Communication Partner Instruction in AAC

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Speaker Disclosures

- Financial – Jill E Senner is the owner and director of Technology & Language Center, Inc. where she provides services and products related to partner-augmented input and communication partner instruction in AAC. Matthew R Baud owns a private practice where he provides similar services and products related to AAC.
- Nonfinancial - No relevant nonfinancial relationship exists.

Learner Outcomes

1. Participants will identify three benefits of communication partner instruction.
2. Participants will identify at least three components of successful communication partner training programs.

Communication Partners

- "Communication involves two or more persons and both the individual using AAC, as well as the communication partner, need to adapt to the skills and needs of each other for the interaction to be successful" (Douglas, 2012).

Communication Partners

- It has been suggested that the success of a communication interaction between an AAC user and a communication partner will depend heavily on the skills of the communication partner (Kent-Walsh & McNaughton, 2005).

Communication Partners

- Research indicates that training an AAC user's significant communication partners (e.g., parents, teachers, teacher aides, friends) can be of great benefit in "promoting greater participation in daily interactions by people who use AAC systems" (Light et al., 1992, p. 865).

Communication Partners

- Recent analyses of communication partner training programs suggest that there is consistent evidence that communication partner instruction not only improves the skills of communication partners but also has a positive impact on the communication of people who use AAC (PWUAAC, Douglas, 2012; Kent-Walsh, Murza, Malani, & Binger, 2015; Shire & Jones, 2015).

Communication Partners

- "Communication partner instruction can be an effective intervention component for individuals with complex communication needs."
- "Partner instruction should be viewed as an integral part of AAC assessment and intervention. Provision of instruction should be routinely provided…"

(Kent-Walsh, Murza, Malani & Binger, 2015, p. 279-280)

Communication Partners

- "Supporting children who are learning language using an AAC system requires the adult to have specific skills in the communication mode, in addition to having strategies for modeling and responding to children's communication" (Kaiser & Wright, 2013, p. 38).
- "Being an effective communication partner or AAC facilitator is not intuitive. It often requires one to change long-established, unconscious ways of communicating" (Blackstone, 2006, p. 12).

School Staff Involvement in AAC

- School-aged children spend roughly 30 hours a week attending school, making school staff members (e.g., therapists, teachers, paraprofessionals) key communication partners in the educational environment.

School Staff Involvement in AAC

- Approximately 55% of school SLPs regularly serve students using AAC (2016 ASHA Schools Survey).
- Many SLPs and special education teachers "may graduate from preservice training with minimal or no exposure to AAC" (Costigan & Light, 2010).
- A recent survey conducted of speech-language pathologists across the United States found that 74% of respondents felt that they lacked adequate preparation in AAC and assistive technology (ATIA, 2012).
- *Classroom staff are likely to require professional development opportunities to further knowledge and skills in AAC.*

Parent Involvement in AAC

- "The primary interventionists in implementing AAC are often the parents, and the primary context for evaluating the effects of the AAC intervention is the family. Parents and siblings are not only interventionists, but they are also important interaction partners of the child who requires AAC" (Granlund et al., 2008, p. 207).

Parent Involvement in AAC

- Mothers and fathers rated the need for increasing knowledge of assistive devices as a priority (Angelo et al., 1995; Angelo et al., 1996).
- Family satisfaction has been found to increase when clinicians recognize parent needs regarding AAC (Angelo et al., 1996; Starble et al., 2005).
- Parent and family support has been identified as a contributor to positive outcomes for individuals who use AAC (Lund & Light, 2007; Gona, Newton, Hartley & Bunning, 2014).

Parent Involvement in AAC

- Parent training in AAC has been linked to positive changes in children's communication (Bruno & Dribbon, 1998; Romski, Sevcik, Adamson, Cheslock, Smith, Barker & Bakerman, 2010).
- Parent-implemented naturalistic behavioral interventions such as JASPER (Joint Attention Symbolic Play Engagement and Regulation) combined with use of a speech-generating device (SGD) resulted in improvements in spontaneous communicative utterances, novel words and comments (Kasari, C., Kaiser, A., Goods, K., Nietfeld, J., Mathy, P., Landa, R., Murphy, S. & Almirall, D, 2014).
- Parent training in AAC has been shown to increase family comfort level with operating a SGD and in supporting communication (Bruno & Dribbon, 1998; Starble, et al., 2005).

Parent Involvement in AAC

- "…problems may occur when families are not provided training on ways to integrate the use of the assistive device in naturally occurring activities. As a result, the device may be seen as a burden as opposed to a facilitative tool to increase participation of their child in daily activities" (Lesar, 1998, p. 147).

Partner Training

- Traditional training strategies such as in-services are frequently insufficient in helping communication partners develop the expertise they need to support long-term communication needs (Kent-Walsh & McNaughton, 2005).
- Evaluations of professional development suggest that as few as 10% of participants who attended a single in-service training implemented what they learned (Showers & Joyce, 1996).

Partner Training

- "We wouldn't teach someone to drive by giving them a lecture, tossing them a book, and then turning them loose on the freeway. Nonetheless, when we provide traditional staff development in schools, that is pretty much what we do." (Knight, 2007)
- "The 'train-and-hope' approach to implementation does not appear to work." (Fixsen et al., 2005, p. 40).

Teaching is not talking and learning is not listening.

Darling-Hammond, 1995

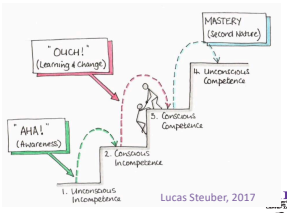
Purposes of Training

1. Fine-tuning present skills.
2. Learning new skills.
   - Requires more intensive training than fine tuning.

Joyce & Showers, 1980

Levels of Impact

1. Awareness
   - realizing importance of a technique
2. Concepts and Organized Knowledge
   - understanding concepts and increasing knowledge
   - awareness and knowledge alone will have little effect (unlikely to change behavior)
3. Principles and Skills
   - tools and potential for action
4. **Application and Problem Solving**
   - **transferring and using skills learned.**



Lucas Steuber, 2017

Joyce & Showers, 1980

Training Elements

1. Theory/Strategy Description
   - Rationale, theoretical base and verbal description
   - Awareness level for fine tuning and learning new skills.
2. Demonstration and Modeling
   - Live or videotaped enactment of skill or strategy
   - May be adequate for fine tuning.
   - For new learning, increases awareness and knowledge but rarely results in application and problem solving.
3. Practice
   - Trying new skill or strategy in simulated conditions
   - Improves principles and skills for fine tuning and new learning.
   - May need to practice up to 20 times in simulated conditions before transfer.

Joyce & Showers, 1980

Training Elements

4. Feedback
   - Observing and providing an opportunity to reflect
     - Can be self-administered or given by peers or coaches.
   - Increases awareness and knowledge with new learning. Can result in application for fine-tuning. Feedback alone rarely results in permanent changes.
5. Coaching
   - Live observation and feedback cycle in a clinical situation
     - Can be provided by peers, supervisors, or consultants
   - Skills transfer to the natural environment.

Joyce & Showers, 1980 & 1981

Training Elements

- "The use of a combination of practices was associated with optimal positive learner outcomes."
- "Learning afforded in settings where there was an immediate opportunity to apply newly acquired knowledge or skills was more effective than learning in settings were there were few or no such opportunities."
- Effect sizes were more than twice as large when instruction or training was conducted in the participants' work settings.

(Dunst & Trivette, 2012).

Training Elements

- "Most skills needed by successful practitioners can be introduced in training but really are learned on the job with the help of a consultant/coach…" (Fixsen et al., 2005, p. 29).
- "…Effective coaching depended upon the availability of coaches who are expert in the content, techniques, and rationales of the program" (Fixsen et al., 2005, p. 45).

Training Elements

Table 1
A Summary of a Meta-analysis of the Effects of Training and Coaching on Teachers' Implementation in the Classroom (Joyce & Showers, 2002)

	OUTCOMES (% of participants who demonstrate knowledge, demonstrate new skills in a training setting, and use new skills in the classroom)		
TRAINING COMPONENTS	Knowledge	Skill Demonstration	Use in the Classroom
Theory and Discussion	10%	5%	0%
+ Demonstration in Training	30%	20%	0%
+ Practice & Feedback in Training	60%	60%	5%
+ Coaching in Classroom	95%	95%	95%

Training Elements

- Goal setting (in combination with coaching) can boost the effectiveness of training.

WHAT GOALS DO YOU WANT TO ACHIEVE???

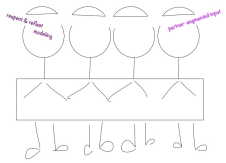
Key Features of EBP In-Service PD

- Explicit explanation and illustration of the specific content knowledge and practice to be learned.
- Active and job-embedded practitioner opportunities to learn to use a practice and engage in evaluation of their experiences.
- Reflection.
- Coaching, mentoring, or performance feedback by a PD specialist.
- Follow—up supports by PD specialists.
- Sufficient duration and intensity (learning opportunities distributed over time).

Dunst (2015)

Active v. Passive Learning

- When the instructor acts as an "information transmitter" and participants are "passive receptacles," data suggest
  - limited recall of information months or years later and
  - an inability to reach application and problem solving levels (Darling-Hammond, 1995).
- "Anything that we have to learn to do we learn by the actual doing of it." - Aristotle



Training Elements

- "People learn what they study and practice" (Joyce & Showers, 1981, p. 163).
- "Transfer of training is greatest when the training conditions are highly similar to those of the ultimate testing conditions" (Ellis & Hendry, 1965).

Parent Instruction

- Five training procedures have been commonly used and associated with successful parent training programs. These include (a) verbal instruction and/or instruction manuals, (b) in vivo practice, (c) role playing, (d) modeling by the trainer, and (e) reviewing videos of intervention being implemented (Lang, Machalicek, Rispoli, & Regester, 2009).
- Parent education programs were also found to be of greater benefit when parents practiced the skills they learned on their own children (Kaminski, Valle, Filene & Boyle, 2008).
- Training is also most effective when it is implemented in everyday, meaningful routines and activities (Barton & Fettig, 2013; Roberts & Kaiser, 2011).

Implementation Fidelity

- "It has been well documented in many disciplines that major gaps exist between what is known as effective practices (i.e., theory and science) and what is actually done (i.e., policy and practice)" (Fixsen et al., 2005, p. 2).

Implementation Fidelity

- The purpose of parent or school staff instruction is to teach families and educators how to use evidence-based methods in AAC (e.g., PAI).
- "According to implementation science, high-fidelity implementation of effective training practices (implementation fidelity) yields high-fidelity implementation of evidence-based practices (intervention fidelity), which results in positive child outcomes" (Barton & Fettig, 2013, p. 195).
- *Implementation features (e.g., the practices used to train partners) are as important as the intervention features to establish evidence-based practice (Barton & Fettig, 2013).*

Partner Training

- Kent-Walsh & McNaughton (2005) devised an 8-step instructional program for communication partners based on Ellis et al. (1991) including:
  1) Pretest and Commitment to Instructional Program
  2) Strategy Description
  3) Strategy Demonstration;
  4) Verbal Practice of Strategy Steps;
  5) Controlled Practice and Feedback;
  6) Advanced Practice and Feedback;
  7) Posttest and Commitment of Long-Term Strategy Use; and
  8) Generalization of Targeted Strategy Use.

Working Instructional Model

- Working Model for Teaching Learning Strategies
- Best practices for teaching adolescents struggling in school (Ellis, Deshler, Lenz, Schumaker & Clark, 1991).

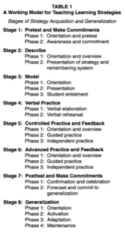


TABLE 1
A Working Model for Teaching Learning Strategies
Stages of Strategy Acquisition and Generalization

Stage 1: Pretest and Make Commitments
Phase 1: Orientation and pretest
Phase 2: Awareness and commitment

Stage 2: Describe
Phase 1: Orientation and overview
Phase 2: Presentation of strategy and remembering system

Stage 3: Model
Phase 1: Orientation
Phase 2: Presentation
Phase 3: Student enlistment

Stage 4: Verbal Practice
Phase 1: Verbal elaboration
Phase 2: Verbal rehearsal

Stage 5: Controlled Practice and Feedback
Phase 1: Orientation and overview
Phase 2: Guided practice
Phase 3: Independent practice

Stage 6: Advanced Practice and Feedback
Phase 1: Orientation and overview
Phase 2: Guided practice
Phase 3: Independent practice

Stage 7: Posttest and Make Commitments
Phase 1: Confirmation and celebration
Phase 2: Forecast and commit to generalization

Stage 8: Generalization
Phase 1: Orientation
Phase 2: Activation
Phase 3: Adaptation
Phase 4: Maintenance

Pretest and Commitment

- Instructors take pretest measurements of communication partners' spontaneous use of he targeted strategy and the communicative participation of the individuals who use AAC in the natural environment.
- Instructors introduce the targeted strategy and the training protocol to communication partners. Instructors and communication partners discuss communication partners' pre-test strengths and weaknesses in implementing the targeted strategy.
- Communication partners commit to participating in the instructional program in order to acquire the targeted strategy.

Getting a clear picture of reality.

PRETEST

Pretest

- Videotape lesson or interaction at home or in the classroom before training begins.
- "When video is used within coaching, it is best if teacher [parent] and coach watch the video separately" (Knight, 2014).
- Meet after watching the video to discuss:
  - On a scale of 1-10, how much did you incorporate the child's SGD into the lesson/activity?
  - What would have to change to make device use closer to a 10?
  - What would you be doing? What would the student/child be doing?

Setting an intention.

COMMITMENT TO TRAINING

Commitment to Training

- Complete written Commitment to Training form.
- Help staff or parents set personal goals.

STRATEGY DESCRIPTION

Strategy Description

- Instructors describe the targeted strategy and its component skills, as well as the method for remembering the steps involved in implementing the strategy. Instructors discuss the impact of implementing the targeted strategy with communication partners and with individuals who use AAC and/or their parents or caregivers.
- This is typically done in an in-service training session.

STRATEGY DEMONSTRATION

Strategy Demonstration

- Instructors model use of the targeted strategy (and its component skills) and give metacognitive explanations of all steps performed.
- Videotapes are showing during the in-service training session.

Strategy Demonstration

- Strategy Demonstration in the Classroom or at Home:
  - Review PAI Observation Tool with the staff member(s) or parent(s)
  - Demonstrate an activity in class or at home (or have them watch a video of you demonstrating the activity)
    - "Teachers report that they prefer that coaches only modeled the targeted practice, rather than the whole lesson" (Knight, 2015).
  - Have the staff member or parent use the observation tool to tally critical behaviors
  - Discuss thoughts and questions

Strategy Demonstration

Partner Augmented Input Observation Tool

☐ Model Lesson ☐ Coaching Session Date:_____

Coach: _____ Staff Member: _____

For each item below, tally the number of times each behavior was observed by the instructor during the model lesson or the staff member during the coaching session.

Behavior	Description	# of Times Observed
Slow Rate	Uses a slow speech rate. Speaks in slow, clearly articulated manner.	
Model	Says words/phrases that are related to the contextual information available while simultaneously pointing to pictures on the child's board or device.	
Respect & Reflect	When the child communicates something through gesture or word approximation, models a word or phrase to communicate the same thought or feeling without making the child repeat him or herself on the device.	
Repeat	Frequently repeats utterances.	
Expand	Builds upon own single word utterances by adding one to two words or builds upon the child's communication.	
Stop	Provides an expectant pause to allow the child time to respond.	

Comments:

VERBAL PRACTICE

Verbal Practice

- Communication partners practice naming and describing all steps required to implement the targeted strategy.

Verbal Practice

- Verbal Practice of the Strategy Steps is done using the S'MoRRES (slow rate, model, repeat, respect and reflect, expand, stop) mnemonic.
- The families/staff members label and described each step aloud during the training with guidance from the instructors to confirm that the partners understand the strategies.
- The instructors also lead staff through rehearsal (i.e., vocal repetition of the strategy steps) to aid staff and parents in memorizing steps involved.

CONTROLLED PRACTICE

Controlled Practice

- Communication partners practice implementing the targeted strategy in controlled environments with gradual fading of instructor prompting and feedback.
- During the in-service training session, families and school staff bring a communication board, emulation software, SGD, or app to participate in controlled practice exercises and labs.

Controlled Practice – Wordless Videos

- Simon's Cat
- https://www.youtube.com/watch?v=yEvhDTWSRec&feature=share

Controlled Practice – Wordless Picture Books

Controlled Practice

- Controlled Practice in the Classroom or at Home:
  - Watch the staff member or parent do the same lesson/activity that was modeled
  - Use observation tool to tally critical behaviors
  - Discuss observation using follow-up questions on PAI Observation Tool

Controlled Practice

Partner Augmented Input Observation Tool

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For each item below, tally the number of times each behavior was observed by the instructor during the model lesson or the staff member during the coaching session.

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Repeat	Frequently repeats utterances.	
Expand	Builds upon own single word utterances by adding one to two words or builds upon the child's communication.	
Stop	Provides an expectant pause to allow the child time to respond.	

Comments:

Controlled Practice

- Observation Tool Follow-up Questions
- For coaching sessions, discuss the following questions with the staff member or parent (Adapted from Knight 2007):
  1. How do you think the activity went?
  2. What did you think went really well in the activity?
  3. What are some things that we kind of still need to work on as a team?

ADVANCED PRACTICE

Advanced Practice

- Communication partners practice implementing the targeted strategy in multiple situations within the natural environment, with gradual fading of instructor prompting and feedback.

Coaching

- "An [instructional coach] is an on-site professional developer who teaches educators how to use proven teaching methods" (Knight, 2005).
- Since the the 8-Step Instructional Program developed by Kent-Walsh & McNaughton (2005) requires coaching of AAC strategies in the classroom, much can be learned by examining the instructional coaching literature.

POST TEST & COMMITMENT

Post Test & Commitment

- Instructors document and review communication partners' mastery of the targeted strategy and check performance against the baseline of communication partners' strategy implementation and the communicative participation of the individuals who use AAC.
- Instructors elicit feedback on the impact of the communication partners' implementation of the targeted strategy from the individuals who use AAC and/or their parents or caregivers. Instructors assist communication partners in generating.

GENERALIZATION

Generalization

- Communication partners practice implementing the targeted strategy across a wide range of settings and plan for long-term implementation of the strategy.

Partner Training

- Kent-Walsh, Binger & Malani (2010) used this training protocol to train parents at a 2-week AAC day camp.
- They taught parents to read with an aided model, ask wh- question with a model, and answer wh- question with a model during a reading activity. Partners were also instructed to provide an expectant pause between steps.
- Use of multi-symbol messages improved.

Partner Training

- Kent-Walsh, Binger & Hasham (2010) used this model to train parents.
- They instructed families to read books with their children using RAA (read + provide an aided AAC model, ask a wh- question + provide an AAC model, and answer the wh- question + provide an AAC model).
- All children demonstrated increases in communicative turns.

Partner Training

- Binger, Kent-Walsh, Ewing & Taylor (2010) used this technique to train educational assistants (EAs).
- They taught EAs to read with an aided model, ask wh- question with a model, and answer wh- question with a model during a reading activity. Partners were also instructed to provide an expectant pause between steps.
- Use of multi-symbol messages improved.

Partner Training

- Sennot & Mason (2015) used this to train an educational assistant (EA).
- They taught the EA to model, encourage and respond during shared storybook reading.
- Partner modeling increased and the child's total communication turns increased.

More Evidence Behind the Practice

- The 8-step instruction model was used to train a self-contained classroom teacher, speech-language pathologist and two instructional assistants in partner-augmented input (Senner & Baud, 2016).
- All staff increased modeling on students' speech-generating devices between pre- and post-test measures across activities.
- The student increased frequency of communication and independence.

More Evidence Behind the Practice

- "Outcomes of this study extend the research by training school personnel and applying the strategy across activities within a natural classroom environment with minimal disruption to the daily routines of the staff involved. This study strengthens and extends the literature by demonstrating that using participants from the same context (e.g., self-contained classroom) regardless of their backgrounds and experiences can be beneficial in increasing augmented input of partners across activities" (Alant et al., 2017, p.12).

Changes in Self

More familiar/quicker with device.
Explained more to [child].
Slowed my speech.
I used device more.
I paused more.
More relaxed in therapy.
Actually communicating with my students.
I felt like I was better meeting their needs.
More knowledge of device made it easier to use.

Changes in Student

Would imitate us.
Used device a little differently – not just when requested.
Stayed with group longer.
[Name] was more engaged/excited about activities.
He appeared relaxed that I was communicating with him in a way that made sense to him.
He paid attention more.
Differentiation in speech.

Staff Likes

Utilizing the device more to become more familiar.
Skills learned useful throughout the day.
I became more familiar with the device.
Was able to incorporate the device into lessons.
Feedback during lesson (showing me things on device).
Personalized training.
Specific feedback.
Quick feedback.
Gained more knowledge of device/where things were.

More Evidence Behind the Practice

- The 8-step instruction model was used to instruct 4 parents of children who use AAC to provide PAI on their children's SGDs during activities frequently occurring at home (Senner, Post & Baud, 2017).
- All parents demonstrated the ability to perform all of the components of successful modeling as determined by review of the observation checklists completed during coaching sessions.
- All parents increased modeling on their children's speech-generating devices between baseline and post-test measures.
- Percentage of time SGD was use at home increased for all participants.

Social Validity

- 7 Questions
  - Overall, I believe that PAI has been effective in supporting my child's communication.
  - I better understand how to provide PAI during regularly occurring activities at home.
  - I am more familiar with the language on my child's device.
  - I found this training useful.
  - I will continue using PAI at home.
  - I think it would be helpful for other family members to attend this training.
  - I used my child's SGD more frequently at home.
- Likert-Type Scale
  - 1 = Strongly Disagree
  - 2 = Somewhat Disagree
  - 3= Neutral
  - 4 = Agree Somewhat
  - 5 = Strongly Agree
- Mean = 5.0, SD = 0 for all questions.

Changes in Self

Using the respect and reflect option more. I believe I communicated better with my child when I took that into consideration. We had great language exchanges then and often lead back to the task we were targeting. But sometimes it didn't but if it didn't the 'conversations' that were had on were very informative and covered ideas/topics that hadn't been talked about in the past.
Much better proficiency using the [device].
I noticed that I am more confident in using the device and getting used to using it in general not just for helping [child] request but also in initiating conversations.
Changes that I started to make and need to continue working on is providing my son with more opportunities to communicate. Over the years I have gotten so used to speaking for him, asking yes/no questions and figuring out what he needs without talking that it is a change of mind set that I need to work on. He has so much he can say, and knows he can use his device it's about breaking that barrier to actually have him use it.

Changes in Child

My child is taking in the modeling in his own way...it might not look like he is watching or learning. But he is...and it may just take some time for it to show itself.
[Child] feels way more comfortable using the [device].
That [child] is getting more comfortable using the talker and [child] is using it more and more as time goes on. When [child] has moments of frustration because he is having a hard time communicating his needs, he will independently reach or search for his talker. At times when I am not getting his attention when I am speaking or I feel he is not fully understanding, I will use the talker to repeat what I am saying and I will get a reaction such as eye contact so I feel it helps him comprehend better.
I have noticed that if I give my son the opportunity with longer pauses and not providing yes/no questions he tends to use his device more.

Parent Likes

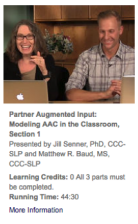
Positive environment for learning the process. I appreciated the hands on approach -- getting the chance to see it and then jump in and try it yourself. I was able to learn more about my child -- his interests and dislikes.
Very thorough, gave everyone a better understanding on how to communicate effectively.
The breakdown of different steps in using my son's device for more than just requesting.
I liked the feedback from sessions that I have received. The training was very good as before the study I knew we need to model the use of AAC for my son but we focused so much on modeling and using the device ourselves that we didn't give him many opportunities to use it.

Resources

Partner Augmented Input in the Classroom Facebook Group:

https://www.facebook.com/groups/PartnerAugmentedInput/

Resources



- Infinitec Online Classroom
  - http://www.myinfinitec.org/online-classroom
  - Infinitec serves school districts in Illinois, Minnesota, Kansas, and parts of Pennsylvania.
- Talcaac.com/products

Resources

- http://bit.ly/PAIControlPractice

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https://www.facebook.com/TechnologyLanguageCenterInc/

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http://www.talcaac.com/
http://bit.ly/NEDSEAT

https://www.youtube.com/channel/UCTG5ahrCU-3zfglv-MUjr6w?view_as=subscriber

QUESTIONS ???

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