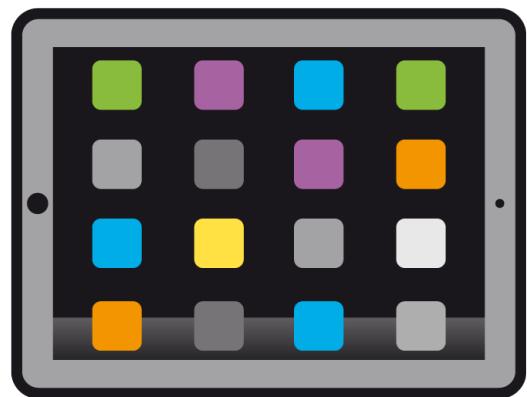




Gesellschaft für Unterstützte Kommunikation e.V.



# AAC on the iPad

Summer School for Assistive Technology 2016  
FH Technikum Wien  
Nina Fröhlich  
[nina.froehlich@gmx.de](mailto:nina.froehlich@gmx.de)

**isaac**  
Gesellschaft für  
Unterstützte Kommunikation e.V.



## about isaac

Gesellschaft für Unterstützte Kommunikation e.V.



### International Society for Augmentative and Alternative Communication

- [www.isaac-online.org](http://www.isaac-online.org)
- since 1983
- Office in Toronto
- 63 countries
- 14 Chapters in countries or regions around the world (USA, Canada, Sweden, Australia...)
- ISAAC members include people who use AAC, their families, therapists, teachers, students, doctors, researchers, organizations and companies that make communication aids.



# isaac-Chapters

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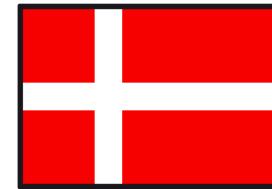
Australia



Brazil



Canada



Danmark



French-speaking  
Countries and  
Regions



India



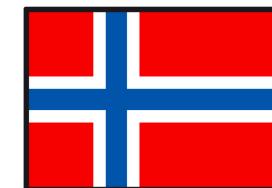
Israel



Italy



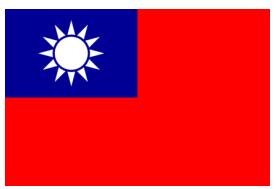
Netherlands  
and Flanders



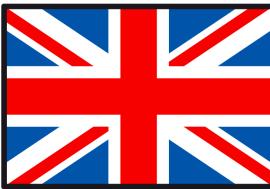
Norway



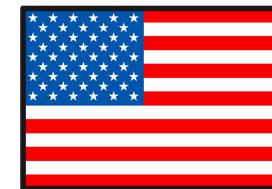
Sweden



Taiwan



United  
Kingdom



United States  
of America

~~German-speaking  
Countries and Regions~~

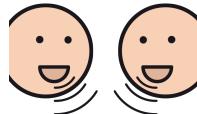


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# programm

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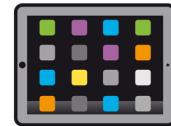
- What is Communication?



- What is AAC?



- AAC based on iPads



- useful iOS Settings



- AAC Apps for the iPad

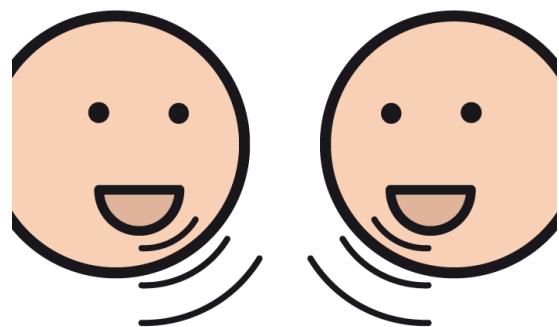


- GoTalkNow - Practice



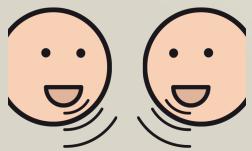


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What is  
Communication?

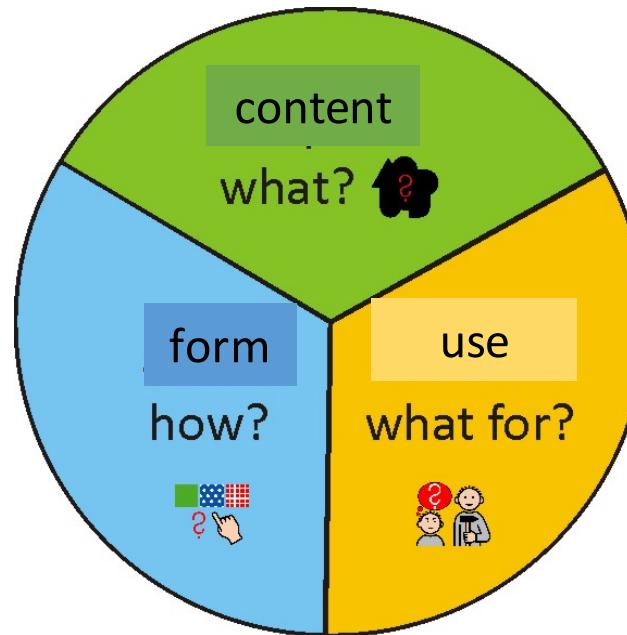
**isaac**  
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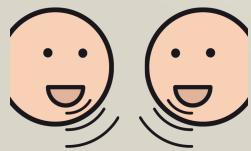


# What is communication?

Gesellschaft für Unterstützte Kommunikation e.V.

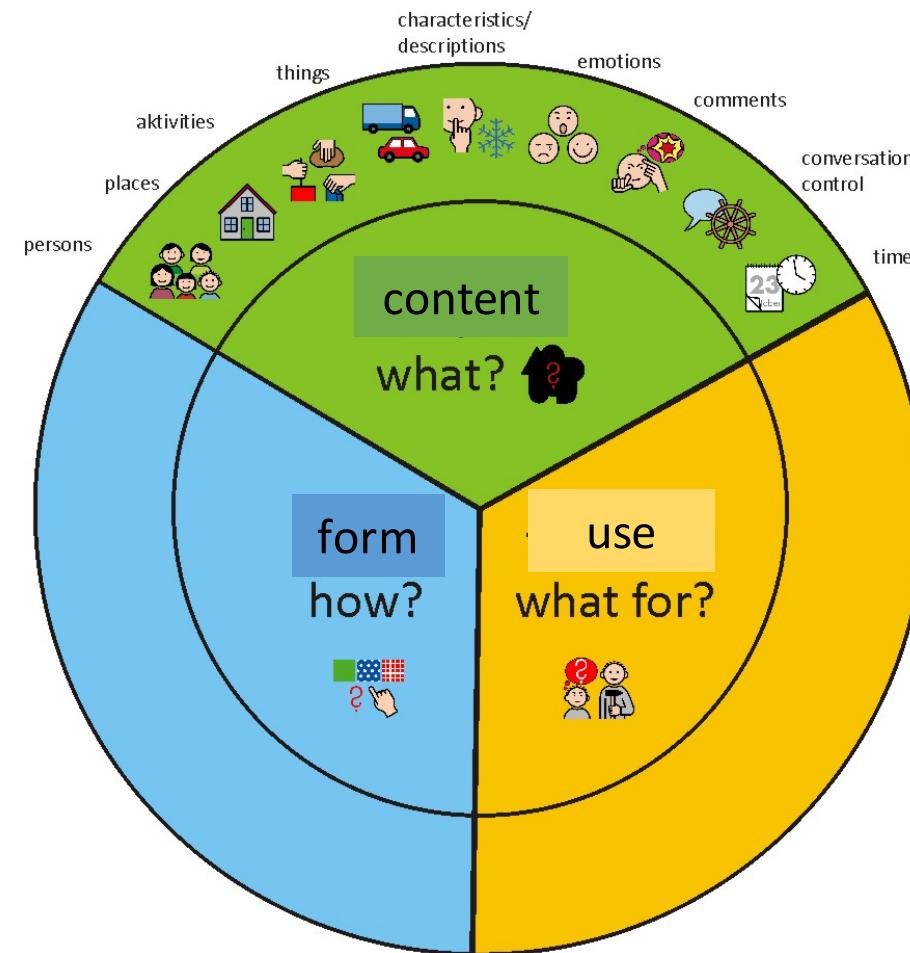
Bloom & Lahey: Model of Language (1978)

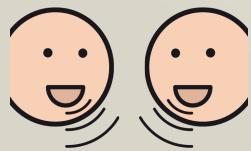




# What is communication?

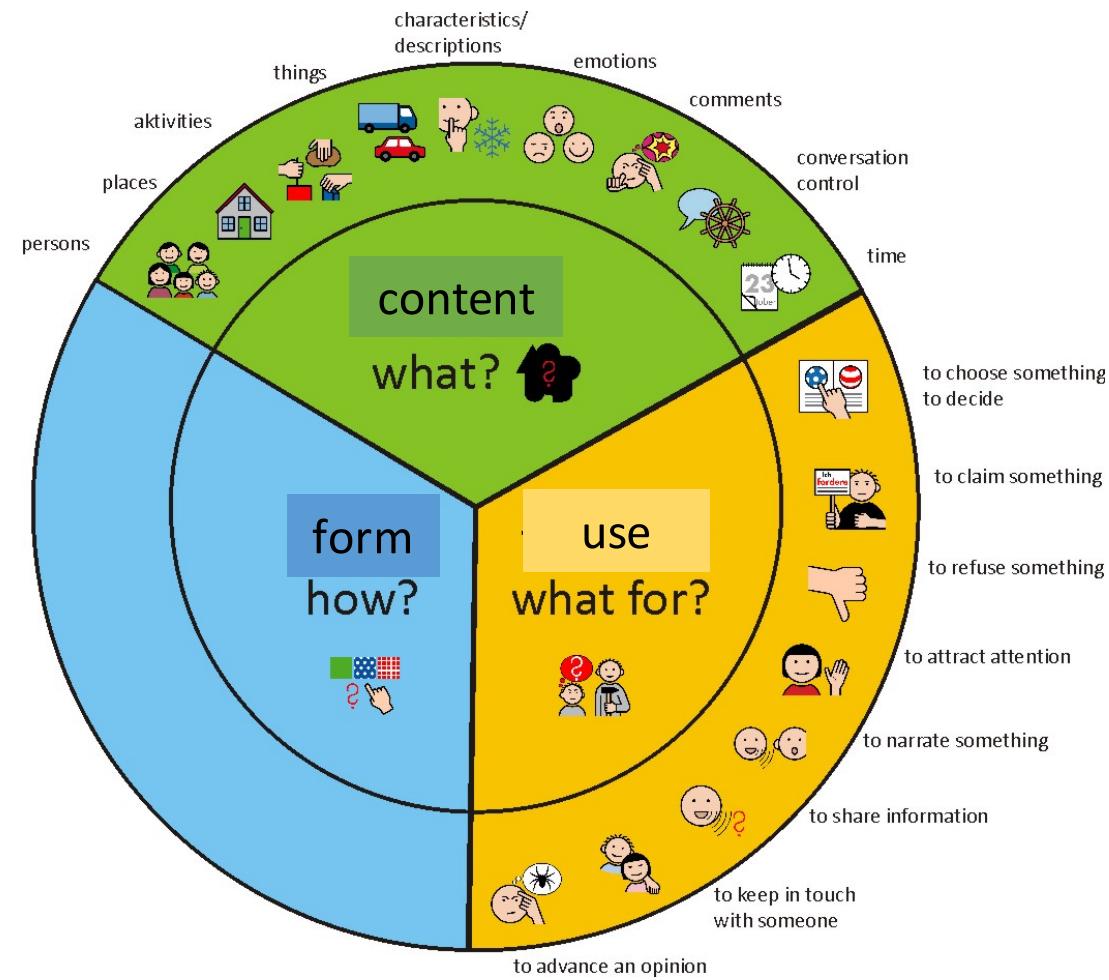
Gesellschaft für Unterstützte Kommunikation e.V.

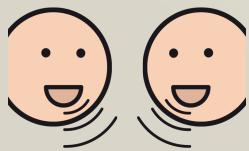




# What is communication?

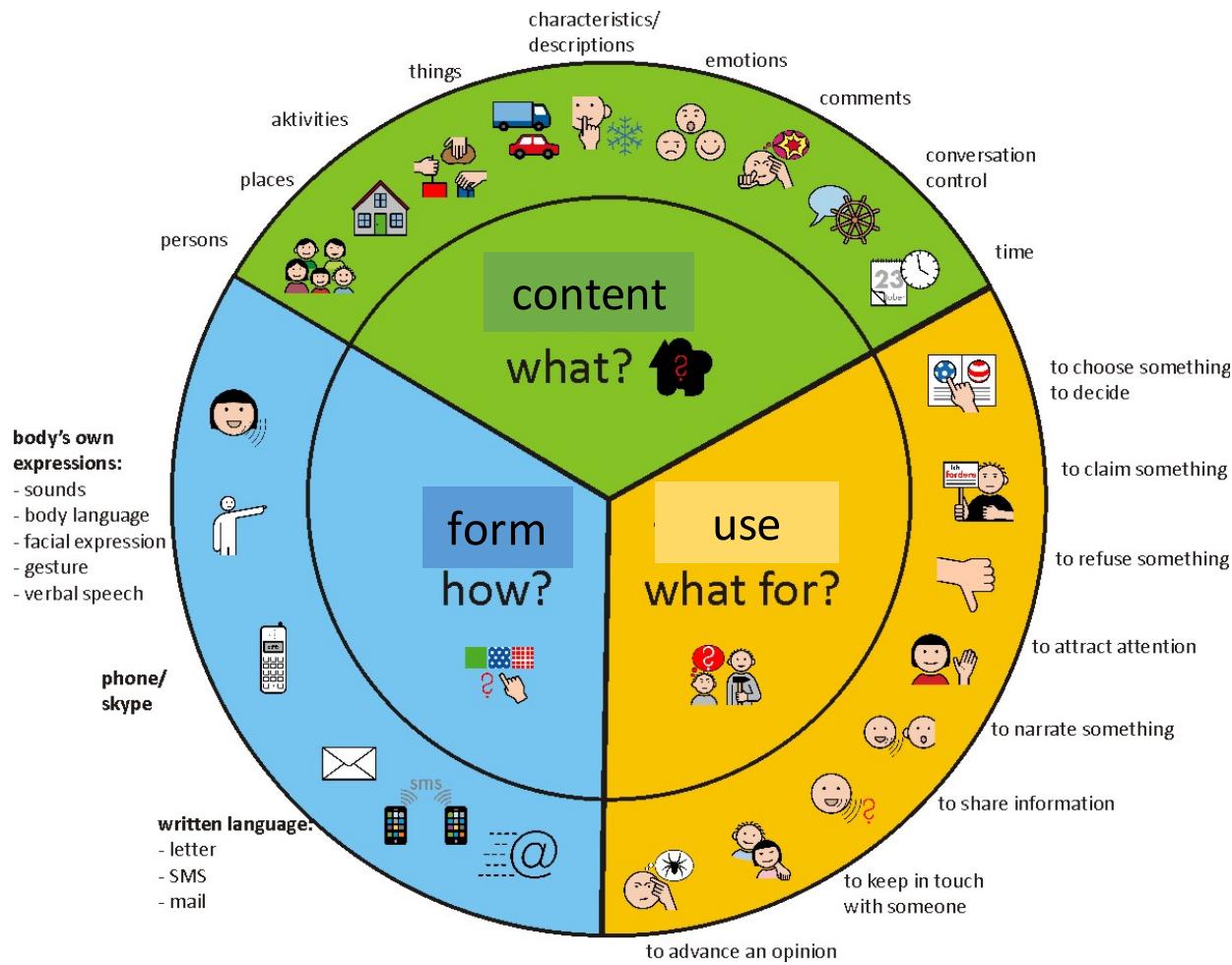
Gesellschaft für Unterstützte Kommunikation e.V.

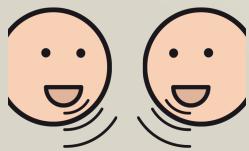




# What is communication?

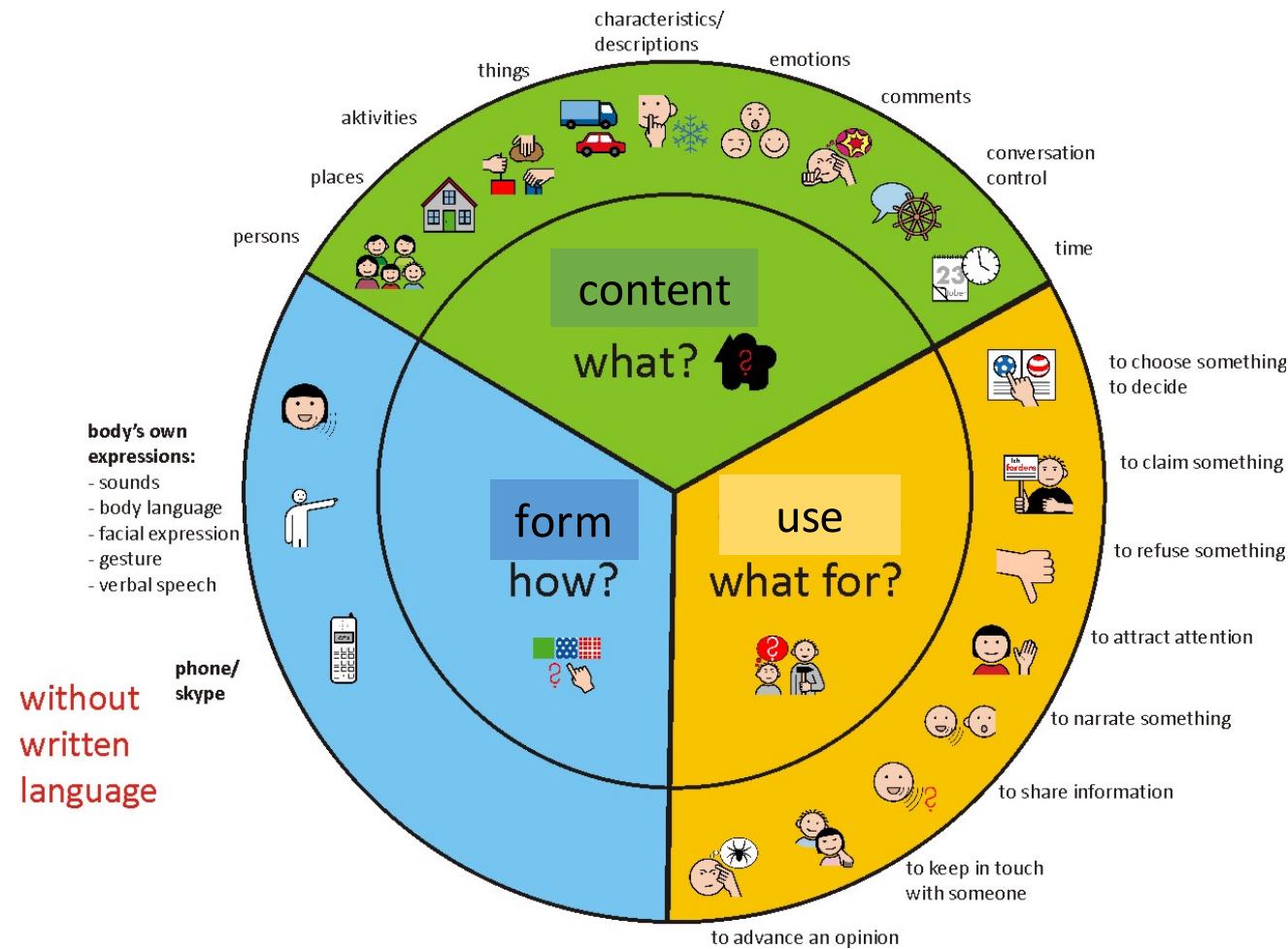
Gesellschaft für Unterstützte Kommunikation e.V.

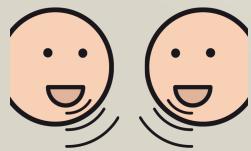




# What is communication?

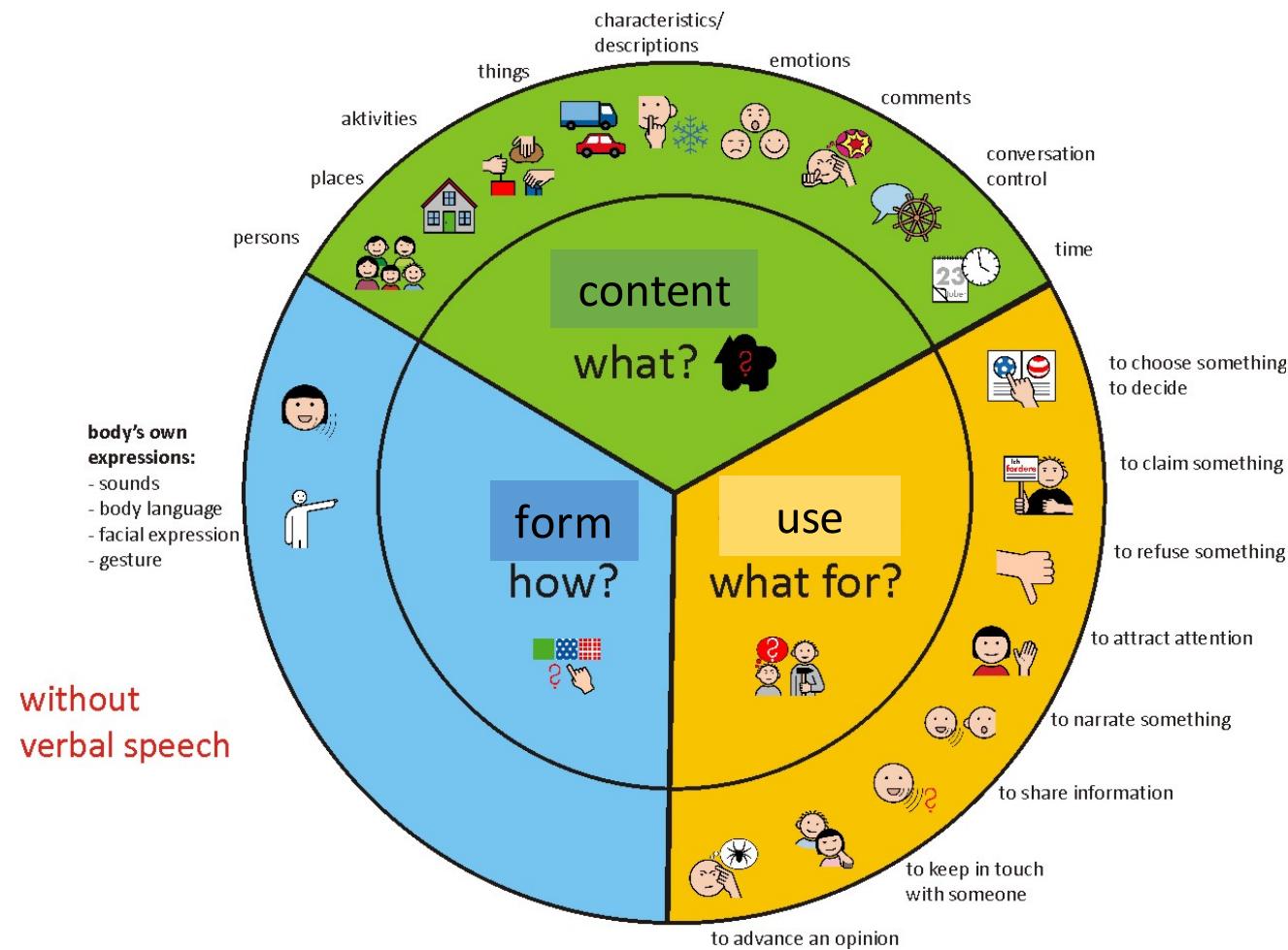
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# What is communication?

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# People without verbal speech

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Many people are not able to use verbal speech for communication.

This could be:



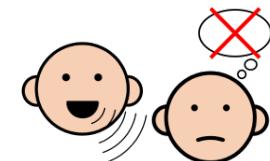
inborn or acquired



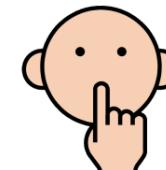
permanent or temporary



not at all or rarely



with intimate persons only or  
under convenient circumstances only





# People without verbal speech Consequences

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- Someone decides for them.



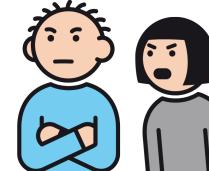
- They cannot ask for the information they need.



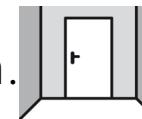
- Others don't understand them.



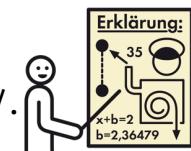
- Others don't take them seriously.



- Communication is restricted to the actual situation.



- They cannot show, what they know.

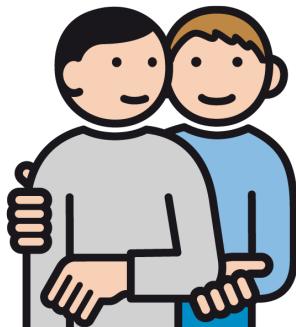


- They cannot express themselves and develop their identity.





People without verbal speech  
That means...



Dependence ...

... instead of ...

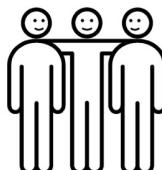
... self-determination,



... identity development,

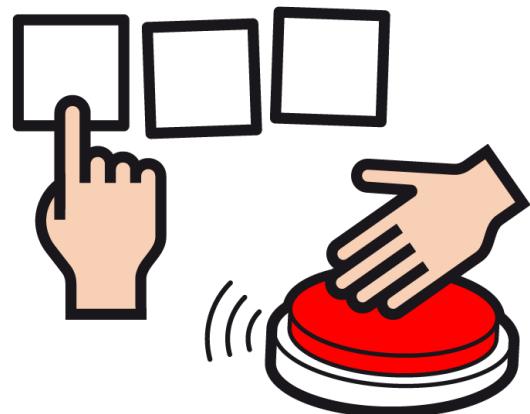


... participation.





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# What is AAC?

## Augmentative and Alternative Communication

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Unterstützte Kommunikation e.V.

# What is AAC?

## AAC's assumptions

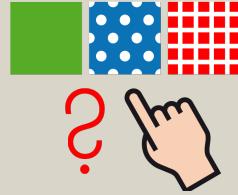
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AAC assumes, that every individual wants to express itself and has a need for communication.

Based on actual competences AAC develops individual methods ...

... for a better communication  
... and more self-determination.

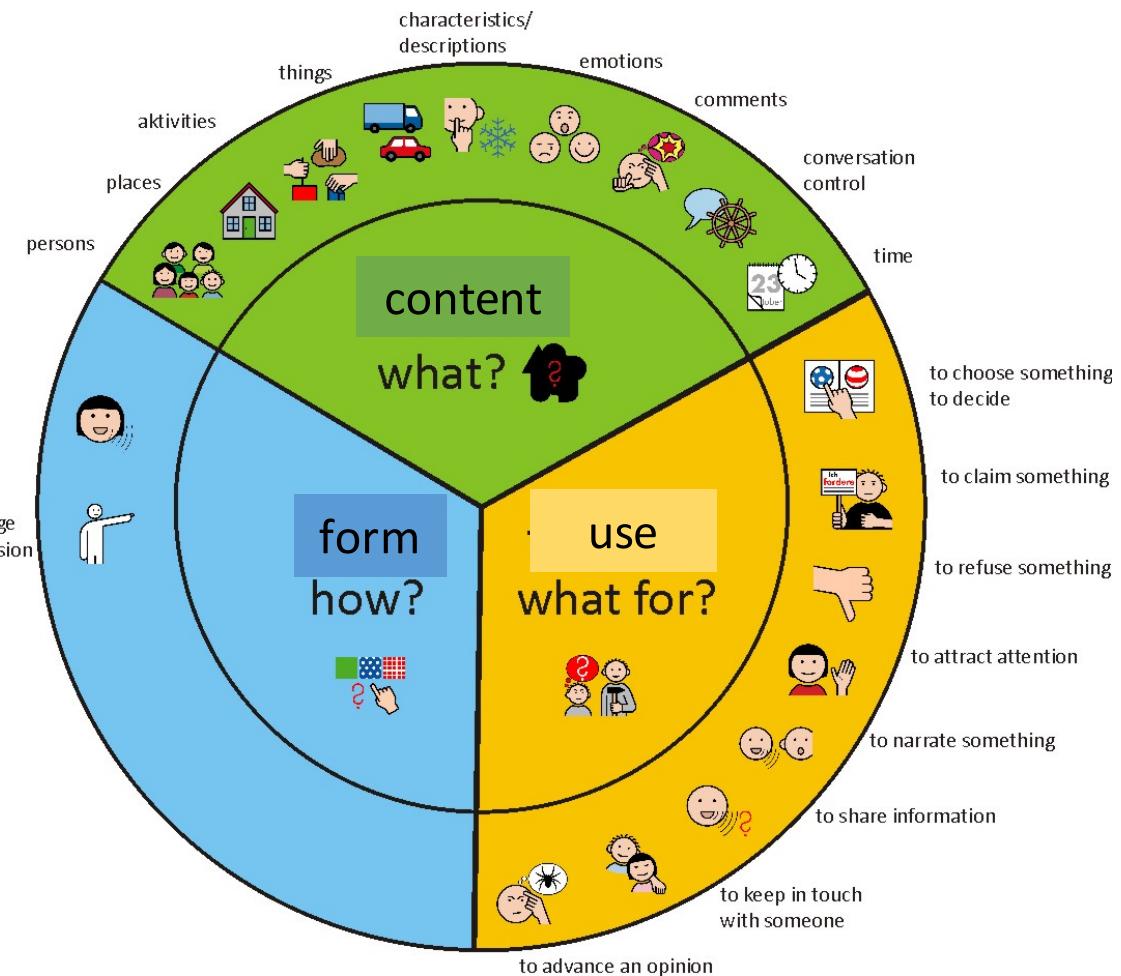




# What is AAC?

## AAC – HOW to communicate

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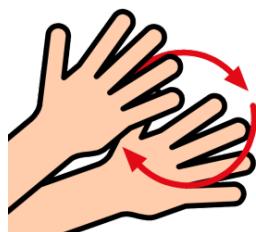


AAC is about  
the **HOW** to  
communicate!

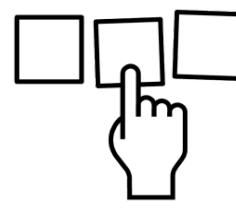
# What is AAC?

## HOW to communicate

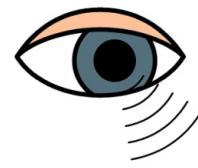
Gesellschaft für Unterstützte Kommunikation e.V.



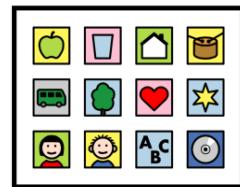
hand signs



picture cards



lines of sight



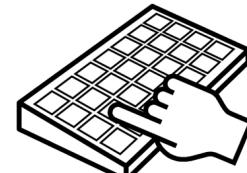
communication books



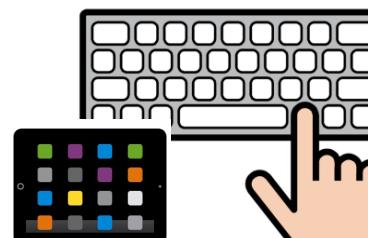
Communication passports



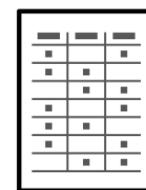
low tech devices for  
recorded voice



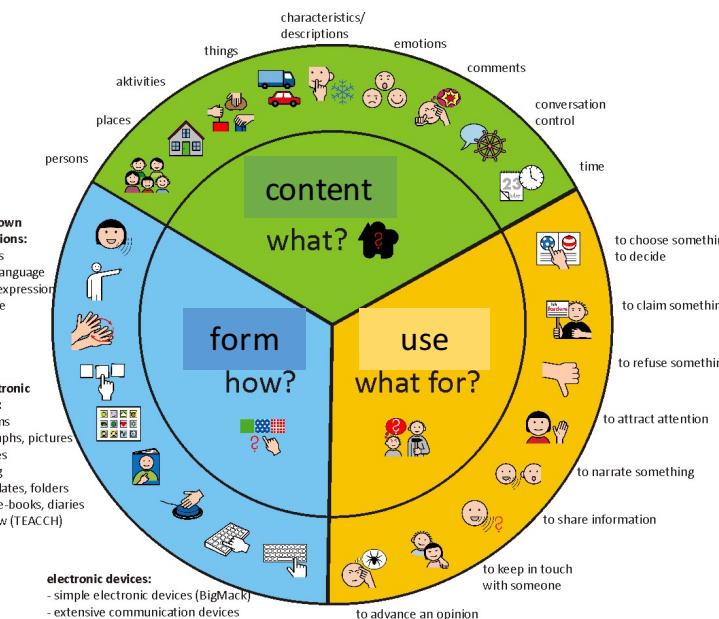
high tech devices with  
synthesised voice



computers and  
tablets



visualization  
(TEAAC)



What is AAC?

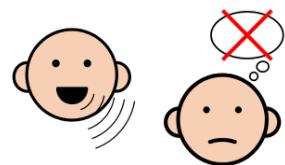
AAC

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AAC = augmentative and alternative communication



for people without verbal speech



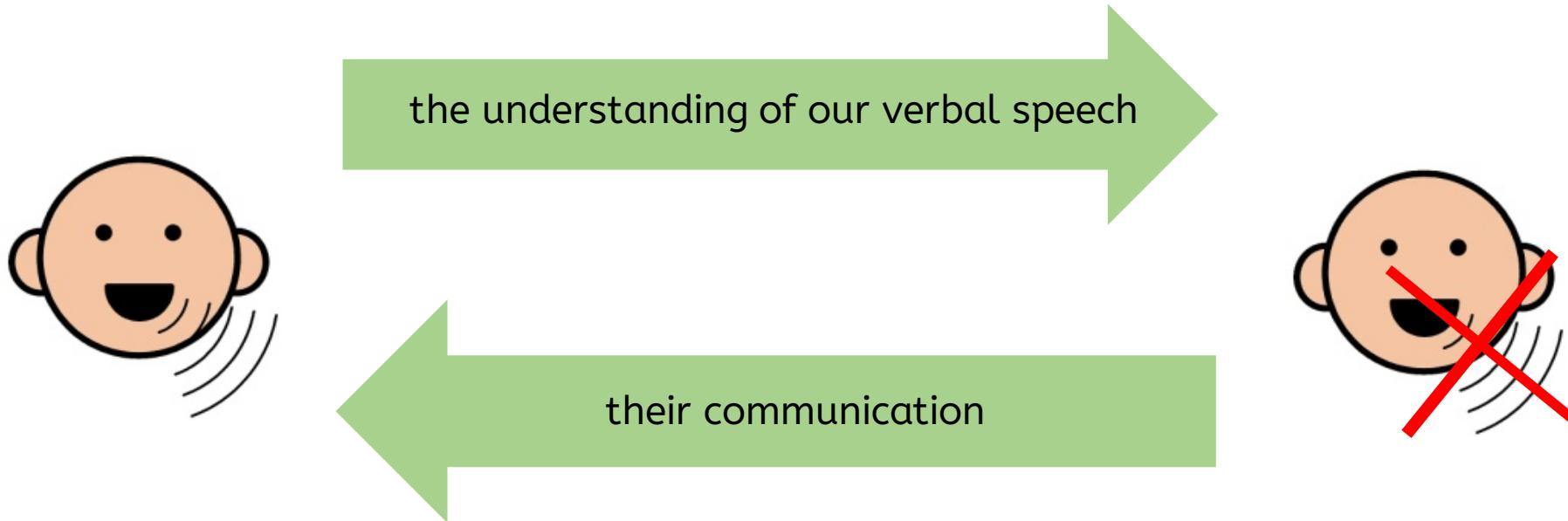
for people with limited verbal speech



What is AAC?  
two ways

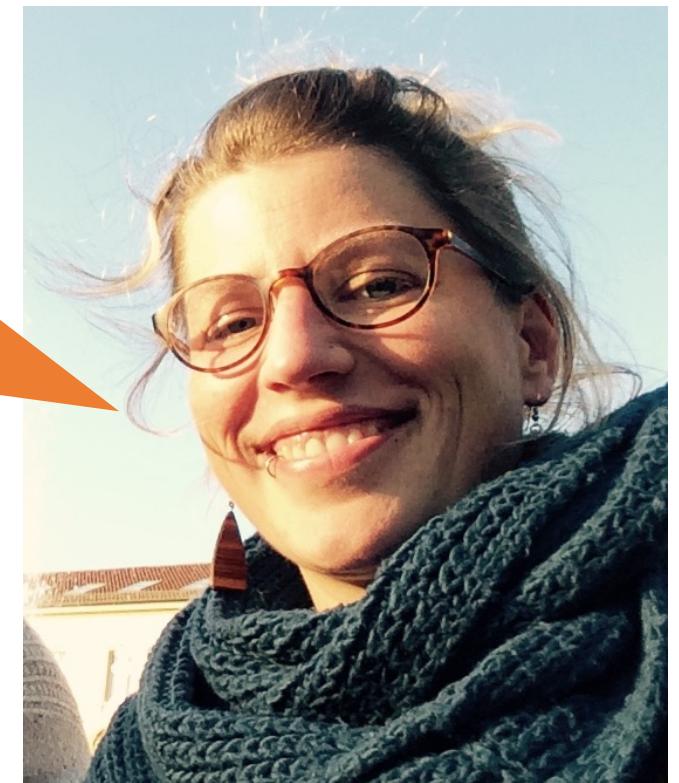
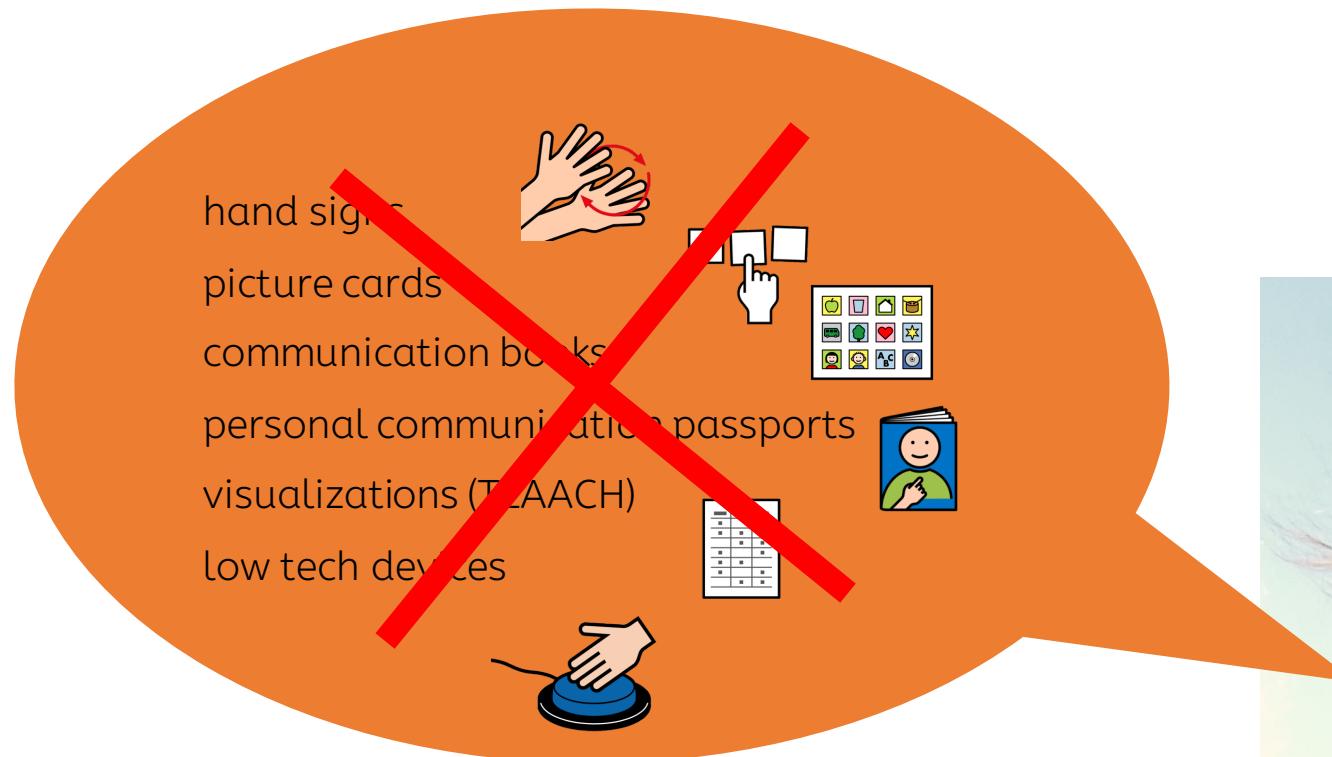
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ACC will improve both:



# I will NOT talk about

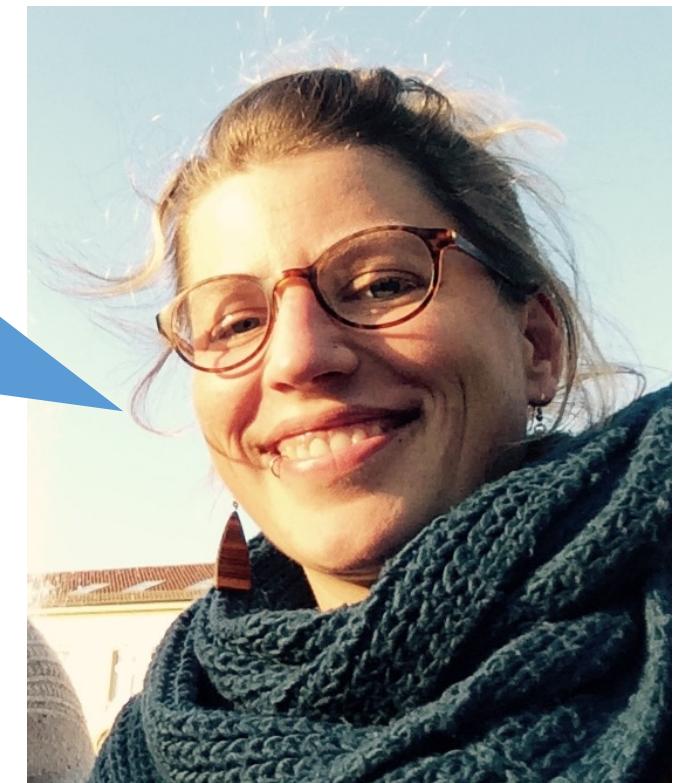
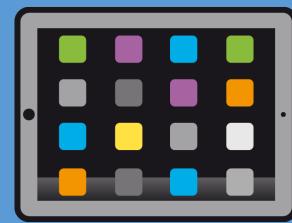
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# I will talk about

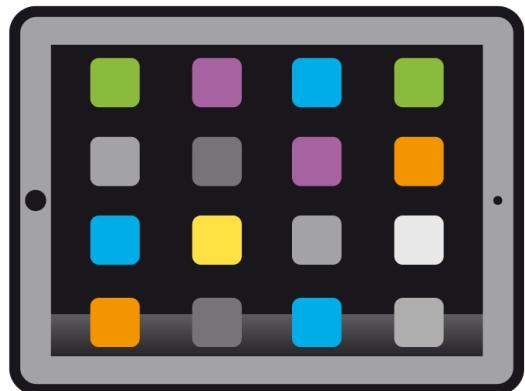
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high tech AAC devices  
based on iPads





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high tech AAC devices  
based on iPads

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## What about you?

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- Any experiences with iPads?
- Own iPad/iPhone?
- Other tablet?
- Any experiences with Accessibility-tools?



AAC based on iPads  
Once upon a time...

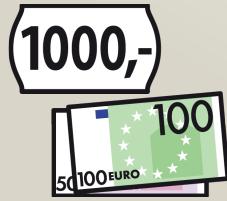
Gesellschaft für Unterstützte Kommunikation e.V.

... we had no iPads.



... but we already had high tech AAC devices.



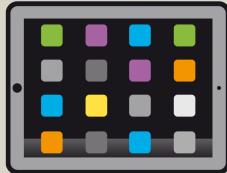


AAC based on iPads

## AAC devices are expensive

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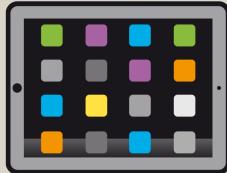
- hardware with the required touchscreen technology was not common, but existed already as a niche product
- software/vocabulary development is expensive
  - linguistic difficulties: how to organize the vocabulary and make every single word accessible with pictures for non-readers
  - every language is unique: the software will be used by a handful users in each country
- some companies focus on AAC devices (Tobii, Dynavox, Prentke Romich): they sell hardware, software, accessibility features (f.e. eye tracking) and their service as a whole
- high tech AAC devices are expensive: 5.000-20.000 €
- in some countries the health insurance has to finance the AAC devices
  - in most countries they have to be self-financed



# AAC based on iPads the iPad-revolution

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- tablets with touchscreen-technology now are produced for a big population as a common lifestyle product
  - that decreases the costs
- AAC professionals developed apps that are now available on the App-Store
  - everybody may buy these apps directly without any need to involve companies for AAC devices
- schools, speech therapists, families just buy the AAC-App for their already existing iPad
  - that increases competence and knowledge



# AAC based on iPads the iPad-revolution

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Why are we talking about iPads?  
And not about Android  
or Windows devices?  
That would make it cheaper at all...



- US: Apple is leading in education: and most AAC Apps are developed for the US market at first... so the developers choose iOS for their OS
- Apple developed great accessibility features for the iPads: that makes it easier for handicapped people to use iPads



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## useful iOS settings

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# Accessibility features in iOS

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The image displays three screenshots from the iOS Settings application, illustrating various accessibility features:

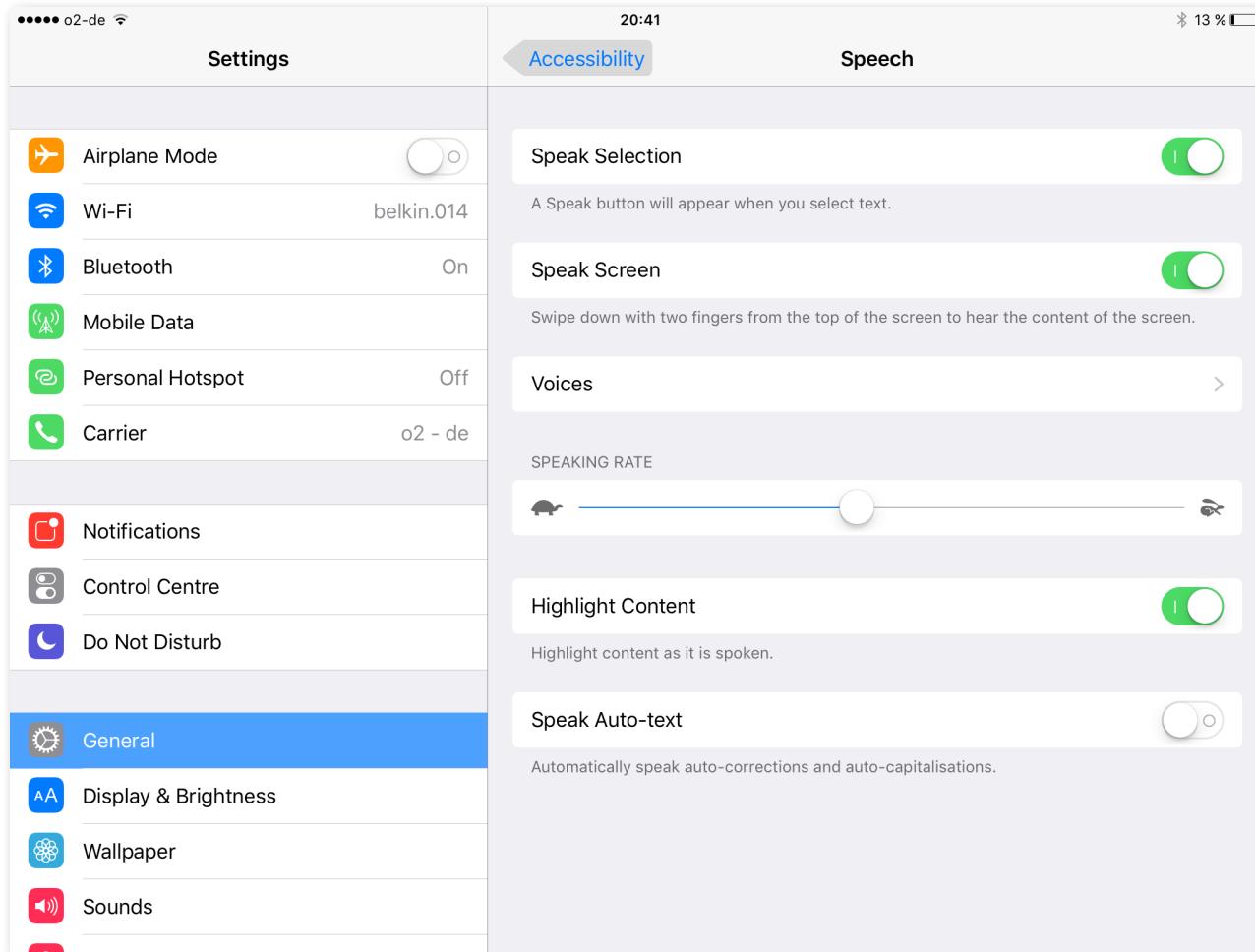
- Left Screenshot (General Settings):** Shows the main General settings screen with options like Airplane Mode, Wi-Fi, Bluetooth, and General selected.
- Middle Screenshot (Accessibility):** Shows the Accessibility section under the General tab. It includes sections for VISION (VoiceOver, Zoom, Invert Colours, Greyscale, Speech), MOTION (Larger Text, Bold Text, Button Shapes, Increase Contrast, Reduce Motion, On/Off Labels), and INTERACTION (Switch Control, AssistiveTouch, Touch Accommodations).
- Right Screenshot (Interaction):** Shows the Interaction section of the Accessibility settings. It includes options for Keyboard, Shake to Undo, Call Audio Routing, Home Button, HEARING (Hearing Aids, Mono Audio), MEDIA (Subtitles & Captioning, Audio Descriptions), and LEARNING (Guided Access, Accessibility Shortcut).



# Accessibility

## Speech – features for non-readers

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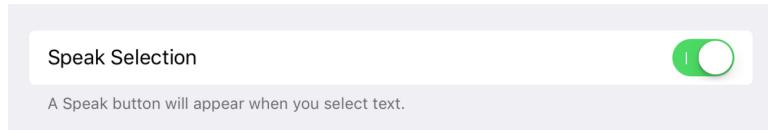


# Accessibility

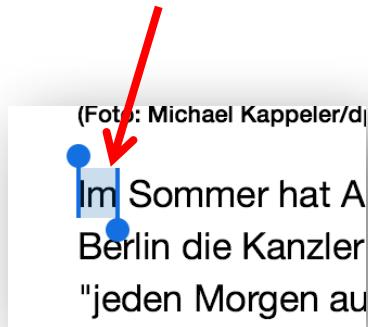
## Speak Selection

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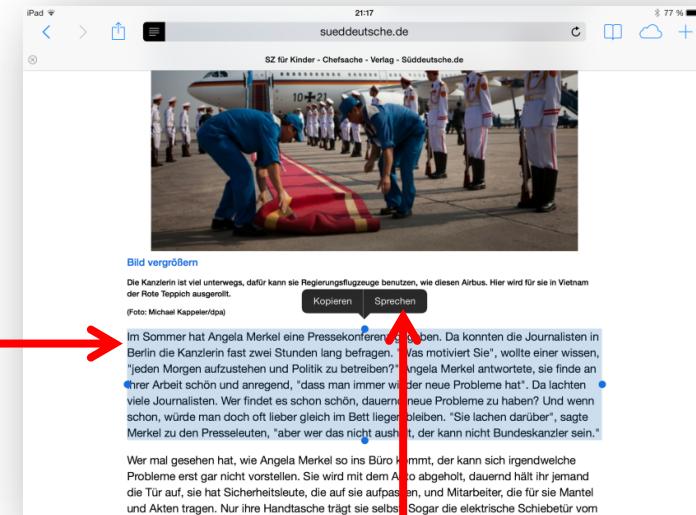
1. Turn on „Speak Selection“ in Settings.



2. Long-Press the text. The word will be highlighted.



3. Enlarge the highlighting to the whole text.



4. Tap “Speak”.

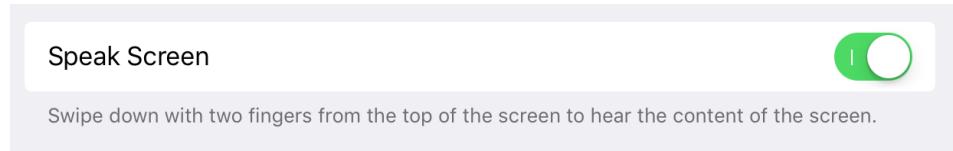


# Accessibility

## Speak Screen

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1. Turn on „Speak Screen“ in Settings.



2. Swipe downwards with two fingers.

3. The iPad starts to speak all text on screen.  
You may skip, stop and change speed in the  
Popup.

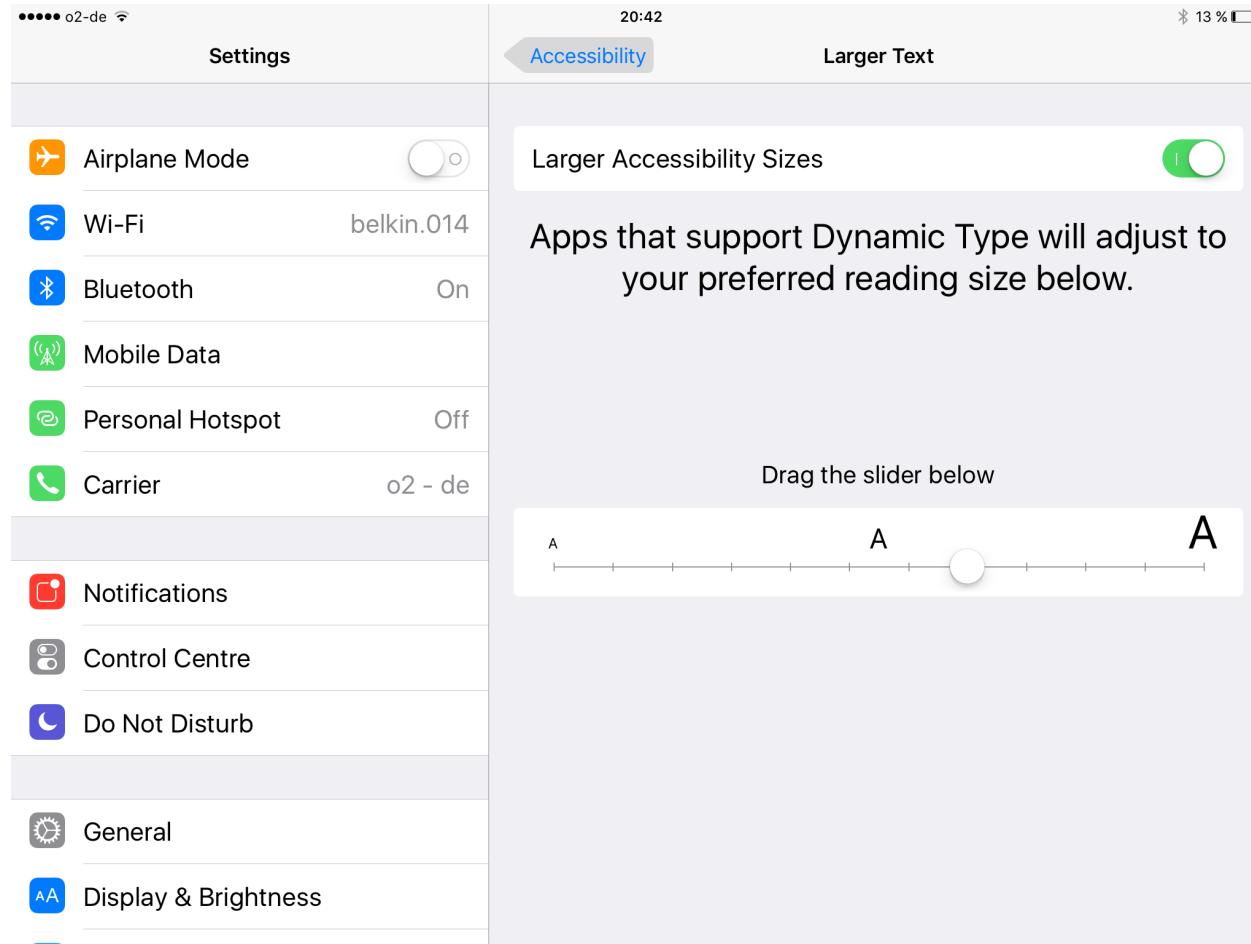




# Accessibility

## Larger Text

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# Accessibility

## Bold Text

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The screenshot shows the iPad's Accessibility settings. A modal dialog box is displayed, stating: "Applying this setting will restart your iPad." It has "Cancel" and "Continue" buttons. In the background, the "Bold Text" option is selected, showing its status as "On". Other options like "Fetter Text", "Tastenformen", "Kontrast erhöhen", "Bewegung reduzieren", and "Ein/Aus-Beschriftungen" are also visible.

„Bold Text“ also modifies the keyboard.

The image shows a portion of the iPad keyboard. The keys are larger and have a bold font. The rightmost key is labeled "Öffnen".



# Accessibility

## Switch Control

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# Accessibility

## Assistive Touch

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20:43

Accessibility      AssistiveTouch      Edit

AssistiveTouch

AssistiveTouch allows you to use your iPad if you have difficulty touching the screen or if you require an adaptive accessory.

Customise Top Level Menu...

CUSTOM GESTURES

Drei finger nach rechts

Create New Gesture...

Custom gestures allow you to record gestures that can be activated from Favourites in the Menu.

Assistive Touch offers that little button on the screen. By tapping it a menu with easy accessible alternatives for the iPad switches (Home-Button, Volume, ...) appears.



Individualize the  
AssistiveTouch-Menu.

20:43

AssistiveTouch      Customise Top Level Menu...

TAP AN ICON TO CHANGE:

Home

Lock Rotation

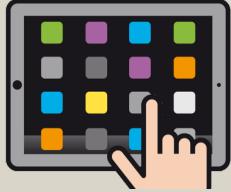
Screenshot

Mute

Triple-Click

5 Icons   - +

Reset...



# Accessibility

## Touch-Anpassungen

Gesellschaft für Unterstützte Kommunikation e.V.

The screenshot shows the 'Accessibility' settings on an iPhone. The 'Touch Accommodations' section is selected. It includes a toggle switch for 'Touch Accommodations' (on), a note about adjusting screen response to touches, and instructions to triple-click the Home button to turn it on or off. The 'Hold Duration' section shows a toggle switch (on), a value of '0,10 Seconds', and +/- buttons to adjust the duration. A note says it's the duration before a touch is recognized. The 'Ignore Repeat' section shows a toggle switch (on), a value of '0,10 Seconds', and +/- buttons. A note says it's the duration for multiple touches treated as single. The 'Tap Assistance' section shows a dropdown menu with 'Off' selected (marked with a blue checkmark). Other options are 'Use Initial Touch Location' and 'Use Final Touch Location'. A note at the bottom says 'Enable Tap Assistance to allow any single finger gesture to perform a tap.'

### Hold Duration:

The duration you must touch the screen before a touch is recognised.

### Ignore Repeat:

The duration in which multiple touches are treated as a single touch. (f. e. for people with tremor)

### Tap Assistance:

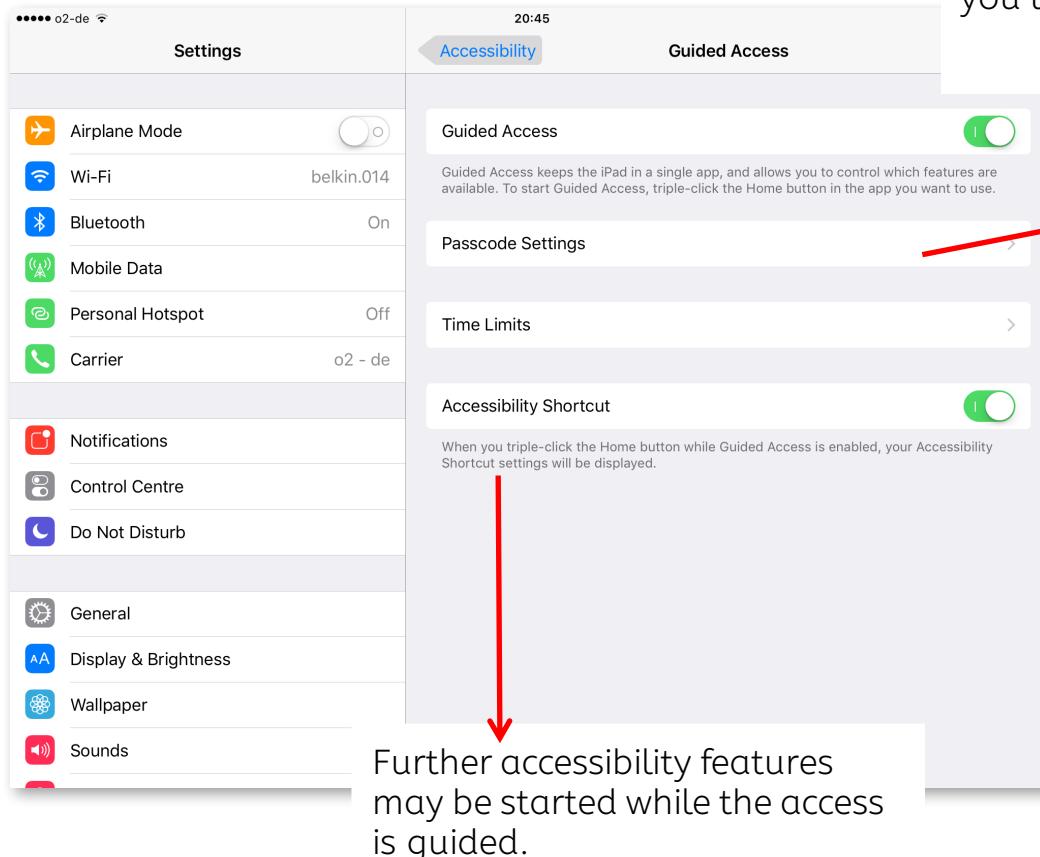
Prevents accidentally gestures. Long-press before or in the end of the gesture to trigger the gestures command.



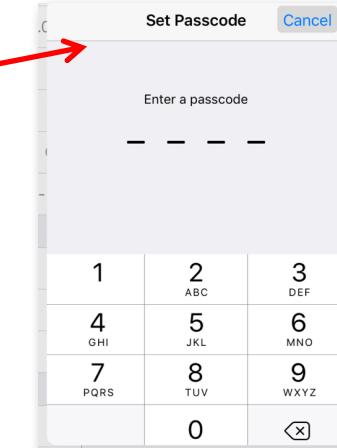
# Accessibility

## Guided Access

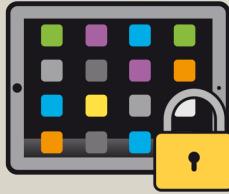
Gesellschaft für Unterstützte Kommunikation e.V.



Guided Access keeps the iPad in a single app, and allows you to control which features are available.



Turn on “Guided Access”, enter a Passcode (twice), close “Settings” and open the App.

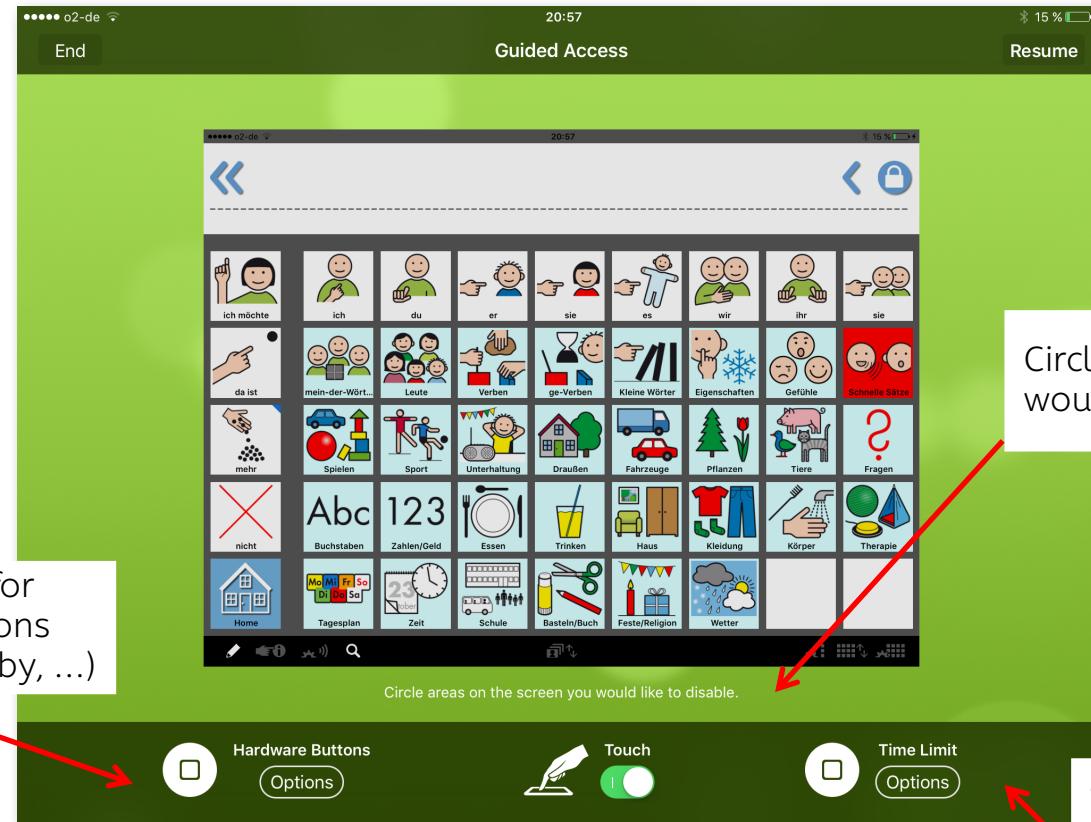


# Accessibility

## Guided Access

Gesellschaft für Unterstützte Kommunikation e.V.

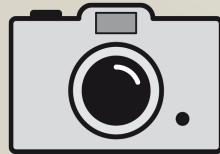
Triple-click the Home-Button.



Chose Options for  
Hardware-Buttons  
(Volume, Standby, ...)

Circle areas on the screen you would like to disable.

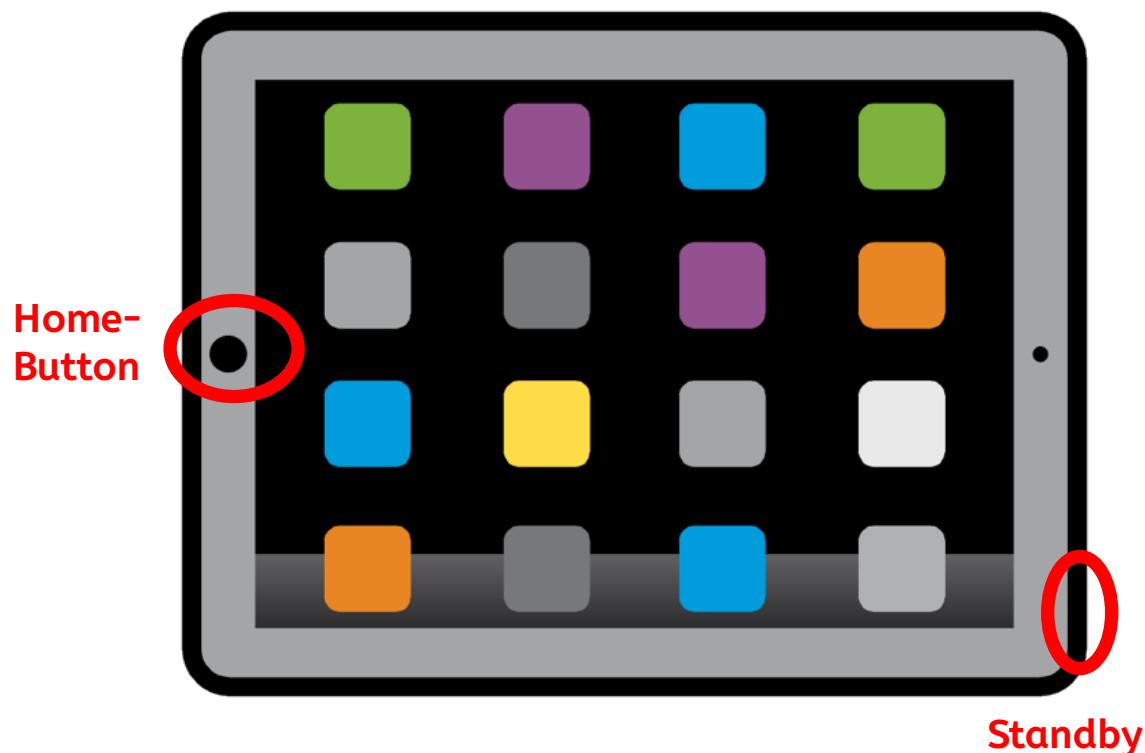
Time-limit: When time is over, the iPad is locked until the „Guided Access-Passcode“ is entered.



Tip:  
Screenshot

Gesellschaft für Unterstützte Kommunikation e.V.

Press Home-Button and Standby at once.



You will hear a camera's noise and the screen lightens shortly.

You will find the screenshot in Photo Library.

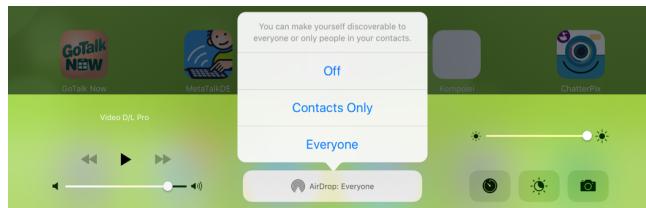




## Tip: AirDrop

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AirDrop is an ad-hoc service in Apple OS X and iOS operating systems. It enables the transfer of files among supported Macintosh computers and iOS devices without using mail or a mass storage device. It uses Bluetooth and WLAN direct.



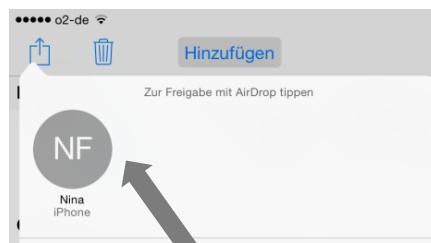
1. Open Control Centre and choose „Everyone“ on both devices.



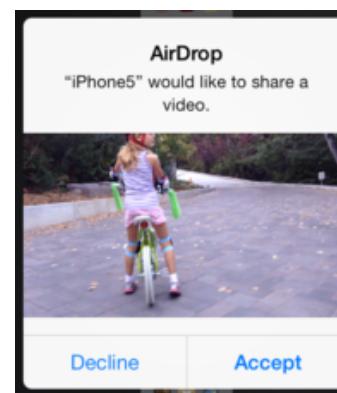
2. Tap on the export arrow to open the Export-Menu.



3. Several Export-features are available. Wait until the other iPad appears instead of the AirDrop-Icon.



4. Tap to share with AirDrop.



5. Accept the transfer on the receiving iPad.

6. iPad will open the data file will in the appropriate app or will ask if several apps are possible.



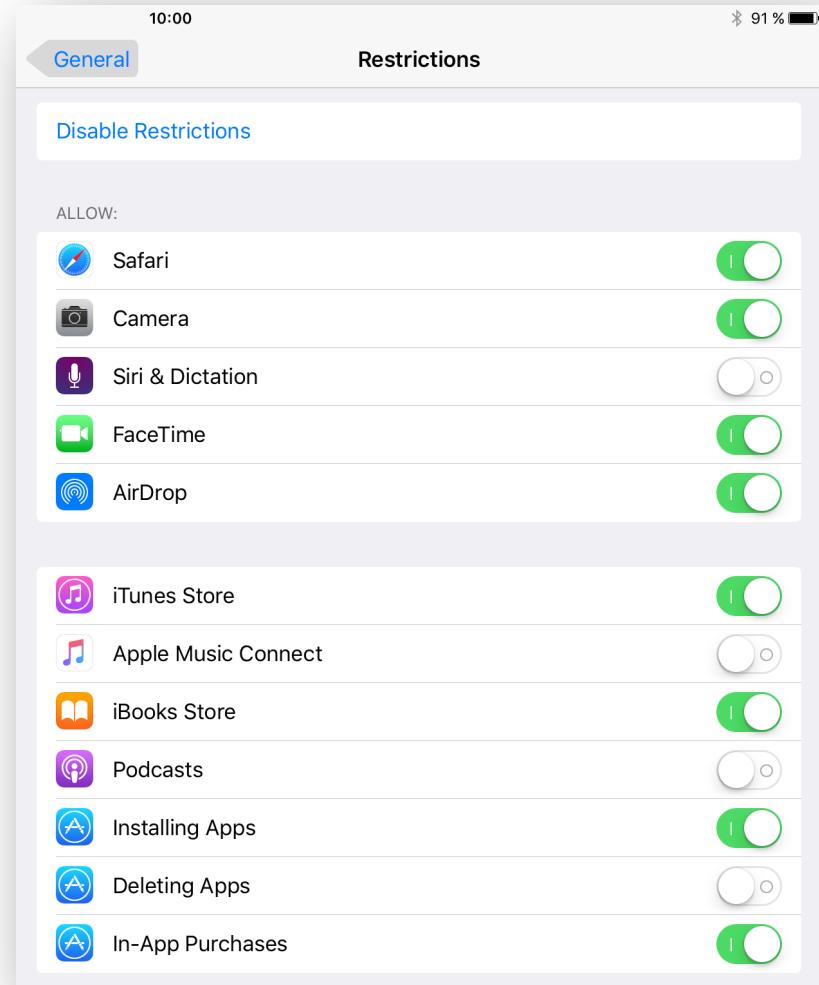
## Tip: Restrictions

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Child-proof-lock for important  
iPad-settings.

To disable Restrictions  
a passcode is necessary.

„Deleting Apps“ must be restricted:  
In case of accidentally deleting an App,  
the individualized content (like  
communication books, ...) is lost  
(if there is no backup in iTunes or iCloud...)





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## AAC Apps for the iPad

**isaac**  
Gesellschaft für  
Unterstützte Kommunikation e.V.



# AAC Apps - List by Jane Farrell

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The screenshot shows the homepage of Jane Farrall Consulting. At the top left is a logo featuring two stylized human figures (one blue, one yellow) above a laptop screen. To the right of the logo, the text "Jane Farrall" is in blue and "CONSULTING" is in yellow, with "Literacy - AAC - Assistive Technology" in smaller text below. A navigation bar at the top right includes links for Home, Literacy, AAC Apps, Switch Apps, BigMouth, About, Contact, and a magnifying glass icon for search. Below the navigation is a section titled "AAC Apps Lists" with a breadcrumb trail "Home > AAC Apps Lists". There are four main links: "Symbol / Picture Apps A – M (Part 1)", "Symbol / Picture Apps N – Z (Part 2)", "Symbol & Text Based Apps", and "Text Based Apps". Each link is accompanied by a small thumbnail image showing hands interacting with a tablet screen displaying a communication app.

[AAC Apps Lists](#)

[Home](#) > AAC Apps Lists

[Symbol / Picture Apps A – M \(Part 1\)](#)

[Symbol / Picture Apps N – Z \(Part 2\)](#)

[Symbol & Text Based Apps](#)

[Text Based Apps](#)

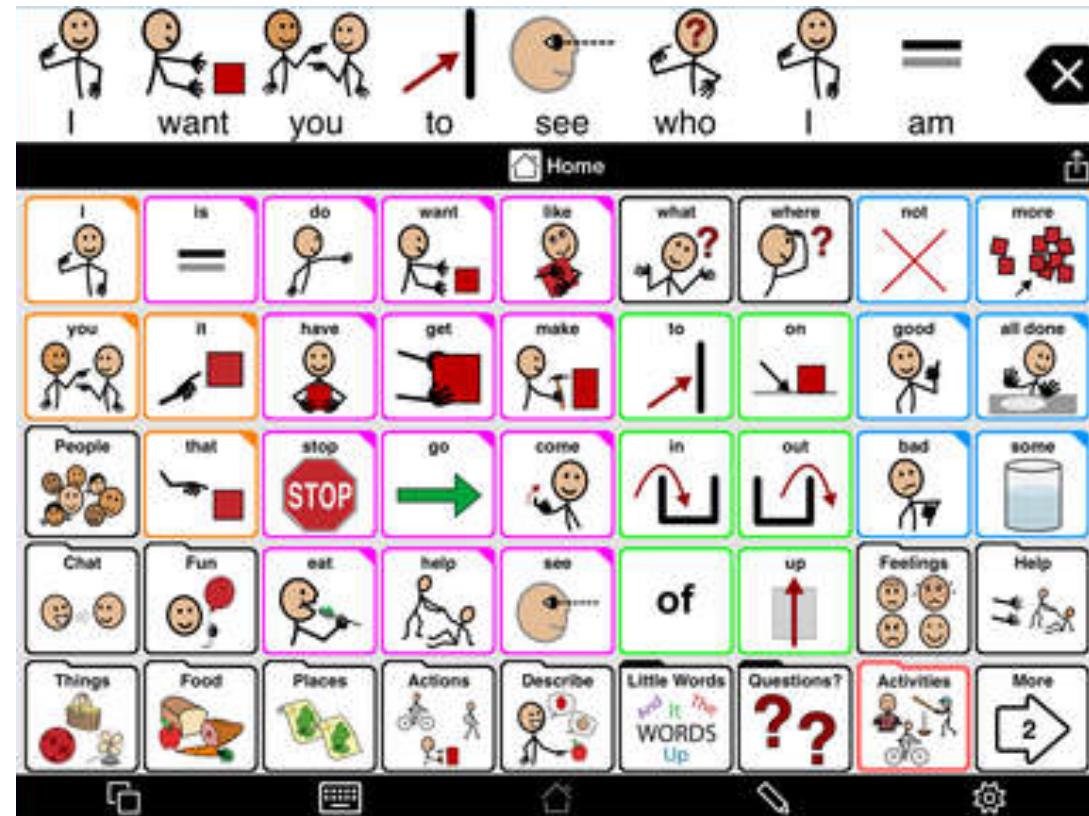


# AAC Apps

## Proloquo2go

Gesellschaft für Unterstützte Kommunikation e.V.

- symbol-based AAC App
- English (British, US, Australian) and Spanish (North-American, Castilian)
- 3 vocabulary levels and 23 grid sizes ranging from 9 to 144 buttons on the screen
- 20,000 SymbolStix symbols or photos
- scanning
- 249,00





# AAC Apps

## MetaTalkUS

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The screenshot shows the main screen of the MetaTalkUS AAC app. At the top, there is a navigation bar with icons for signal strength, provider (o2-de), signal, battery level (90%), and time (16:08). Below the navigation bar is a toolbar with a double-left arrow icon, a single-left arrow icon, and a lock icon. The main area is a grid of 4x10 cards, each containing an icon and a label. The cards are organized into categories:

Row 1	I would like	I	you	he	she	it	we	you	they
Row 2	not	Me-the	People	Verbs	-ing	-ed verbs	Little Words	Description	Sentences
Row 3	to	Play	Sports	Entertainment	Outside	Vehicles	Plants	Animals	Questions
Row 4	There is	Abc	Letters	Eating	Drinking	Home	Clothing	Personal Care	Therapy
Row 5	Home	123	Numbers/Mon...	Daily Plan	Time	School	Crafts/Books	Celebration	Weather

At the bottom of the screen is a toolbar with various icons for navigating through the app's features.

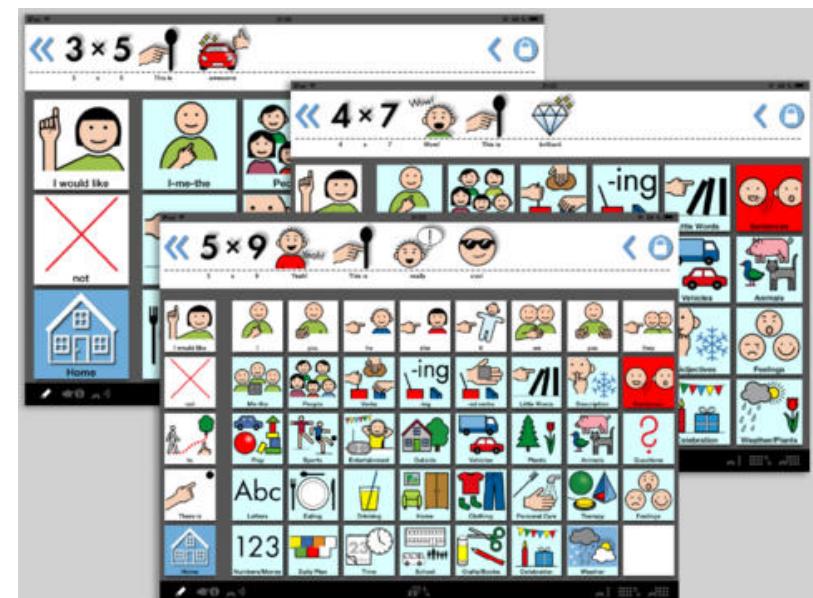


# AAC Apps

## MetaTalkUS

Gesellschaft für Unterstützte Kommunikation e.V.

- MetaTalk is a symbol-based application for Augmentative and Alternative Communication (AAC). It allows users without or with limited voice capabilities to communicate. MetaTalk is preconfigured with three rich vocabularies - you can start immediately. Individual customizations are easy and always possible.
- MetaTalk is based on METACOM symbols which are known for their clarity and professional design. A simple structure allows beginners - and relatives without special AAC training - to learn and grow over time.
- Cidar Health Care LLC
- 179,99 €
- has to be improved  
(version 1.5.1, last update 10/14)



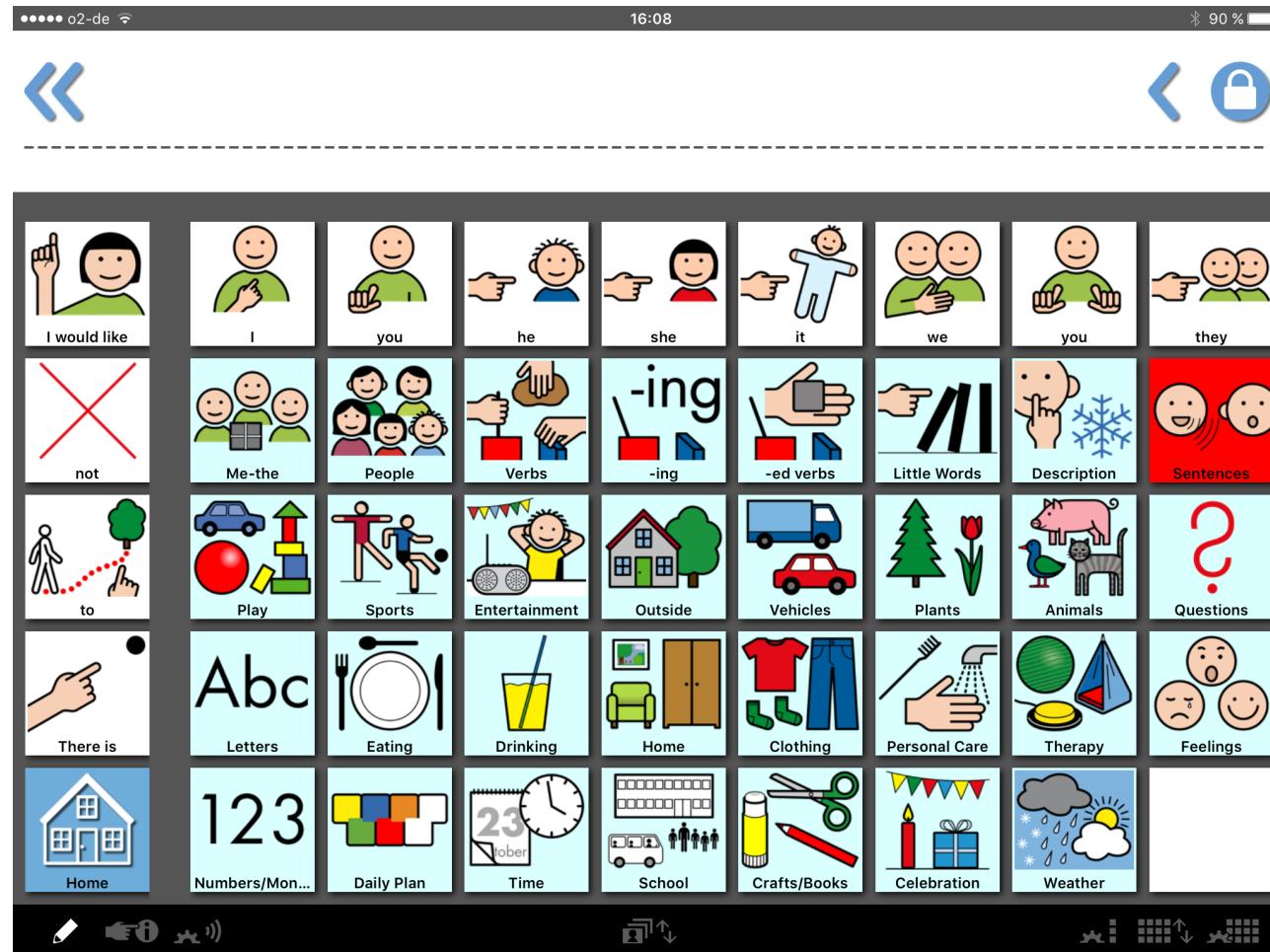


AAC Apps

MetaTalkDE and MetaTalkUS

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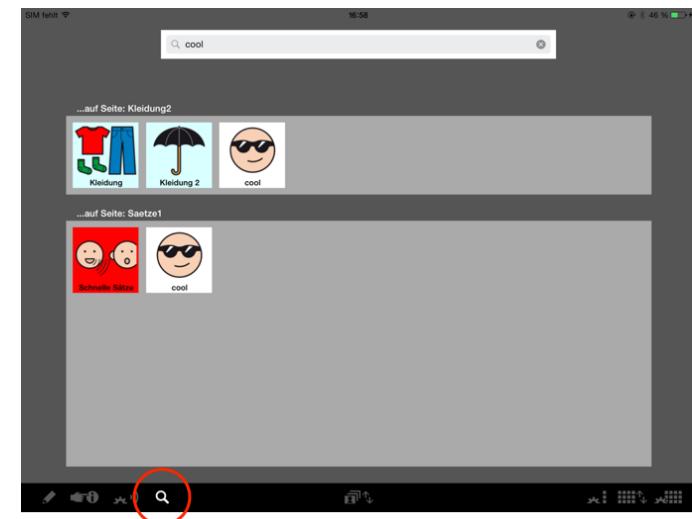
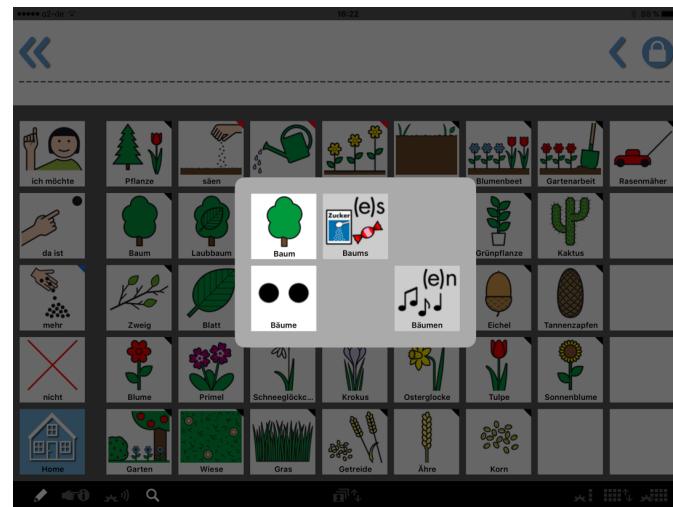


# AAC Apps

## MetaTalkDE

Gesellschaft für Unterstützte Kommunikation e.V.

- German version of MetaTalk
- really popular
- Cidar Health Care LLC
- 199,99 €
- further developed than MTUS  
(version 2.0.1, last update 02/16)
  - grammatical popups
  - search function





# AAC Apps

## GoTalk Now

Gesellschaft für Unterstützte Kommunikation e.V.

- AAC-app for individual communication sets
- adjustable page layouts
- customizable navigation
- recorded and text-to-speech capabilities (with different voices)
- included and in-app symbol sets



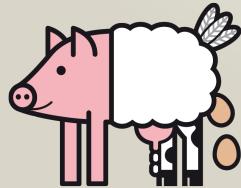


# GoTalk Now at Summer School 2016

Gesellschaft für Unterstützte Kommunikation e.V.



- GoTalk Now is the most flexible AAC App with supporting photos, different symbol sets, videos, music...
- individual communication books or teaching materials are easy to create
- GoTalk Now supports 38 build-in iOS voices und 68 in-App voices for text-to-speech in more than 30 languages
- it is one of the cheapest AAC apps (80 €, GoTalk Start 20€, GoTalk Lite for free)



Gesellschaft für Unterstützte Kommunikation e.V.



Kommunikationsbuch



Videos



Erzählbuch



Mediaplayer



Kommunikationstafel

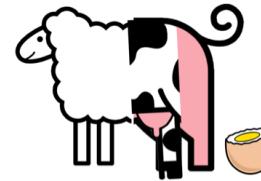


die

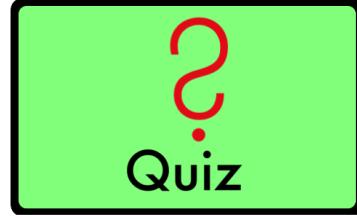


Präsentation

eierlegende  
Wollmilchsau



Diagnostik mit Fred



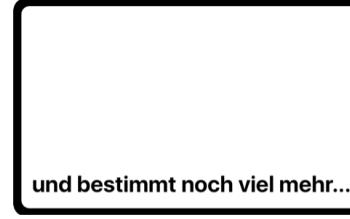
Quiz



Sprachaufnahme



URL einfügen



und bestimmt noch viel mehr...



Eierlegende Wollmilchsau





# GoTalk Now

## Home Screen

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**Book Sharing:**  
better use AirDrop!

**Store:**  
symbol sets as in-app-purchases

**Feedback:**  
Ich habe ein Problem!  
Ich mag GoTalk NOW!

**Help:**  
video-tutorials and user's guide

**Attainment Company:**  
news and link to the website

**Player:**  
for the AAC-user, buttons are speaking, videos and jumps are working here ...  
To Leave the Player-Mode: Press the house-Button für 8 sec. or swipe downwards with 3-fingers

**Page Editor:**

- Add Blank Pages
- Buttons
- Jumps
- Videos ...

**Communication Books:**

- switch to other books
- add new books
- delete, rename, duplicate, share books and export them as PDF

**Settings:**  
for the actual book:

- scanning, accessibility, ...



# GoTalk Now

## Page Editor

Gesellschaft für Unterstützte Kommunikation e.V.

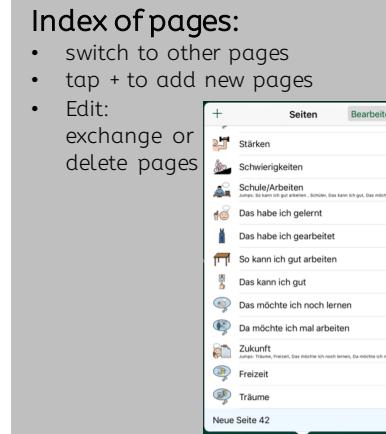
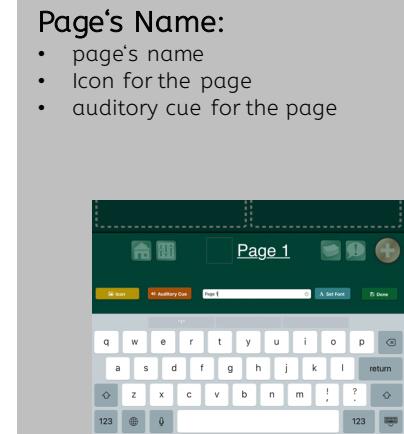
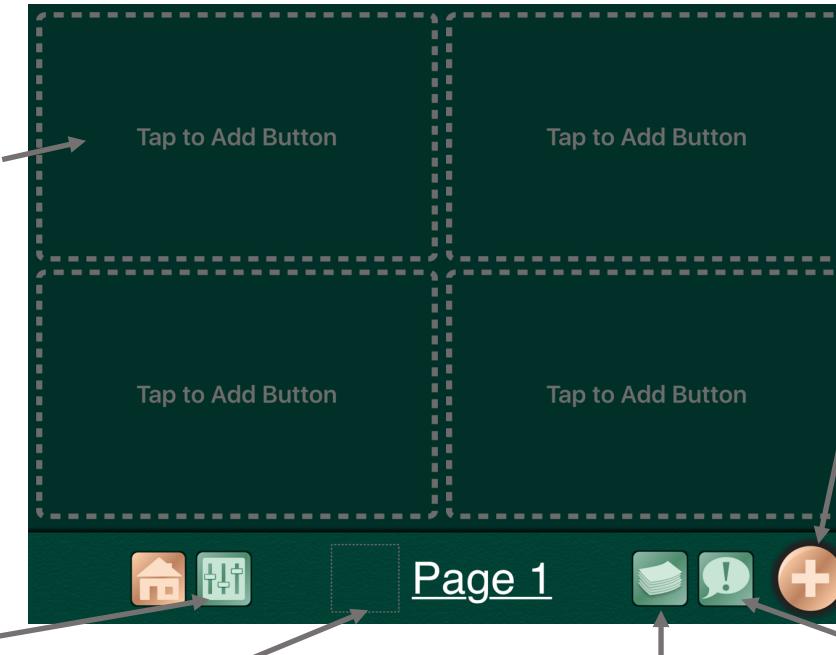
**Tap to Add Button:**  
opens the Button-Editor.  
Long keystroke to delete,  
exchange and  
copy buttons.

**House:**  
back to Main Menu.

**Arrows:**  
Turn the page.

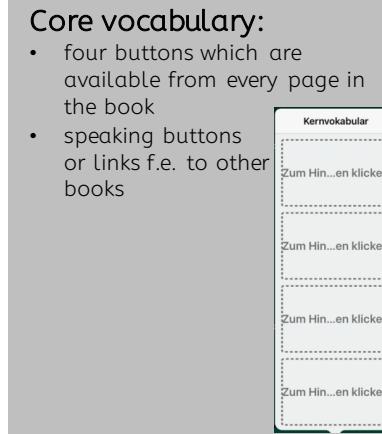
**Page Options:**  

- Background
- number of Buttons
- Express Page (Buttons will be added into a field on top of the page and can be spoken as a sentence)



**Add new Pages:**  
+Button only on the last page of  
the book. Reach the Tapmate  
Gallery via Index of Pages and +  
on each Page.

- Button pages
- scene pages
- keyboards
- duplicate Pages
- download books and Templates
- use Page Wizard





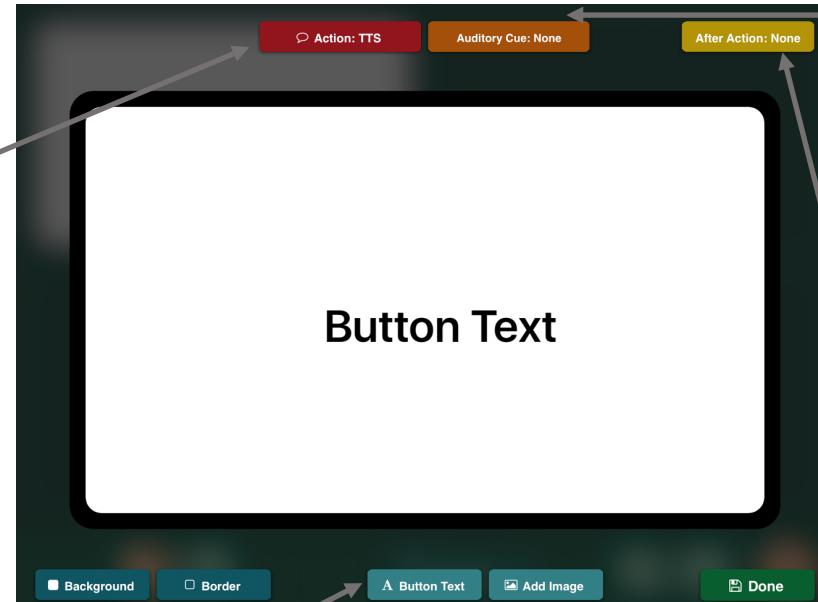
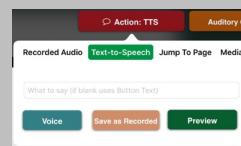
# GoTalk Now

## Button Editor

Gesellschaft für Unterstützte Kommunikation e.V.

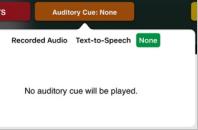
### Action:

- recorded Audio
- Text-to-Speech (change and buy voices here)
- „Jump to Page“
- Medioplayer: add Musik from iTunes
- open URL in Safari
- HUE lamps
- add Video from Library



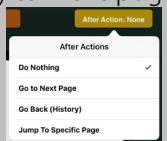
### Auditory Cue:

if you add an auditory cue (as recorded Voice or TTS) the Player will hear this on 1. tap. On 2.tap „Action“ will start.



### After Aktion:

After the choosed “Action“ is finished, the button can automatically turn the page.



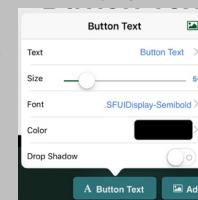
### Background/Border:

- choose colors for Background and Borders of the Button.



### Button Text:

- Subtitle of the Button (will be read if you choose Text-to-Speech as Action)
- Size, Font and Color of Text
- duplicate Text as jpg to simulate a second Text



### Add Image:

- Take photo
- Add from Photo Library
- Internet-Search
- Symbol set
- You may add multiple pictures
- double-tap on the image to delete, reset position, crop, bring to front and save to Camera Roll.



### Done:

Back to Page Editor:  
Button will be saved.

**Tip:**  
Tap beside pop-up to close it.

To leave Player mode:

- long press (8 sec) House-Button
- swipe downwards with 3 fingers



To leave Page-Editor

- tap House-Button





# Exercise 1 – That's me!

Gesellschaft für Unterstützte Kommunikation e.V.



Add a foto and your name.



Take a video (using the iPad-camera-App) and add it as "Action".  
Add a screenshot of the video as image from Foto Library.



Tell us where you're from in your first language. Use recorded audio in "Action".



Use "+" to add a new "Blank Button Page" and "Page Options" to create 16 buttons. Use "Action" and "Jump to Page" on this blue button to link it to your new Page.



## Exercise 1





## Exercise 2 – International fast Communication

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I would like to have something.	I would like to do something.	I would like to tell something.	I've got a question.
I am hungry.	I am thirsty.	I need help.	Something is wrong.
more	Hello!	Bye bye!	not
Yes	again	done	No

**East Communication**