this experiment will be conducted remotely and in person. The remote research will be conducted using Facetime and Discord. Facetime is a mobile and laptop app created by Apple, that allows users to video chat with other Apple users. Discord is a streaming program that allows users to share audio, video, and message. In-person research will be conducted using a think-aloud approach and face-to-face communication within a household. The data collection will be done using a computer. All the notes will be recorded using Google Docs and Sheets. The in-person interviews will have the participant sitting in front of the researcher, so the mobile device screen can be seen as well as the participant's actions and behaviors.

Participant Shortlist:

Frequency Levels: Frequent, Moderate, Occasional, Rare

Experience Levels: Advanced, Intermediate, Beginner

Levels are determined based on the use of Instagram and/or VSCO

Participant Age Gender Experience Frequency of Use Location One 18 Male Intermediate Moderate In-Person

Two 18 Female Advanced Frequent Remote Three 18 Female Intermediate Occasional Remote Four 20 Male Intermediate Rare In-Person

-Uses the messaging feature on Instagram often

PARTICIPANT ONE

-Uses Instagram to connect with friends, however, does not use the post/editing feature often

-Not a user of VSCO but has been on the app

-Very skilled and knowledgeable with technology and computers

PARTICIPANT THREE

-Uses Instagram to connect with friends and posts photos often

-A rare VSCO user but has an old profile

Task Success Levels:

Task success was evaluated using three levels: complete success, partial success, and failure. **Complete Success: The participant completed all tasks & subtasks without any help**

Partial Success: The participant completed all tasks & subtasks with minimal or moderate help

Failure: The participant failed to complete all or more than half of the tasks & subtasks

-Time: The participant failed to complete tasks & subtasks within given time (3 minutes)

-Participant: The participant gives up on the tasks & subtasks

Experiment One Think-Aloud Study Design

Participants in this study were asked to convey their feelings verbally. They were made aware that their statements would be recorded using *Google Docs* by the moderator. Performance metrics were collected including time on task and task success. Participants were made aware that they were being timed but were not informed of the time on task or success levels. This was done to ensure that participants did not feel tempted to rush or become frustrated with their success levels. A mobile digital timer was used to calculate time on task using seconds. Comments made by participants were recorded during and after the task and subtasks to ensure participants were focused on completing tasks, paying attention to the system, and experience.

Behavioral Study

Experiment #1: Copy an Image Link

Participant	Instagram	Instagram	VSCO	VSCO
	Time On Task (sec)	Task Success	Time On Task (sec)	Task Success
One	17	Complete Success	19	Partial Success
Two	15	Complete Success	17	Complete Success
Three	18	Complete Success	18	Partial Success
Four	19	Partial Success	20	Partial Success

Experiment One Think-Aloud Comments & Statements

Task: Copy an Image Link

Participant One:

Unprompted Verbal Expressions:
Instagram "That was fast"
"Everything loads quickly"
"Wow, it already knew what I was typing" "The button is small"
"Gives a lot of menu options"

Participant Two:

Unprompted Verbal Expressions:
Instagram "It suggested Instagram super fast' "It has high contrast"
"This was fast"
"A lot of text and numbers"
"It has a cool layout"

Participant Three:

Unprompted Verbal Expressions:
Instagram "It loaded fast after I tapped"
"There are too many options"
"The profile screen is crowded"
"I like how easy it was"
"Interesting"

Participant Four:

Unprompted Verbal Expressions:
Instagram "It was faster than expected"

"There's way too many profile options" "The feed view can be reduced"
"The green is easy to see"
"It was easy to tell I did the task"

Unprompted Verbal Expressions:
VSCO "I like the top navigation bar"
"The colors are hard to see"
"The system is similar to others" "It felt slow loading"

Unprompted Verbal Expressions:
VSCO "Very easy and simple"
"Fewer options"
"The screen is minimal"
"Very basic colours"

Unprompted Verbal Expressions:

VSCO "It's easy with just black and white" "The grey is hard to see"
"The isn't many features on the profile" "It could have been faster with loading"

Unprompted Verbal Expressions:
VSCO "The screens take long to load"
"Not much contrast on the nav bar"
"I thought it would predict my search" "Can't tell if it is the official account" "That wasn't to hard"

Unprompted Verbal Expressions:

Categorizing Statements: Instagram

Negative	Neutral	Positive
"The button is small"	"That was fast"	"A lot of text and numbers"
"There are too many options" "The profile screen is crowded" "There's way too many profile options" "The feed view can be reduced"	"Everything loads quickly"	"It loaded fast after I tapped"
"It has a cool layout" "Interesting"	"Wow, it already knew what I was typing"	"I like how easy it was"
	"Gives a lot of menu options"	"It was faster than expected"
	"It suggested Instagram super fast" "It has high contrast"	"The green is easy to see"
	"This was fast"	"It was easy to tell I did the task"

Categorizing Statements: VSCO

Negative	Neutral	Positive
"The grey is hard to see"	"It's easy with just black and white"	"The system is similar to others"

"The isn't many features on the profile" "It could have been faster with loading" "The colors are hard to see"

"It felt slow loading"

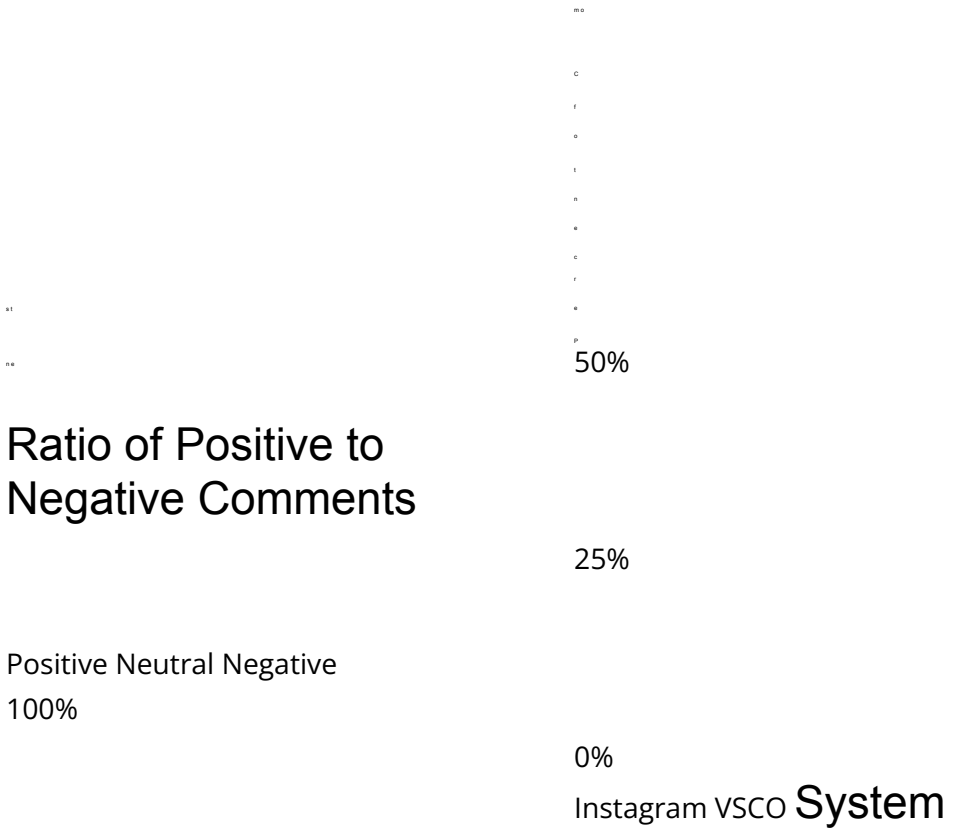
"The screens take long to load" "Not much contrast on the nav bar" "Can't tell if it is the official account" "I thought it would predict my search"

"Fewer options"

"The screen is minimal" "Very basic colours"

"I like the top navigation bar" "That wasn't to hard"

"Very easy and simple"



Analyzation of Ratios

The ratios revealed that Instagram received more positive comments from participants compared to negative comments. In addition, VSCO received more negative comments than positive comments from participants. This reflects that participants had a better experience completing the task using Instagram. When given the same set of instructions and subtasks, participants reacted more positively towards Instagram than a VSCO. This suggests that VSCO needs to redesign its system to improve user satisfaction. The ratios also reveal that users of VSCO had more negative comments than positive ones compared to Instagram. For VSCO, this reflects that users may be feeling sub-par or mediocre after

using the system instead of feeling satisfied. For Instagram, this reflects that the system is meeting users' needs and expectations. The ratios indicate that overall, Instagram is performing better for users compared to VSCO.

Combined Metrics Score

Combined Metrics Based on Percentages				
Instagram				
Participant	Task Success %	Time on Task %	UMUX Lite Score %	Average
1	83%	100%	92%	92%
2	100%	100%	92%	97%
3	100%	0%	83%	61%
4	100%	92%	83%	92%
	96%	**73%**	**88%**	**85%**
VSCO				
Participant	Time Success %	Time On Task %	UMUX Lite Score %	Average
1	83%	83%	83%	83%
2	100%	100%	75%	92%
3	100%	17%	67%	61%
4	100%	0%	42%	47%
	96%	**50%**	**67%**	**71%**

Combining Metrics Based on Z Scores Instagram								
Participant	Task Success (of 6) Instagram	Time On Task	UMUX Lite Score	z Tasks Success	z Time	z Time (-1)	z UMUX Lite	Average
1	5	6	92	-1.5	-0.55	0.55	0.87	-0.03
2	6	6	92	0.5	-0.55	0.55	0.87	0.64
3	6	19	83	0.5	1.50	-1.50	-0.87	-0.62
4	6	7	83	0.5	-0.39	0.39	-0.87	0.01
Mean				0	0	0	0	0
Standard Deviation				1	1	1	1	0.45

Combining Metrics Based on Z Scores VSCO								
Participant	Task Success (of 6) VSCO	Time On Task	UMUX Lite Score	z Tasks Success	z Time	z Time (-1)	z UMUX Lite	Average
1	5	9	83	-1.5	-0.68	0.68	0.92	0.03
2	6	7	75	0.5	-1.02	1.02	0.46	0.66
3	6	17	67	0.5	0.68	-0.68	0.01	-0.06
4	6	19	42	0.5	1.02	-1.02	-1.39	-0.64
Mean				0	0	0	0	0
Standard Deviation				1	1	1	1	0.46

Combined Metrics Percentages and Z Score Results

The results of combing metrics of task success, time on task, and UMUX scores from previous experiments and usability studies reveal insightful results for Instagram and VSCO. For task success, the average was equal for Instagram and VSCO, revealing that when tasked with a task, participants were

equally successful for both systems. For time on task, Instagram had a higher usability score than VSCO, with a 23% difference and increase. For the UMUX Lite combined metrics, Instagram had a much higher average score of 88% compared to VSCO at 67%, resulting in a 21% difference. The average combined metric in percentages for all participants revealed that Instagram had a higher single usability score of 85% compared to VSCO at 71%. This shows that overall, Instagram scored better than VSCO with a higher single/standard usability score and suggests that it performs better for participants. Focusing on participants, the average score for participant one was higher for Instagram than for VSCO. This also occurred for participant two, with a higher score for Instagram as well. Participant three scored the same average combined metric of 61%, suggesting that both systems provided a similar experience. The most significant result for participants was participant four who scored a 92% average single usability score with Instagram compared to VSCO at 47%. This 45% difference suggests that the user had many usability issues with VSCO and Instagram performed better for them.

The results of the average z scores for Instagram show that participants one and three were at the bottom while participants two and four were at the top. Participant three was many units under or below the mean of the distribution, while participant two was many units above the mean. The average z scores of participants one and four were not very above or under the mean of the distribution. The results of the average z scores for VSCO reveal that participants three and four were at the bottom while participants one and two were at the top. Participant two was the only user with a positive average z score that was many units above. When comparing both results for each system, participant one was at the top and received a positive average z score for both systems. Participant three had the lowest average z score for Instagram and second-lowest for VSCO. Participant four had the lowest average z score for VSCO with the most units below the mean of the distribution. The average z scores indicate that half or 50% of participants had a negative average z score for both Instagram and VSCO. These results suggest that when participants complete tasks on Instagram and VSCO, the average z score result for time on task, task success and UMUX scores will be similar or yield a similar ratio of positive and negative average z scores based on participant.

Additional Topics

A/B test

An A/B test was conducted to evaluate accessibility between Instagram and VSCO. For the assessment, numerous tasks were tested to evaluate if the tasks performed on both systems meet the WCAG Accessibility Guidelines. These tasks included: Editing an Image and Saving as a Draft,

Sending an Existing Post to Another User, Search for help or support about “How to like a post,” Apply a preset filter to an existing photo with hashtags and location, Copy an Image Link, and View Liked Images Collection.

Principle	WCAG Accessibility Guidelines + Additional Heuristics	Instagram	VSCO	Does one system meet the guideline better than the other?	Why?
Perceivable	Provide text alternatives for non-text content	Yes	No	Yes -Instagram	Instagram allows users to add alt text before posting a however only those with a screen reader can view the does not have the ability to add or view alt text.
Perceivable	Provide captions and other alternatives for multimedia	Yes	Yes	Yes -Instagram	Both systems allow users to add captions to images an media however, Instagram lets users turn on and off c videos and VSCO does not.
Perceivable	Create content that can be presented with assistive technology without losing meaning	Yes	No	Yes -Instagram	Only Instagram allows content to be presented alterna alt text for images and allows those with screen reade Instagram also has assisted auto captioning on stories music.
Perceivable	Make it easer for people to see and hear content	No	Yes	Yes -VSCO	VSCO allows users to adjust the appearance settings to contrast with light and dark settings. Instagram can on by using the device settings not the system settings.
Operable	Make all functionality available from a keyboard	No	No	No	Both systems require individual strokes, touch screen, adjusting filters and edits. It requires specific endpoint movements that cannot be done using a keyboard.
Operable	Give people enough time to read and use content	Yes	Yes	Yes -VSCO	Both systems allow users to scroll or view at their own videos on VSCO can be paused using a button while Ins users to hold down on the screen and will continue pla
Operable	Do not use content that causes seizures	Yes	Yes	No	Both systems do not contain any content or elements t users while using the system. However, both systems v to post private videos or images that use flashing light
Operable	Help people navigate and find content	Yes	Yes	Yes -Instagram	While both systems provide help and support centers, I more headlines, titles, and sections for the profile and Instagram also has different categories for profile pag tagged images while VSCO does not.
Understandable	Make text readable and understandable	Yes	Yes	Yes -Instagram	Both systems allow users to change languages howeve less titles and jargon as Instagram uses section labels without providing definitions
Understandable	Make content appear and operate in predictable ways	No	Yes	Yes -VSCO	VSCO and Instagram both have homepage feeds that s however, VSCO orders them in chronological order bas recent that image was posted. However, Instagram or based on user activity. The search results for users wil affected based on the interactions with users. In addit will order other user profiles based on how frequent y them, not by last visit, message, or other interaction (
Understandable	Help people avoid and correct mistakes	Yes	Yes	No	Both systems provide users with errors messages that about the error and more information. There are also l that are used to identity the errors and label them.
Robust	Maximize compatibility with current and future tools	Yes	No	Yes -Instagram	Instagram has an public statement which focuses on it to accessibility. It maximizes combability by using scre alt text. Instagram has automatic alt text by using obje technology to provide a visual description of photos for visual impairments. VSCO does not inform users of an with tools or assistive technology.
Compliant	Meet standards; keep current.	Yes	No	Yes -Instagram	Instagram complies with this standard better than VS has a public accessibility statement and commitment t five different sections on accessibility options and abil a terms of use, help center, and community guidelines information or commitment to accessible design.

Is one system better than the other at meeting these guidelines?

The results from the A/B tests revealed that one system was better at meeting guidelines than another. Instagram meets accessibility guidelines seven times better than VSCO at three times better when compared to each other. VSCO failed to meet five of the different principles and heuristics whereas Instagram failed to only meet three of them. While both systems offer similar capabilities and features,

VSCO does not make a public effort to inform users about accessibility guidelines, designs, or tools in place.

Overall Findings

Post-Session Interviews

By running a post-session interview with participants, additional insights into Instagram and VSCO were revealed. Many users shared that there preferred to use Instagram over VSCO because of the popularity of the systems. Users shared that since the majority of their social circle uses Instagram, it makes more sense to be active on that system. All of the users felt that their data and privacy were safer and better using Instagram. This was due to the fact that profiles on Instagram can be private where only the user can allow select users to view their profile. However, on VSCO any account is open for the public to see regardless if they have an account or follow the user. One user prefers Instagram over VSCO because of the association Instagram has with *Facebook* and *Meta*. Since Instagram is operated by a reliable and popular parent company, the user feels more inclined to use it over VSCO. One other insight from the post-session interviews revealed that users would or already post more frequently on VSCO compared to Instagram. Users explained that VSCO does not have a follower count, likes, or comments visible to other users. Essentially, other users cannot see how many likes a post and the owner of the post can only see who liked the image but there is no numeric counter. The participants feel less self-conscious using VSCO and prefer posting there because their relatives or family members who are not part of a younger generation use Instagram more than VSCO. Thus, providing young adolescent users with more privacy and social life.

Participant Quotes

"The way Instagram orders the homepage feed is confusing, I always miss

posts" "Instagram is really fast to load but VSCO takes longer sometimes"

"I knew Instagram had alt text because I've seen it before"
"I like how basic the colours are on VSCO"

"I wish I could pause videos on Instagram"

"VSCO should let you tag other users"

"I can never navigate through VSCO"

Possible Changes

To improve both products, there are various design improvements that could be made to accomplish better operating systems and user satisfaction. To improve Instagram, many users found it hard to navigate with so many menu options or buttons. Instagram should reduce the number of sections it uses to divide profiles on its system. Instagram currently has a horizontal bar that separates into sections such as feed, tagged, saved, reels, shopping, and videos. The options overwhelm users and should be reduced and sorted into less categories. This will make a less crowded screen and should adapt to a more minimal appearance and interface. To improve the system from an accessibility standpoint, Instagram should create a pause button on videos. This will allow users to stop the video from playing or pause to slow down the content. To improve understandability, Instagram should redesign the homepage feed to make posts appear in order from most recent to oldest. The current system which orders content based on your interactions with accounts makes it hard for users to find the most recent posts or certain users. To improve VSCO, the system should just the colour settings of their grey font and typography. Users have trouble reading and viewing the small grey text against white background so the system should increase the contrast on screens. To ensure users are able to identify reliable and legitimate accounts, VSCO should create an option where accounts can be verified. This shows users that influencers, companies, or celebrity accounts are official and not fake accounts, scams, or bots. To meet accessibility standards, VSCO should implement an alt text feature that allows users to add alt text or automatically adds it to any user post. VSCO should also create a public statement or section on the community guideline lines, terms or use or help center with a dedicated space for accessibility. Currently, with no public information about accessibility, users will not be aware of any assistive tools or technology available for use. One final possible improvement for VSCO is to add more options to the profile page of users. This will allows users to find content faster and create a better user flow and information architecture.