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## Getting Started with TippyTalk EDU: An evidence-based manual for use of assistive communication mobile application

Kylie E. Cousins

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**NORTHERN ILLINOIS UNIVERSITY**

(Getting Started with TippyTalk EDU: An evidence-based manual for use of  
assistive communication mobile application)

**A Capstone Submitted to the**

**University Honors Program**

**In Partial Fulfillment of the**

**Requirements of the Baccalaureate Degree**

**With Honors**

**Department Of**

Special Education

**By**

Kylie Cousins

**DeKalb, Illinois**

05/11/2019

## HONORS CAPSTONE ABSTRACT

Individuals who are nonverbal do not have the freedom to communicate outside of the room they are in without the help of technology. Through apps like TippyTalk EDU, individuals with this need for communication freedom can send messages to anyone, anywhere. This app can be used inside or outside of the classroom to communicate needs and wants, as well as engage in meaningful communication.

Through collaboration with creator of TippyTalk EDU Rob Laffan, his creative team, and NIU faculty advisor Toni Van Laarhoven, and NIU student Kylie Cousins, a comprehensive, evidence-based manual was created to instruct teachers, parents, and caregivers on how to most effectively use TippyTalk EDU. Evidence of which areas of focus to include on the manual was derived from working with a focus student at DeKalb High School over the course of one week. After two, twenty-minute sessions two days in a row, the focus student was able to use TippyTalk EDU to express a desire after only one verbal prompt to use the device.

The story of TippyTalk EDU, explanation of the application, a summary of research, and the evidence-based manual are all attached as thesis materials.

TippyTalk  
EDU



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## GETTING STARTED WITH TIPPYTALK EDU

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*TippyTalk EDU created by Rob Laffan*

*Manual fabricated by Kylie Cousins intended for use on iOS device*

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## THE STORY OF TIPPYTALK EDU

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Founded in Ireland, TippyTalk started as a device created by Rob Laffan as his final-year project while studying industrial automation and robotic systems at university. The device was inspired by Rob's daughter, Sadie, who is nonverbal and has Autism. When Sadie was 3, she successfully sent a message to her dad using TippyTalk. The message read "Hi, Daddy, I want chicken nuggets"; this was the first time she was able to communicate her desires on her own.

After seeing success with his daughter, Rob decided to turn the device into a mobile application, so it could provide the freedom of communication to other individuals who are nonverbal. Ordinarily, if an individual has difficulty speaking, they are limited to communicating only with others in the same room as them. TippyTalk expands those limitations and allows the individual to communicate with anyone, anywhere.

TippyTalk EDU is the second launch of TippyTalk, and although is still in its very beginning stages, customization is already a priority. As stated by Rob Laffan, "The best communication system for someone that needs it is the one that works." To make TippyTalk and TippyTalk EDU useful for people of differing abilities, each user can customize their contacts, categories, words, and voiceovers so that each user can have their own voice and personality.

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## WHAT IS TIPPYTALK EDU?

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As mentioned, TippyTalk EDU is an updated version of the original TippyTalk. In the original version, users could send an SMS text message to anyone, but the conversation partner they chose could not reply. In TippyTalk EDU, a two-way form of communication within the app will be introduced.

The overall purpose of TippyTalk is for an individual who is nonverbal to be able to communicate with other people, whether that other person is in the same room, the same state, or even the same country. TippyTalk formulates text messages based on the selection of images. Each image on TippyTalk has display text as well as message text that accompanies it.

For example, if a student wants to let his/her teacher know that they need a break, they may message the teacher “I want tablet time, please.” In order to do this, the student would need picture representations for “I want” and “tablet”. When adding a photo to represent “I want”, an authorized user would upload the photo and choose the display text “I want”. The user could then choose the message text that would send to a conversation partner. In this case, the message text would also be “I want”. When adding a photo to represent “tablet”, a user may choose for the display text to simply read “tablet”; however, they then have the choice to make the message text read “tablet time, please” so that when the student selects the images “I want” and “tablet”, TippyTalk EDU will send a message that reads “I want tablet time, please” to the conversation partner selected by the student.

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## SUMMARY OF RESEARCH

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Over the course of three months, Kylie Cousins worked with faculty advisor Toni Van Laarhoven of NIU and the TippyTalk creative team to gain an understanding of the functionality and application abilities of TippyTalk EDU. The goal of this project was to create a comprehensive manual for teachers, parents, or caregivers of individuals who are nonverbal. This manual demonstrates the purpose, setup, and customization capabilities of the application.

Because TippyTalk EDU is still in its beginning stages, the creative team was interested to see how the app may be used in a classroom setting and taught to a teacher or student. Cousins was completing a clinical placement as a teaching candidate at DeKalb High School in DeKalb, IL throughout the project, and was able to briefly test the use of TippyTalk EDU with one of her students. Although the ultimate goal of the research was to write a comprehensive manual for use of the app, Cousins found that through watching the student become familiar with the app, she could pinpoint which areas to emphasize when fabricating the manual.

Cousins worked with a student named Shawn\*, a twenty-year-old with Cerebral Palsy who was nonverbal. After working with Shawn for twenty minutes per day, two days in a row, on the third day he was able to use TippyTalk EDU to communicate his need for a break from his work. When communicating this need, Shawn required only one verbal prompt to use TippyTalk, after which he was able to formulate his request on his own. Cousins customized Shawn's TippyTalk by adding a category for his family and one for school. Under the family category, there were pictures of his dog, his mom, and his little sister. In the school category were cards such as "Chromebook" (Shawn's favorite reward), "sweep", "wipe tables", "help", and "pencil". The "Chromebook" card was the want that Shawn was able to express to Cousins after only using TippyTalk EDU briefly for two days. Throughout the next three days of the school week, Shawn required a verbal prompt from Cousins to use TippyTalk EDU almost 65% percent of the time; however, after being prompted, Shawn only required assistance to communicate in about 25% of the opportunities. Although requiring assistance about a quarter of the time when using TippyTalk is not ideal, being able to communicate that accurately after only five school days gave Shawn 75% more freedom than he had before using TippyTalk.



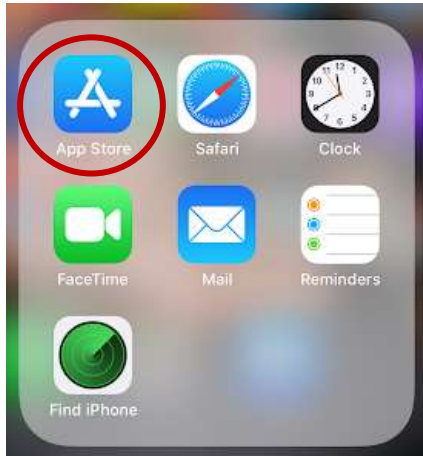
When testing and implementing the application, Cousins and her faculty advisor, Van Laarhoven, noted that there were a few areas that required improvement. For instance, being able to store photos on the application would streamline customization. In the current version, the user can create albums on the mobile devices “photos” app and can then navigate from TippyTalk to their saved albums on the device, but this process could be made more user-friendly by the ability to store photos in TippyTalk. Also, Cousins found that, when entering *new* category and item cards, the message text does not display correctly. When using pre-programmed cards such as “I want” and “tablet”, the message text displays “I want the tablet, please”; however, when using user-created cards such as “I want to” and “watch TV, please” the message displays “I want towatch TV, please” with no space between the text of the two cards.

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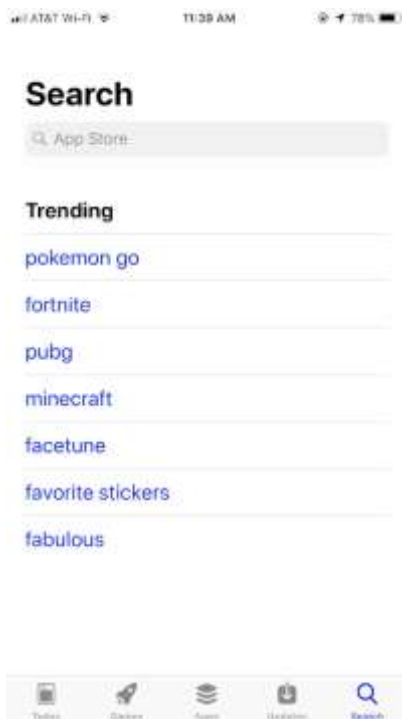
## DOWNLOAD TIPPYTALK EDU

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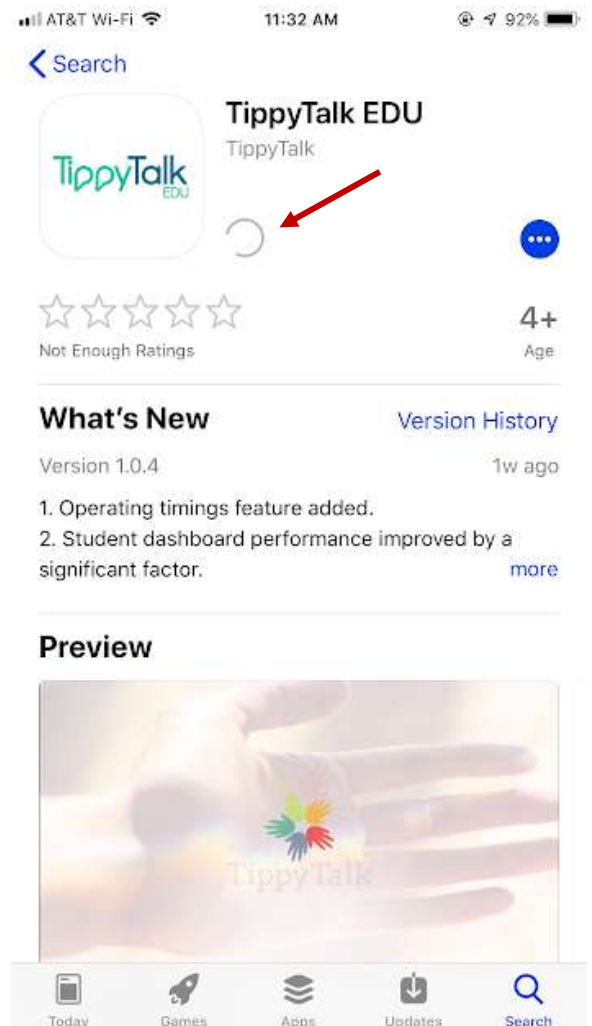
1. Open App Store



2. Search “TippyTalk EDU”



3. Click “GET” and download TippyTalk EDU to your mobile device

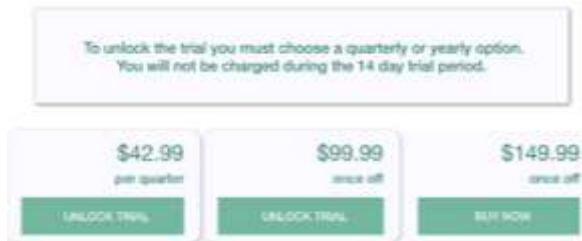


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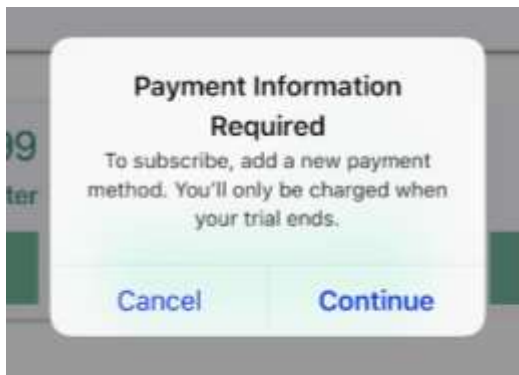
## INITIAL SETUP

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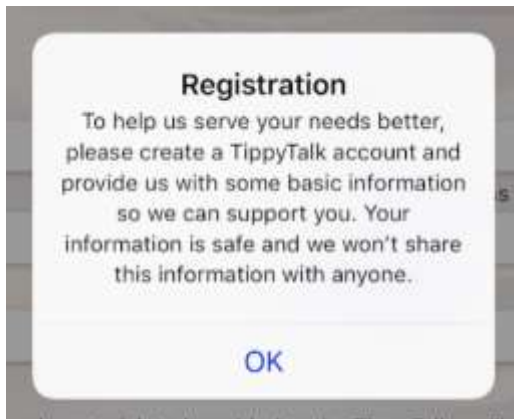
1. Choose membership option



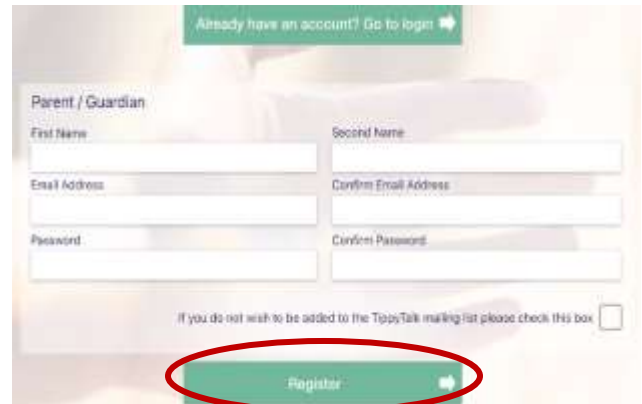
2. If prompted, enter payment info



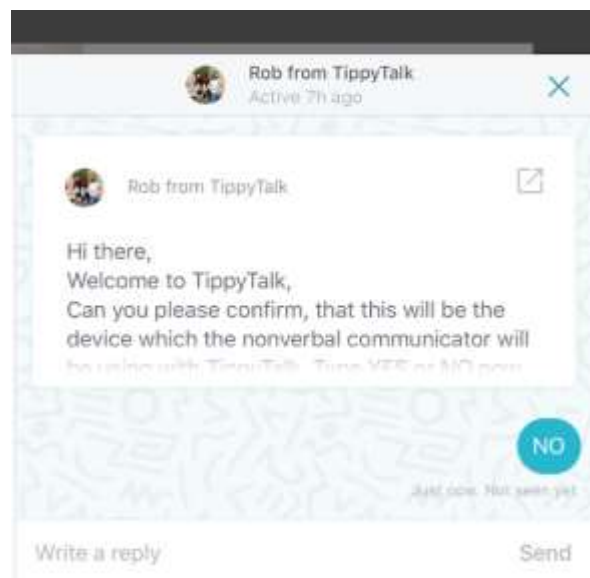
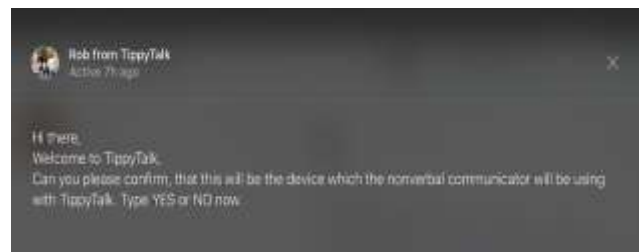
3. Select "OK" on Registration pop-up box



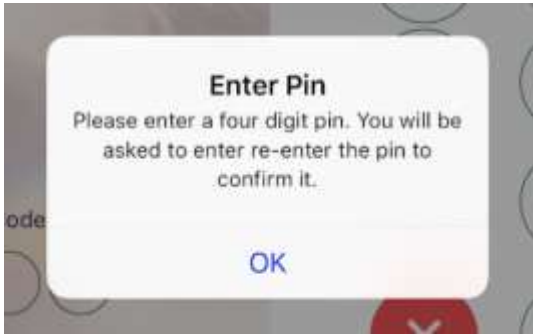
4. Complete registration information
5. Select "register"



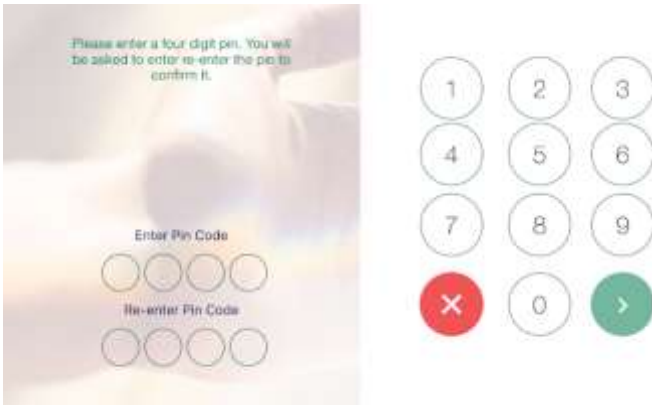
6. When prompted, type "Yes or No"



7. Exit out of conversation
8. Select “OK”



9. Choose a 4-digit pin (This will be entered when making any customizations to the app to ensure the changes are made by the authorized user)

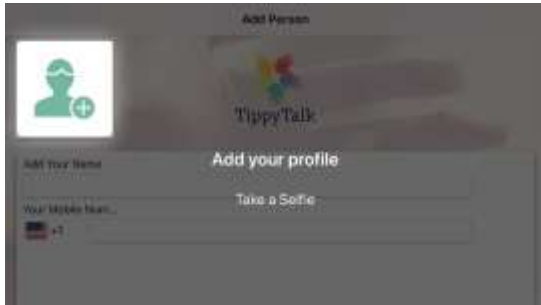


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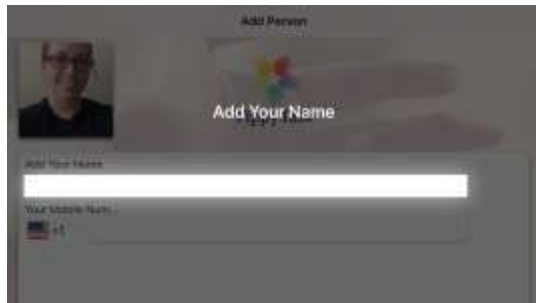
## ACCOUNT SETUP

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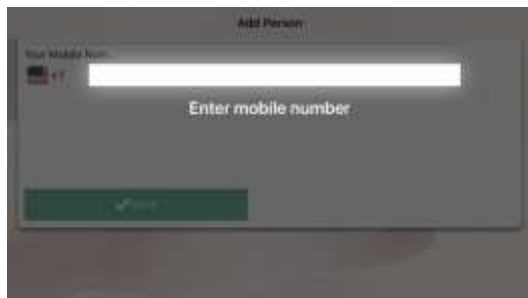
1. Click add photo icon



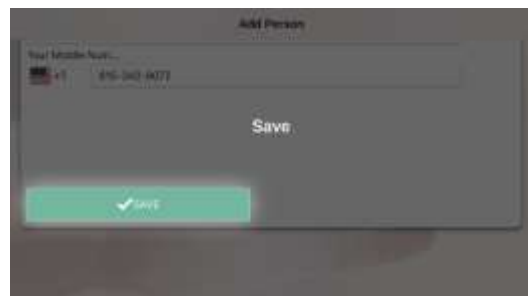
2. Take a picture
3. Add your name



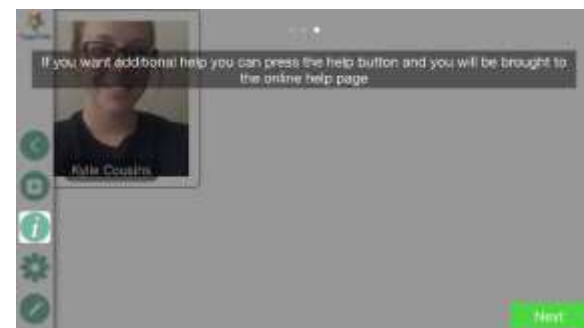
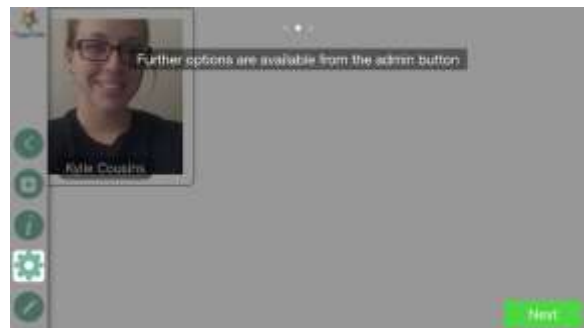
4. Enter the phone number you wish to have connected to the account



5. Select "Save"



6. Read and Click through on-screen tutorial

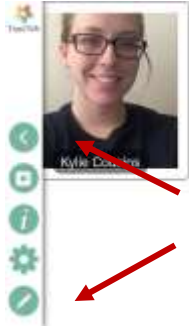


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## ADDING ANOTHER USER

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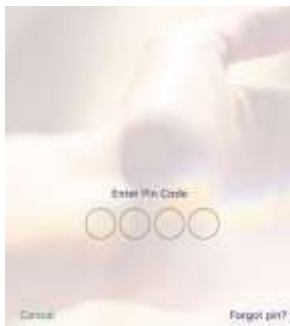
1. Swipe from left side of screen to view menu



2. Select square with plus sign



3. Enter pin



4. Add a photo and fill out information for new user

*(Note: Click “start time” and “end time” to restrict when that user is reachable on TippyTalk)*

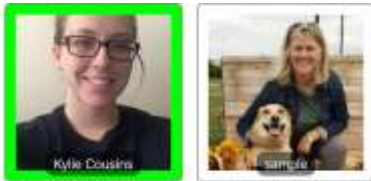
5. Select “Save”

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## STARTING A CONVERSATION

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1. Select the user you want to send a message to (a green box will appear around your selection)



3. Choose what you want to say (The sentence you chose will then send as a message to the user you selected in step 1)

2. Choose a category



*(Note: defaults shown)*



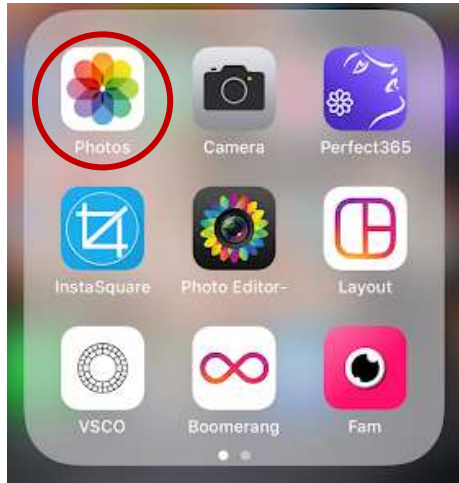
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## CREATING A PHOTO ALBUM IN PHOTOS

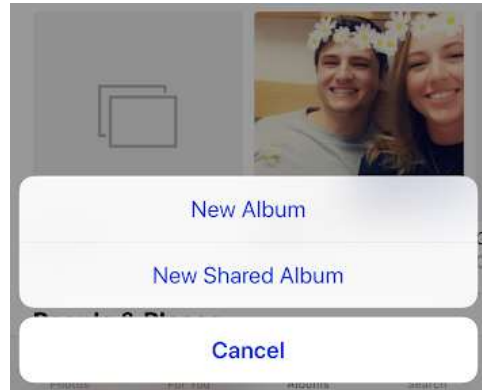
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(This will facilitate uploading pictures to TippyTalk EDU)

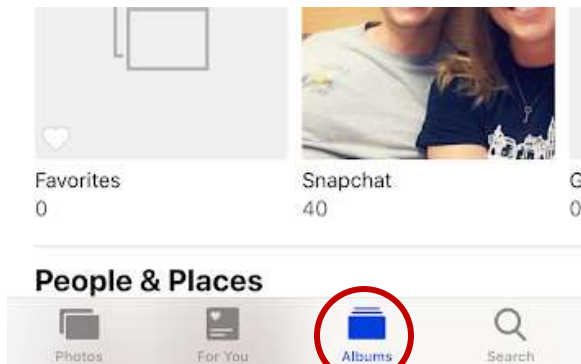
1. Open Photos app



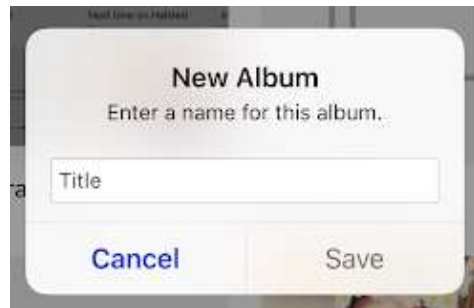
4. Choose “new album”



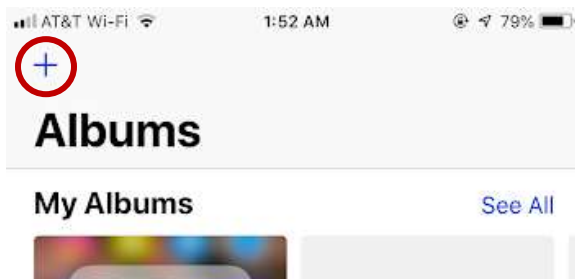
2. Select “albums” from the bottom menu



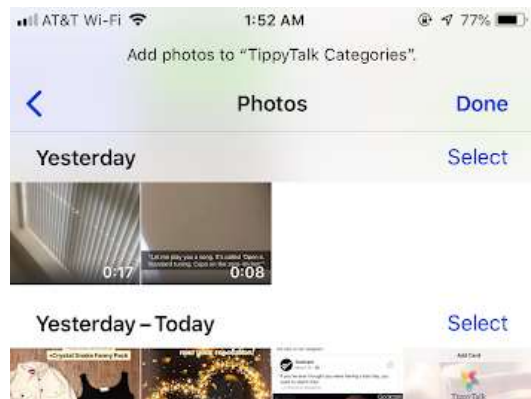
5. Title album (Examples: Photos for TippyTalk or TippyTalk categories)



3. Select the “+” on the top left of the screen



6. Select photos from your camera roll to add to the album





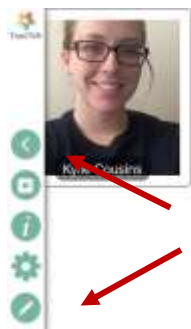
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## CUSTOMIZATION

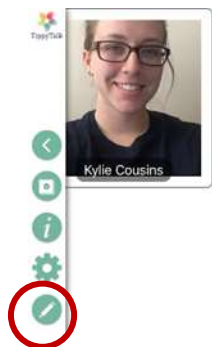
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### *CUSTOMIZING A USER*

1. To change the name of a user, time restriction, or voiceover for a user, swipe from left side of screen to view menu



2. Select the “edit” button

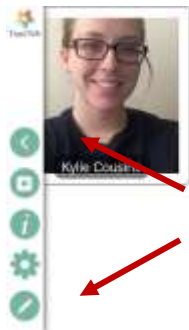


## ADDING A CATEGORY CARD

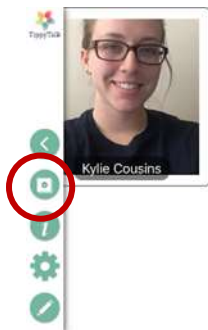
### 1. Select Recipient



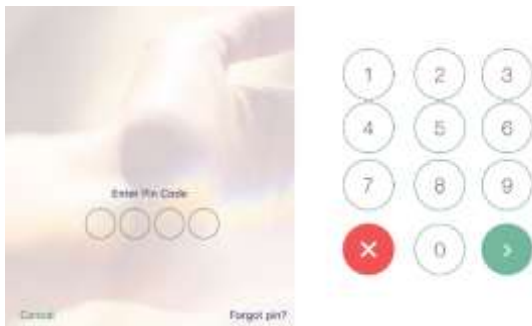
### 2. Swipe from left side if screen to view menu



### 3. Select "add card" button



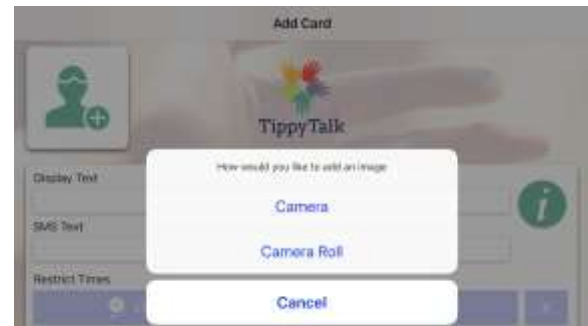
### 4. Enter pin



### 5. Add photo of item



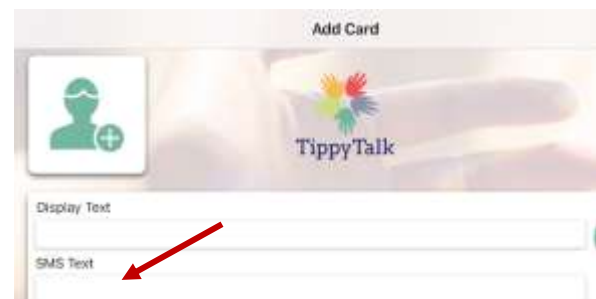
### 6. Select "camera" or "camera roll" (selecting "camera roll" will allow access to personal, premade albums)



### 7. Choose display text to appear under picture



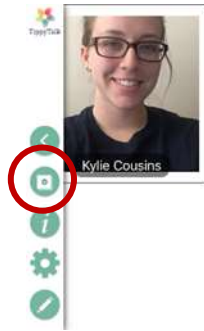
### 8. Choose message text to be sent to conversation partner when image is selected



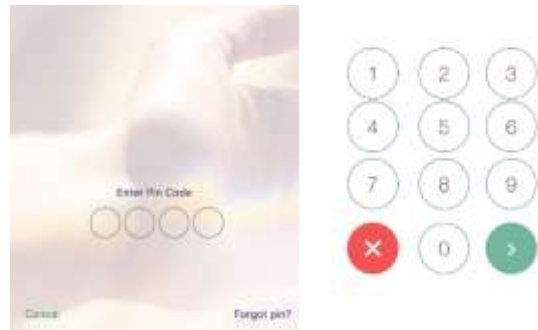
9. Add voiceover or timer if needed
10. Select “save”



4. Select “add card” button



5. Enter pin



### ADDING A SUB CARD

1. Select recipient



6. Add photo of item

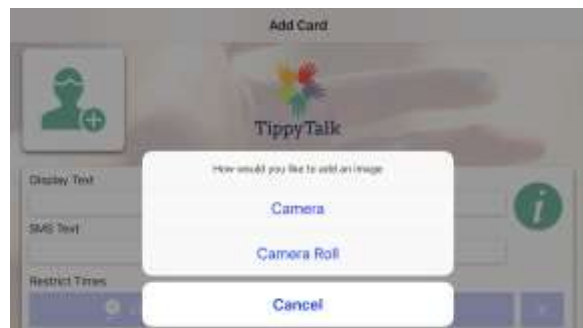
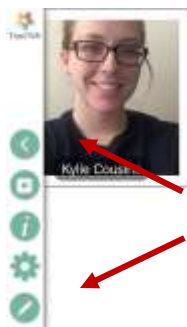


2. Select category



7. Select “camera” or “camera roll”  
(selecting “camera roll” will allow access to personal, premade albums)

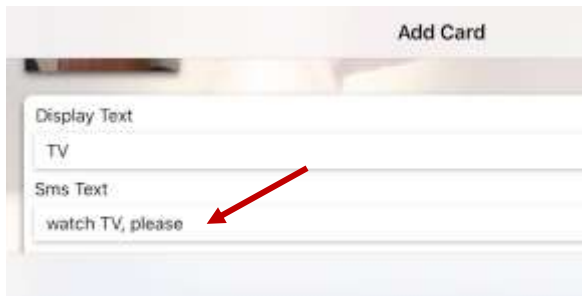
3. Swipe from left to view menu



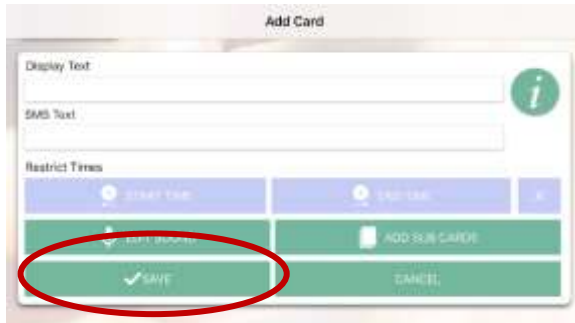
8. Choose display text to appear under picture



9. Choose text to be sent to conversation partner when image is selected



10. Select “save”



*Example:* Adding “home” as a category and making the message read “I want to”. Next, adding sub cards that contain hobbies the student likes to do at home. “TV” can be added as a sub card with the message text “watch TV, please”. When the student selects “home” and “TV”, the text message sent with read “I want to watch TV, please.”

