



Usability Evaluation of the TigerPrint Mobility Print Instructions

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TIGERPRINT
PrePay Printing & Kiosk Printing

MOBILITY PRINT



- Make sure you are connected to AU WiFi.
- Install the Ricoh Print Queue profile on your device (phone, tablet, or laptop) by scanning this QR code or visiting aub.ie/mobilityprintkb.
- For further instructions on installing, please visit aub.ie/mobilityprintkb.
- Locate your document on your device and select "Print." Select RicohPrinter as your desired printer and set your print settings (color, # of copies, two-sided, etc.) before submitting.
- Once your document is processed, you will receive an email with your release code. This code will be the same every time you print.
- To print your document(s), you can swipe your Tiger Card at one of the quick-release printers, or log in to a kiosk using your Auburn credentials, or print release code.

WEB PRINT



- Log in to tigerprint.auburn.edu with your Auburn username and password.
- Select "Web Print" from the left hand menu.
- Click "Submit a Job."
- Indicate the amount of copies you'd like to print and click "Upload Documents."
- Drag and drop your documents into the box or click "Upload from computer" to browse for your documents. Once done, click "Upload & Complete."
- Once your document is processed, you will receive an email with your release code. This code will be the same every time you print.
- If you have pre-loaded funds on Papercut, you can locate a PrePay printer and swipe your Tiger Card to print your document(s).

PRELOAD FUNDS

- Preloading funds for TigerPrint on your Papercut account can make things quick and convenient when printing! Paying for each print job individually from the kiosk will place a \$10 hold on your method of payment that will expire after 24-48 hours. Preloading funds to your Papercut account will allow you to avoid any holds.
- To load funds, log in to tigerprint.auburn.edu with your Auburn username and password.
- Select "Add Credit" from the left hand menu.
- Choose an amount to add to your account and click "Add value."
- Enter in your credit card, debit card, or banking information, then click "Pay Now."
- Once your funds are loaded, you will see the amount on your "Summary" page, as well as on a TigerPrint kiosk when signed in.
- These funds will allow you to use the Prepay printers on campus by simply swiping your Tiger Card.

Printing Prices

-Color
-B&W
-Multiple Copies
-Double Sided

Detailed Instructions

We want your feedback!



For **refunds**, email ricohhelp@auburn.edu.
For **assistance**, call the IT Service Desk at 334-844-4944
or visit us on the 3rd floor of the RBD Library.

Introduction

Our research team conducted a usability test of the TigerPrint Mobility Print instructions for Kiosk Printers in RBD.

The following presentation summarizes our testing methodology, evaluation, findings, and recommendations.

The top 3 student-reported complaints:



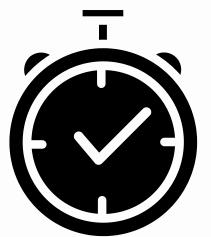
1. The current TigerPrint instructions are too difficult to understand and follow.
2. The Mobility Print feature is unreliable.
3. The printing process takes too long.

TESTING METHODOLOGY

This section details the testing methodology that we used during our usability test.

Test Objectives

Based on requests from Mrs. Dala and Mrs. Seymour, our research team established three primary test objectives.



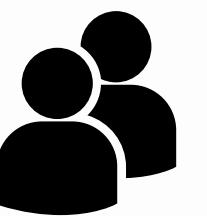
Average use time for first-time users

Data was collected regarding the length of time it takes a first-time user of Mobility Print to successfully print a document using the instructions.



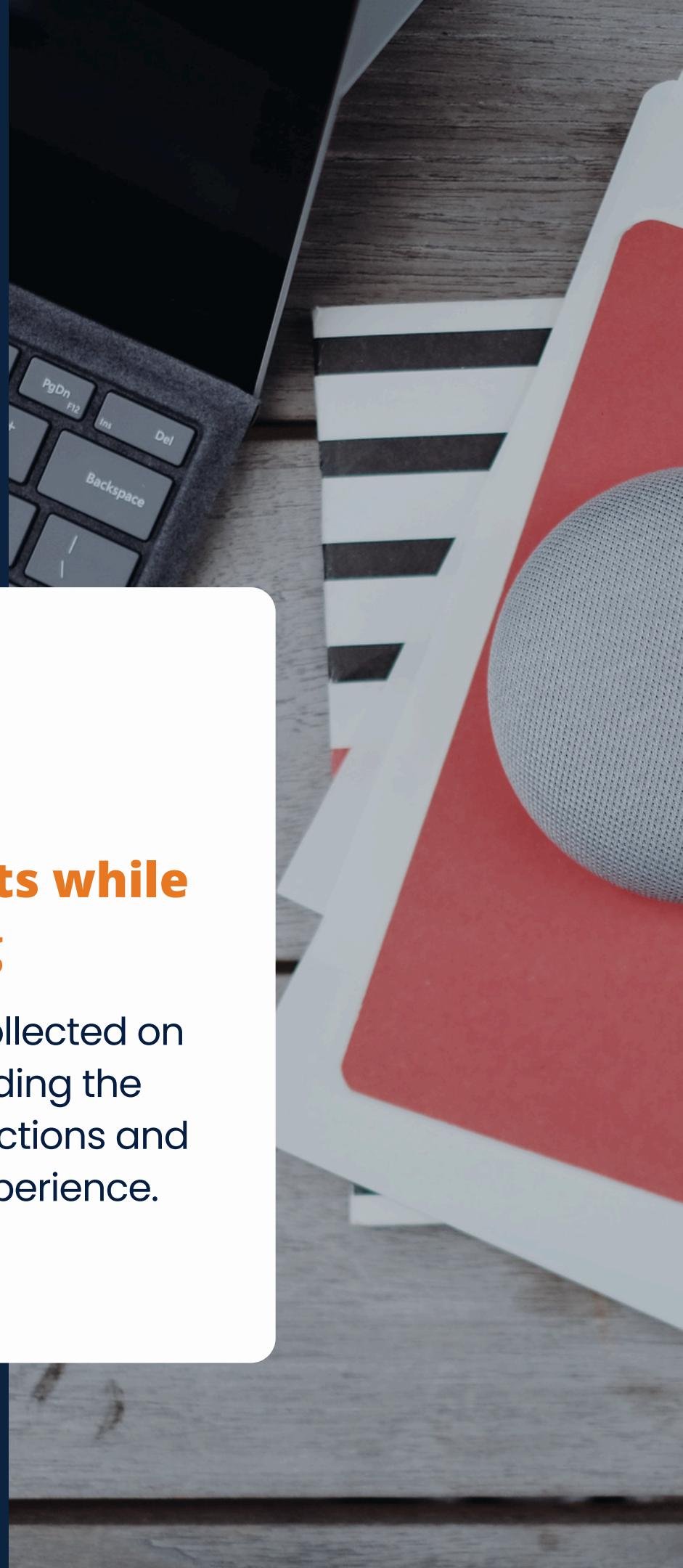
Sources of error in the instructions

We evaluated what errors first-time users experienced and where these errors occurred while interacting with the instructions.



User sentiments while printing

Additional data was collected on users' feelings regarding the usefulness of the instructions and the overall printing experience.



Profile of Participants

We recruited a total of 5 participants, with the following requirements:

- Be an Auburn University student
- Have no prior printing experience with Mobility Print
- Be at least 18 years old
- Own a mobile/cellular device

Participants 1, 2, & 3

These participants had never used TigerPrint services, nor had they used Mobility Print before.

Participants 4 & 5

These participants had experience with the older TigerPrint system; however, they had never used Mobility Print.

	How would you describe your level of comfort with technology?	How much time do you expect your ideal printing experience to take?	Device Type	Accessed Email Via..
P1	Moderately comfortable	10 minutes	Apple	Outlook Mobile App
P2	Very uncomfortable	5 minutes	Apple	Outlook Web Version
P3	Very comfortable	5 minutes	Android	Outlook Mobile App
P4	Very comfortable	5 minutes	Apple	Default Mail App for iPhone
P5	Very comfortable	5 minutes	Apple	Outlook Mobile App

Usability Evaluation Methods

1

PRE-TEST QUESTIONNAIRE

The pre-test questionnaire was delivered via Google Forms and gathered data on the following:

- participants' demographics
- prior printing experience
- general level of comfort with technology

2

4 TASK-BASED SCENARIOS

Four task-based scenarios formed the core of our usability test.

In each task, real world scenarios were created to simulate AU students' use of the Ricoh printers to print documents within a specified time constraint (e.g., printing an English paper before class begins).

3

REACTION CARDS ASSESSMENT

Participants underwent a desirability test using Microsoft's 118 Product Reaction Cards.

This portion of our usability test helped our team better understand the illusive, intangible aspect of desirability resulting from users' engagement with the TigerPrint instructions.

4

POST-TEST QUESTIONNAIRE

The post-test questionnaire gathered immediate feedback on the following:

- ease/difficulty of performing test tasks
- sources of frustration & barriers to completion
- recommendations to improve instructions
- Likelihood of participants using TigerPrint services again

Conducted as a think-aloud process

How Evaluations Were Conducted

Data Collection Tools



We filmed all five testing sessions using a DSLR camera and tripod borrowed from RBD Library.



We recorded users' cell phone screens during testing using the screen recording feature on iPhone and Android.



We captured audio recording of each testing session using a lavalier microphone borrowed from RBD Library.



To supplement the above data collection tools, two group members recorded written notes during the testing sessions.

Team Member Roles

VIDEO MODERATOR

The Video Moderator (Kaitlin) was responsible for managing all technological aspects during testing.

TEST MODERATOR 1

Test Moderator 1 (Anna) was responsible for taking detailed written notes on participants' nonverbal cues during testing.

TEST MODERATOR 2

Test Moderator 2 (Colleen) timed the task scenarios and facilitated the Product Reaction Cards assessment.

RESULTS/FINDINGS

This section details our collated, general, and specific findings. Specific findings are broken down based on each scenario.

Collated Findings Chart

Usability Problem	# of Participants Affected	Severity Score
Participants did not understand what happened in their system once the Ricoh profile/app was downloaded.	4	1
Confusion about whether the app/profile was successfully installed	4	1
Participants did not know they needed to select the file name on the Pay Station to allow them to print	3	1
Confusion about the different QR codes on the instructions and the Pay Station	2	2

Severity Score for Collated Findings

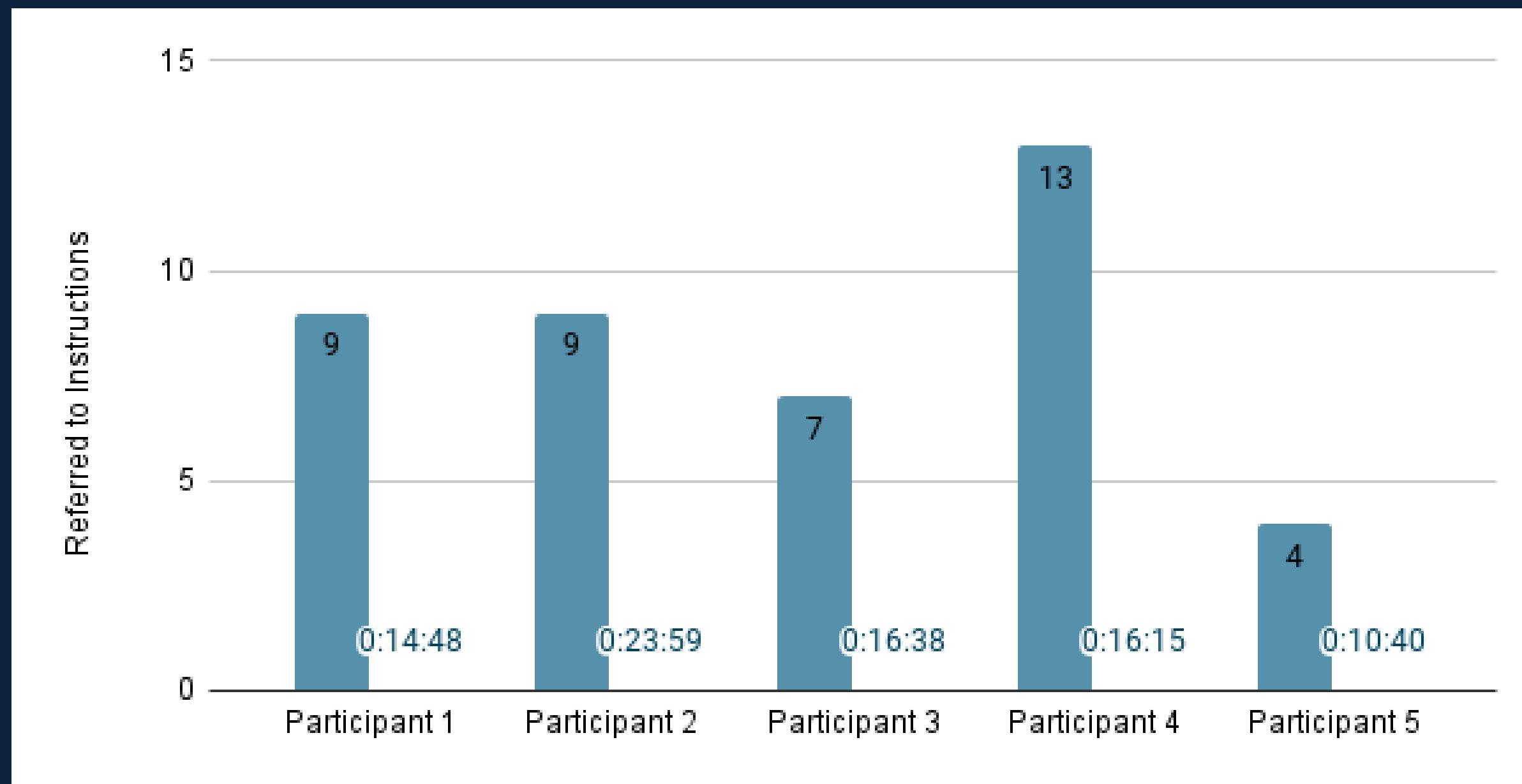
- **Level 1** – Frustrated participant and caused significant delay on a task
- **Level 2** – Had a minor effect on usability
- **Level 3** – Caused no significant impact on performance, but participant indicated a preference
- **Level 4** – Caused no significant impact on performance, but was noted as a frustration by test moderators

Confusion about how to enter Auburn credentials when prompted	4	2
Confusion about the difference between a profile and an app	4	2
Participants did not know the cost of printing until they were prompted to print on the Pay Station	5	4

Time on Tasks

Participant #	Scenario #1 <i>First Impression of Instructions</i>	Scenario #2 <i>Downloading Ricoh Print Queue Profile</i>	Scenario #3 <i>First Time Printing</i>	Scenario #4 <i>Second Time Printing</i>	Total Test Time
P1	0:30	3:22	7:00	3:56	14:48
P2	1:48	148	18:05	2:18	23:59
P3	0:47	0:56	13:01	1:54	16:38
P4	0:40	3:26	9:11	2:58	16:15
P5	1:22	2:16	4:36	2:26	10:40
Average	1:01	2:21	10:22	2:42	16:28

Number of Times Participants Referred to Instructions vs. Total Test Time



SPECIFIC FINDINGS

This section details specific findings from Scenarios 1, 2, 3, and 4, as well as the Product Reaction Cards Assessment and post-test questionnaire.

Scenario 1

Using a think-aloud process, participants were asked to state their initial impressions of the TigerPrint Mobility Print instructions.

2 out of 5 participants expressed that the instructions were too wordy.

2 out of 5 also presumed the instructions appeared “simple” or “straightforward.”

Participant #	Initial Impressions of the Mobility Print Instructions
P1	"My first impressions—it's a lot of words."
P2	"I already don't like that I have to scan something." (<i>in reference to using their phone to scan the QR code on the instructions</i>). "It seems simple. It's only 5 steps."
P3	"Seems straightforward enough. QR codes have a habit of going wrong on Samsung devices."
P4	"It's very organized in the way it's divided. I like the different columns. It looks like it would be easy to get everything I need."
P5	"It's a lot of words. Immediately, I don't want to read all these words..."

Scenario 2

During Scenario 2, participants were instructed to download the Ricoh Print Queue profile/app on their mobile device.

Differences were noted in language between Android and Apple users.

Apple users downloaded the **Ricoh Print Queue Profile**, while Android users downloaded the **PaperCut Mobility Print App**.

Participant 3 (the Android user) completed downloading the fastest.

-Install the Ricoh Print Queue profile on your device (phone, tablet, or laptop) by scanning this QR code or visiting aub.ie/mobilityprint.



Participant #	Scenario 2 <i>Downloading the Ricoh Print Queue</i>	Device Type
P1	3:22	Apple
P2	1:48	Apple
P3	0:56	Android
P4	3:26	Apple
P5	2:16	Apple

Scenario 2

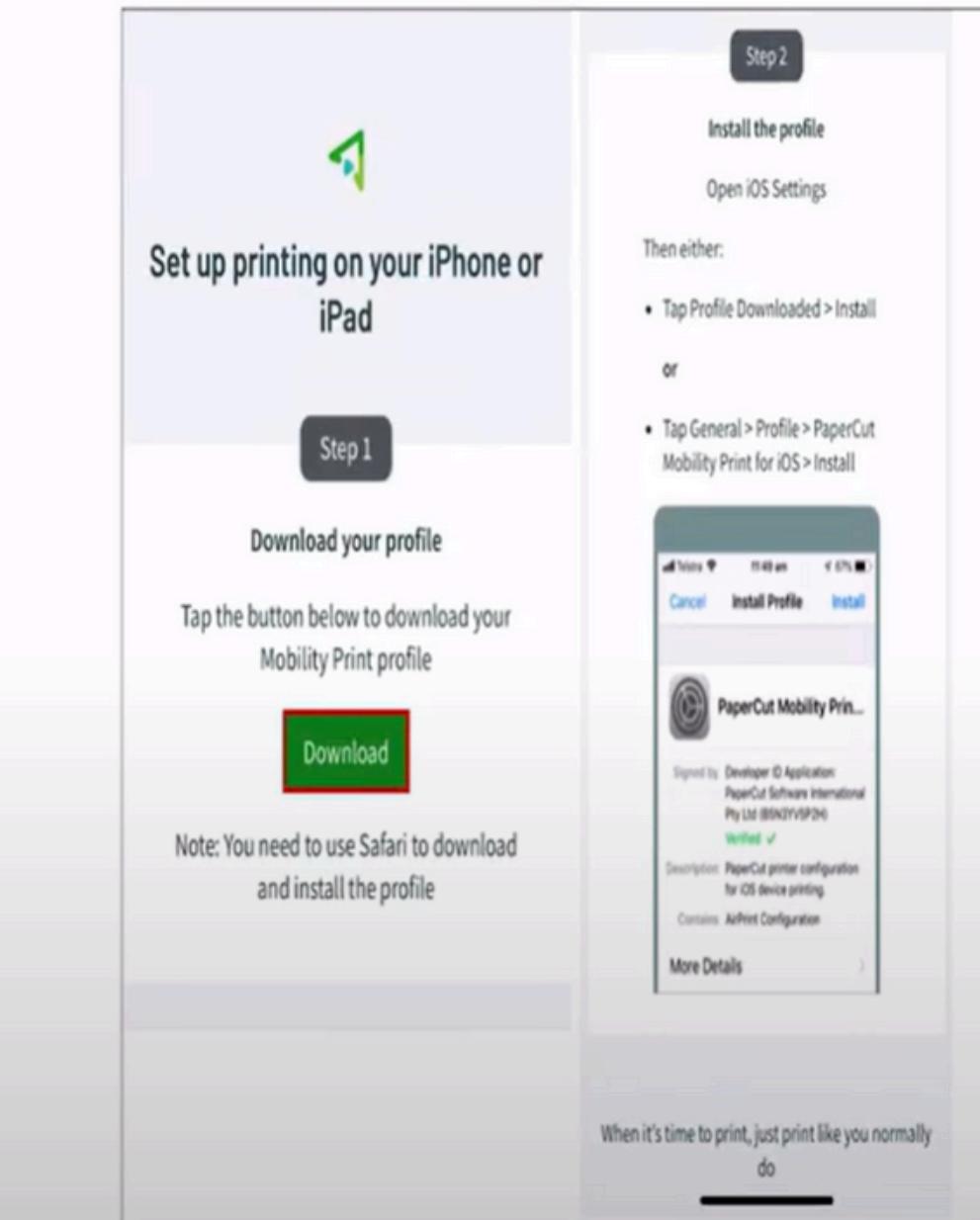
4 out of 5 participants used the QR code connected to the Mobility Print instructions.

Participant 5 scanned a QR code on the Pay Station, which brought them to a digital version of the Mobility Print instructions.

Though both sets featured identical wording, the digital version included images corresponding to each step.

Follow the steps below or view this [Instructional Video](#) to install and use Mobility Print by Ricoh on your iOS device.

1. After using the Aubie link or QR code, you will be taken to the download screen for the Mobility Print installer. The link will provide you with the installer that you need. You can scroll down to see general instructions. Tap "Download" to begin the process.



2. Your device may require permission to download a configuration profile. Tap "Allow." This profile is safe and is necessary for Mobility Print.

Scenario 3

During Scenario 3, participants were instructed that they had 30 minutes to print a double-sided 4-page essay for their literature class.

Participants used 3 different modes to access their email containing the print-test document.

Participant 2, who used Outlook Web Version, had the most difficulty locating their printing options.

Participant #	Device Type	Accessed Email Via...
P1	Apple	Outlook Mobile App
P2	Apple	Outlook Web Version
P3	Android	Outlook Mobile App
P4	Apple	Default Mail App for iPhone
P5	Apple	Outlook Mobile App

Scenario 3 Cont.

Participants were unaware of the total cost of printing until they were prompted to print on the Pay Station.

Participants 1, 2, and 5 did not change their print settings to black & white prior to printing.

4 out of 5 participants expressed confusion over whether to use their Auburn credentials to login.

Participant #	Scenario 3 <i>Printing a 4-page double-sided essay</i>
P1	\$1.40
P2	\$1.40
P3	\$0.40
P4	\$1.40
P5	\$0.40

Cost of TigerPrint Services

	Black & White	Color
Single-sided (simplex)	\$0.17	\$0.50
Double-sided (Duplex)	\$0.20	\$0.70

Scenario 4

During Scenario 4, participants were instructed to print a one-sided color copy of an AgriBusiness Flyer.

Overall, participants were much more satisfied with their second print and recorded significantly lower time on task.

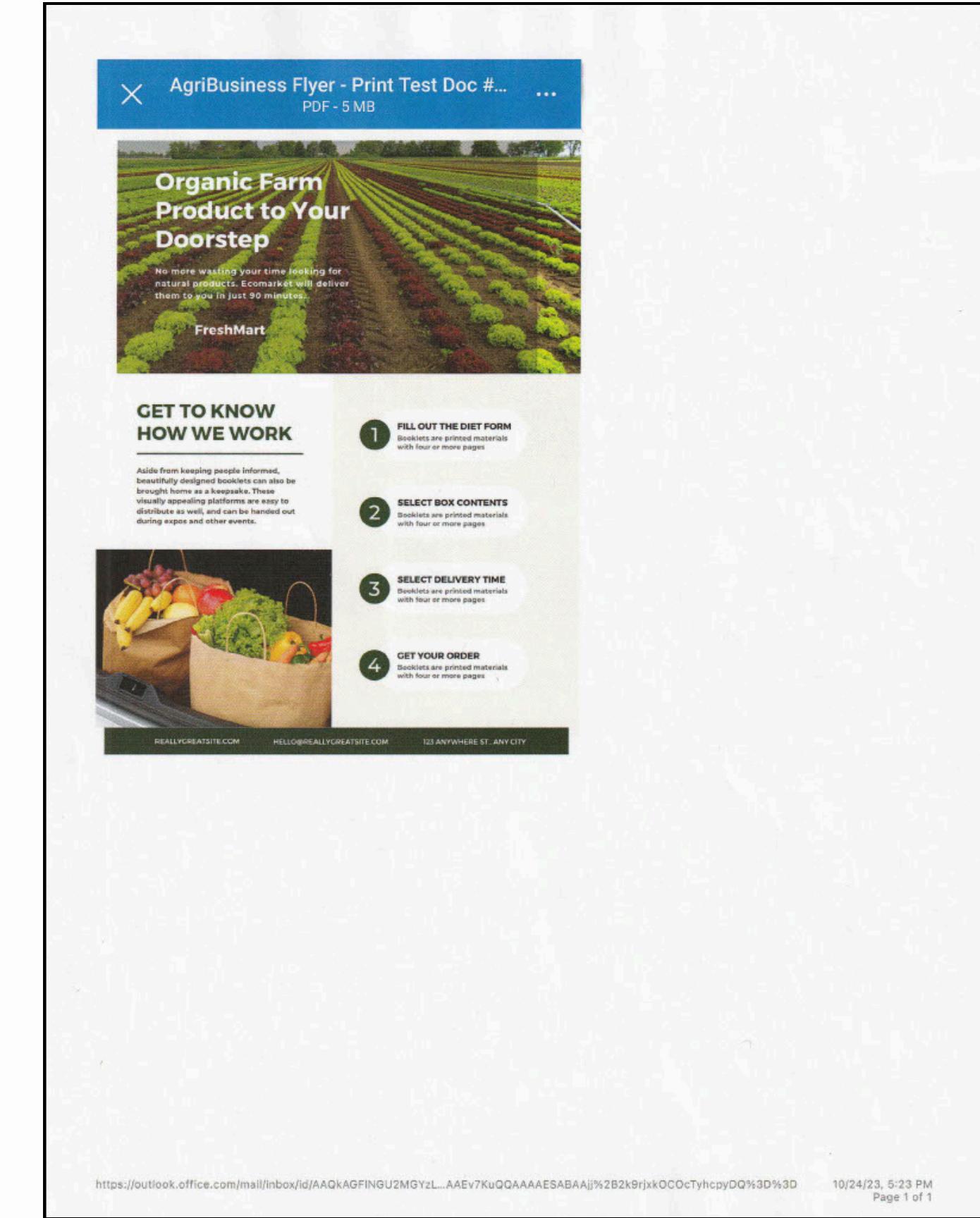
Participant #	Scenario 4 <i>Printing for a second time</i>	Comments
P1	3:56	"This should be easier because I have done this before."
P2	2:18	"That went much more smoothly."
P3	1:54	"The other one printed readily. Why is this one taking so long? Is this a toner printer? Oh, there we go! Huzzah!"
P4	2:58	N/A
P5	2:26	"Ok, and it's in color and it looks good."

Average Time on Task: 2:42

Scenario 4 Cont.

One thing to note is that during Scenario 4, Participant 2 forgot to download their flyer and printed a smaller version.

These results suggest the instructions may need to provide clearer directions about sending documents to the printer.



Product Reaction Cards

Participants were asked to choose 3-5 cards (from a set of 118) that best described their printing experience and experience with the instructions.

60%

Positive Words

40%

Negative/Neutral

Participant Think-Aloud

Participant 4 noted that, although the instructions were understandable, if people were short on time and not actively reading them users might encounter frustration

Participant 3 noted that TigerPrint prices were “expensive” and asked if “expensive” was an available card.

Word	# of Times Chosen	Categorization
Useful	2	Positive
Usable	2	Positive
Confusing	2	Negative
Time-consuming	2	Negative
Essential	1	Positive
Complex	1	Negative
Innovative	1	Positive

Post-Test Questionnaire

Participants felt neither comfortable nor uncomfortable following the printing instructions.

3 out of 5 participants noted that understanding the instructions was difficult. This suggests room for improving the usefulness of the instructions.

Overall Printing Satisfaction

3 out of 5 participants were dissatisfied with their printing experience., while 2 out of 5 were satisfied.

It is important to note that the 2 out of 5 participants who were satisfied used the older version of the TigerPrint system.

I felt very confident following the printing instructions.

(1 = strongly disagree – 5 = strongly agree)

Understanding the TigerPrint Mobility Print instructions was...

(1 = very difficult – 5 = very easy)

Please rate your overall satisfaction with your printing experience.

(1 = very dissatisfied – 5 = very satisfied)

P1

2

2

2

P2

1

1

2

P3

4

1

2

P4

5

4

4

P5

4

4

4

Avg.

3.2

2.4

2.8

Post-Test Questionnaire

3 out of 5 participants said they would recommend TigerPrint, but one said they would not recommend TigerPrint if students had access to an “easier printer.”

2 out of 5 participants “might” recommend TigerPrint, but noted that users would need extra time to understand the instructions and printing process.

	Would you recommend TigerPrint services to other students if they have never printed on campus before?	If you answered “no” or “maybe” to the previous question, please explain why. If you answered “yes” type N/A.
P1	Yes	If they have access to an easier printer, I would not recommend using TigerPrint.
P2	Maybe	I would only recommend if they have time to figure it out. If they’re in a crunch, they probably won’t have the time or patience
P3	Maybe	They are going to need spare time to figure out what is going on.
P4	Yes	N/A
P5	Yes	N/A

RECOMMENDATIONS

This section details our recommendations in terms of priority (high, medium, and low) and concludes with a revised mock-up of the Mobility Print instructions based on our evaluation and findings.

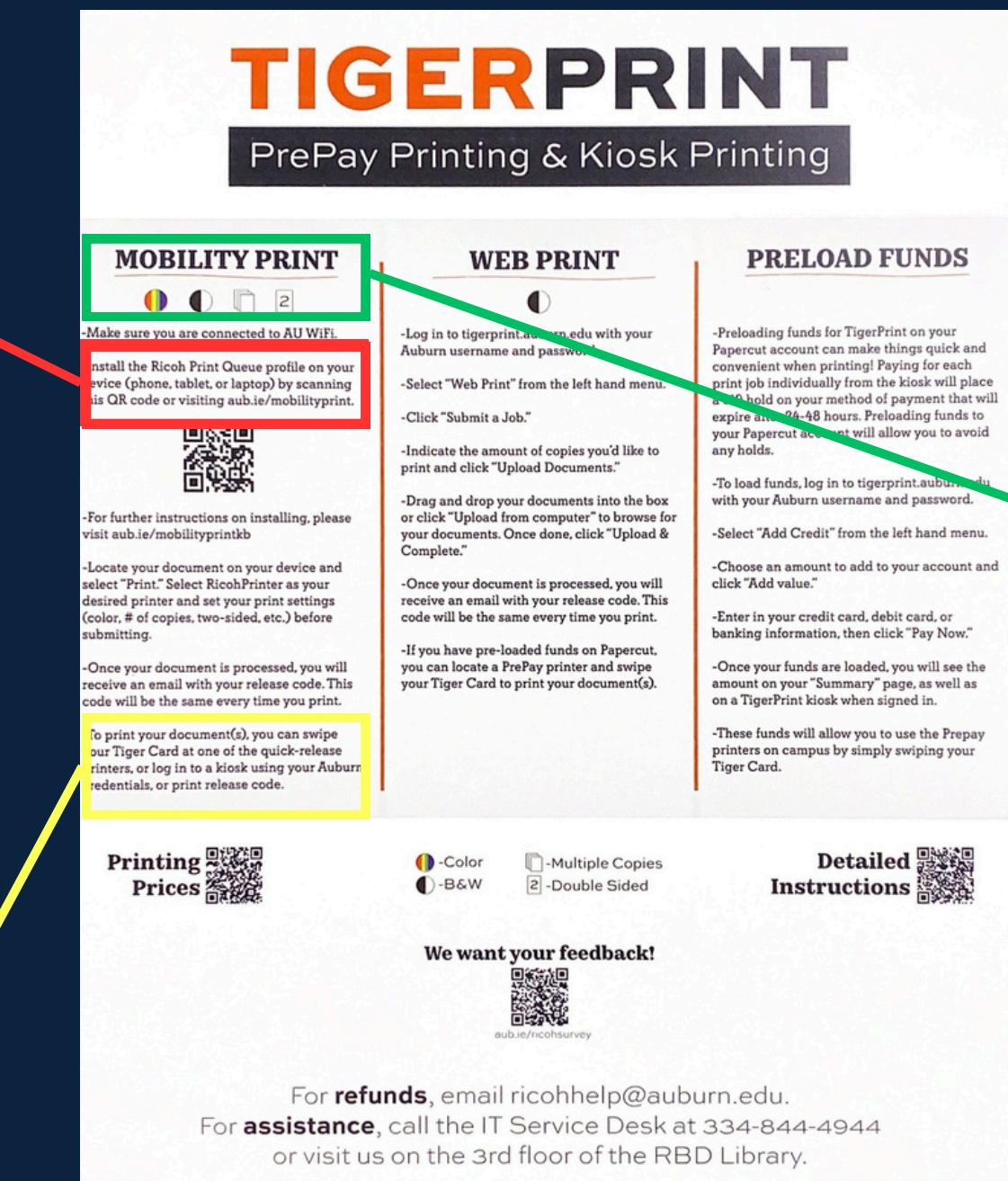
High Priority Recommendations

1. Create separate sub-steps for installing the Ricoh Print Queue (Step #2) for Android and Apple users.

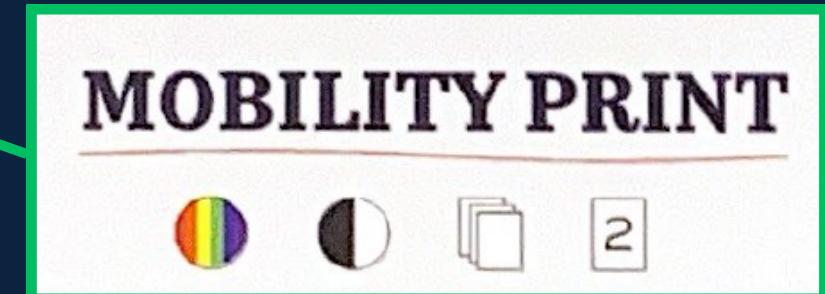
-Install the Ricoh Print Queue profile on your device (phone, tablet, or laptop) by scanning this QR code or visiting aub.ie/mobilityprint.

2. Create a final step (after Step #5) to inform users to select the file name on the Pay Station before attempting to press "Print."

-To print your document(s), you can swipe your Tiger Card at one of the quick-release printers, or log in to a kiosk using your Auburn credentials, or print release code.



3. Move the QR code for the mobile version of the instructions, located on the Pay Station, to the top part of the Mobility Print instructions for clarity.



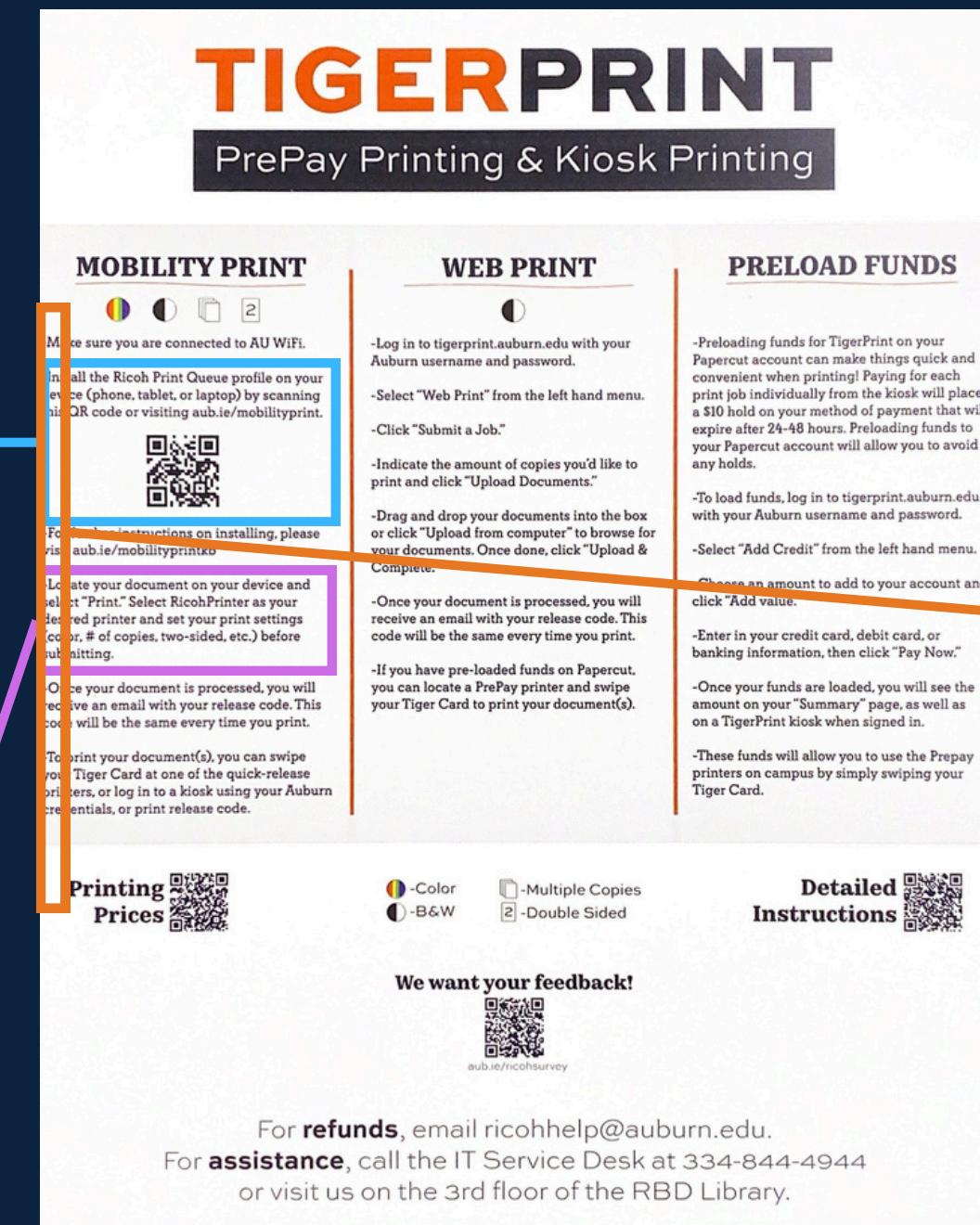
Medium & Low Priority Recommendations

1. Revise Step #2 by creating a larger title in bold above the QR code that reads: "Scan here to download the Ricoh Print Queue profile/app on your device."



2. In Step #4, notify users that they will need to use their Auburn credentials (only their 7-character username) to log in to the Ricoh Print Queue profile/app.

-Locate your document on your device and select "Print." Select RicohPrinter as your desired printer and set your print settings (color, # of copies, two-sided, etc.) before submitting.



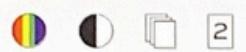
3. Number the steps on the instructions (the original instructions include a bulleted list but no numbered steps).

-Install the Ricoh Print Queue profile on your device (phone, tablet, or laptop) by scanning this QR code or visiting aub.ie/mobilityprint.

TIGERPRINT

PrePay Printing & Kiosk Printing

MOBILITY PRINT



-Make sure you are connected to AU WiFi.

-Install the Ricoh Print Queue profile on your device (phone, tablet, or laptop) by scanning this QR code or visiting aub.ie/mobilityprint.



-For further instructions on installing, please visit aub.ie/mobilityprintkb

-Locate your document on your device and select "Print." Select RicohPrinter as your desired printer and set your print settings (color, # of copies, two-sided, etc.) before submitting.

-Once your document is processed, you will receive an email with your release code. This code will be the same every time you print.

-To print your document(s), you can swipe your Tiger Card at one of the quick-release printers, or log in to a kiosk using your Auburn credentials, or print release code.

WEB PRINT



-Log in to tigerprint.auburn.edu with your Auburn username and password.

-Select "Web Print" from the left hand menu.

-Click "Submit a Job."

-Indicate the amount of copies you'd like to print and click "Upload Documents."

-Drag and drop your documents into the box or click "Upload from computer" to browse for your documents. Once done, click "Upload & Complete."

-Once your document is processed, you will receive an email with your release code. This code will be the same every time you print.

-If you have pre-loaded funds on Papercut, you can locate a PrePay printer and swipe your Tiger Card to print your document(s).

PRELOAD FUNDS

-Preloading funds for TigerPrint on your Papercut account can make things quick and convenient when printing! Paying for each print job individually from the kiosk will place a \$10 hold on your method of payment that will expire after 24-48 hours. Preloading funds to your Papercut account will allow you to avoid any holds.

-To load funds, log in to tigerprint.auburn.edu with your Auburn username and password.

-Select "Add Credit" from the left hand menu.

-Choose an amount to add to your account and click "Add value."

-Enter in your credit card, debit card, or banking information, then click "Pay Now."

-Once your funds are loaded, you will see the amount on your "Summary" page, as well as on a TigerPrint kiosk when signed in.

-These funds will allow you to use the Prepay printers on campus by simply swiping your Tiger Card.

Printing Prices

-Color
-B&W
-Multiple Copies
-Double Sided

We want your feedback!



aub.ie/ricohsurvey

For **refunds**, email ricohhelp@auburn.edu.

For **assistance**, call the IT Service Desk at 334-844-4944 or visit us on the 3rd floor of the RBD Library.

Detailed Instructions

MOBILITY PRINT INSTRUCTIONS FOR KIOSK PRINTERS

Scan the QR code below to view Mobility Print instructions on your mobile device:



Cost of TigerPrint Services

Black & White **Color**

Single-sided (Simplex)	\$0.17	\$0.50
Double-sided (Duplex)	\$0.20	\$0.70

Step 1: Check that you are connected to AU WiFi.

Step 2: Scan the QR code to the right to download the Ricoh Print Queue profile/app or visit aub.ie/mobilityprint.



Apple Users: Select and download the **Ricoh Print Queue profile** and follow the prompts on your screen to install. The profile will not appear as an app; print services will run in the background.

Once the word **"Verified ✓"** in green appears, no further action is needed.

Android Users: Select and download the **PaperCut Mobility Print App**. Once downloaded, select **"Tap here and check the Mobility Print Service is on"** to ensure the app will run in background.

Once completed, no further action is needed.

Step 3: Locate your document on your device. If printing from your email, access the document via your default mail app. (For optimal printing, access this email via the Outlook Mobile app.)

Be sure to **download** the document before sending it to the printer.

Step 4: Select Print. Then select Ricoh Printer as your desired printer. When prompted, enter your 7-character Auburn username and password.

Step 5: Indicate your desired print settings.

NOTE: if printing in black & white, check that Print in Color is turned off. Then select Print.

Step 6: You will receive an email from Tigerprint@auburn.edu with a print release code. Enter the 6-digit print release code on the Pay Station touchscreen.

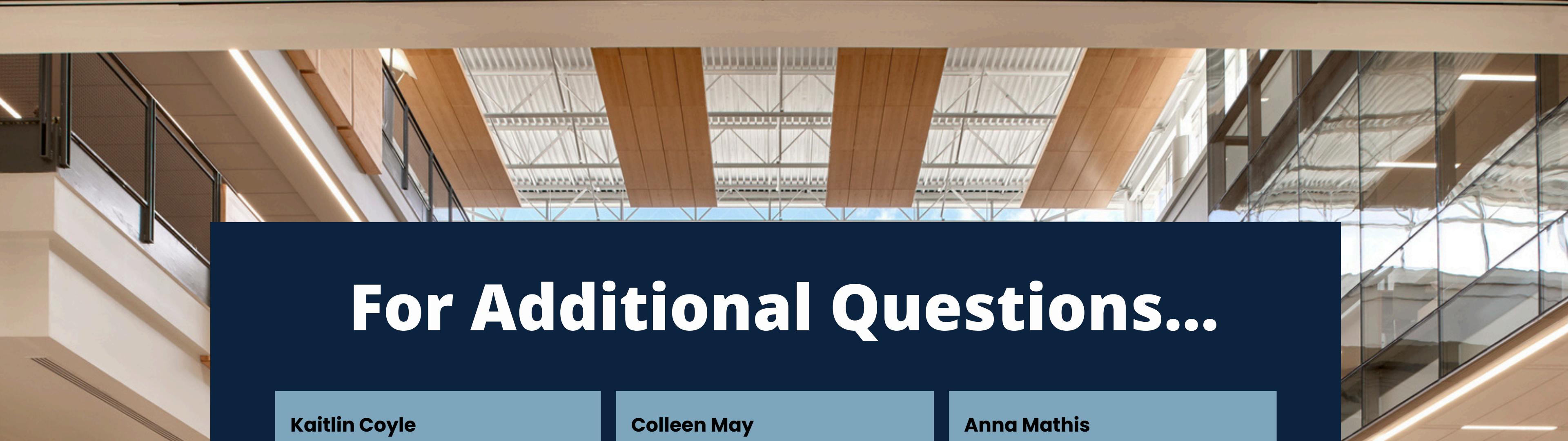


Step 7: Press the file name on the Pay Station touchscreen to release the print job. Then follow the prompts to enter your payment method.

NOTE: You may pay via TigerCard, credit/debit, or preloaded funds. Paying via credit/debit on the Pay Station will place a \$10 hold on your payment method that will expire after 24-48 hours. For instructions on preloading funds, see the far-right column.

Original Instructions

Mock-Up Instructions



For Additional Questions...

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