

Supplemental Material S5. Table summarizing changes to the taxonomy over rounds and the qualitative and quantitative data that informed changes.

<p>Changes to taxonomy after each round:</p> <p>R1 = Changes after Round one R2 = Changes after Round two NA = Not applicable for this round</p> <p>(Note: no changes after Round three as this was the last round)</p>	<p>Qualitative data: Themes from participant comments that informed change</p>	<p>Qualitative data: Examples of participant comments related to the identified theme</p> <p>R1 = Comment from Round one R2 = Comment from Round two R3 = Comment from Round three NA = Not applicable for this round (no comments in this round related to this theme)</p>	<p>Quantitative data: Level of agreement</p> <p>R1: Round one R2: Round two R3: Round three</p>
<p>Aspect 1 R1: Structural change made to the flowchart i.e., the components “Comprehension” and “Production” were placed after other domain categories in the taxonomy flowchart. R2: NA</p>	<p>Suggestion to change sequence in flowchart by placing “comprehension” & “production” after the other domain categories.</p>	<p>R1: “Consider if the domains should come before comprehension and production. Much of language requires the integration of comprehension and production so may be better to consider which domain the child is most challenged in before considering receptive versus expressive (if this is even applicable). Not every language domain has a dominant comprehension or production component.” R2: NA R3: NA</p>	<p>This suggestion was not linked to lack of consensus but was actioned to improve the taxonomy.</p>
<p>Aspect 1 R1: Additional information was added to the definitions of “Discourse” and “Social Abilities” to create greater distinction between these two categories. R2: The two categories “Discourse” and “Social Abilities” were amalgamated into one category.</p>	<p>Identification of possible overlap between categories of “Discourse” and “Social Abilities.”</p>	<p>R1: NA R2: “I do not agree that Discourse only relates to the types listed, as conversation is a type of discourse, so much of what is classified as ‘social abilities’ is an aspect of ‘Discourse.’” R3: NA</p>	<p>R1 and R2: Lack of consensus on application of category “discourse” for describing the domains targeted in interventions.</p>
<p>Aspect 1 R1: Additional information and examples were added to indicate how interventions targeting pre-linguistic communication may be categorized. R2: NA</p>	<p>Suggestion to add clarification to ensure that categorization of pre-linguistic communication is clear</p>	<p>R1: “As the taxonomy is valid for school age children regardless of severity etc., potentially an element that incorporates pre-symbolic and pre-intentional ‘spoken language?’” R2: NA R3: NA</p>	<p>This suggestion not linked to lack of consensus but was actioned to improve the taxonomy.</p>
<p>Aspect 1 R1: Additional information was added to indicate how interventions that use multi-modal communication are categorized. R2: NA</p>	<p>Identification that SLPs may have less clarity regarding categorization of interventions for children who use multi-modal communication.</p>	<p>R1: “The wording for the definition of ‘Spoken’ and ‘Written’ language may need some clarification. Both refer to ‘symbols,’ creating some ambiguity in the decision regarding PECS.” R2: NA R3: “Semantics - could have been taken as demonstrating understanding/use of words and word meaning via nonverbal process (i.e., connecting word and picture).”</p>	<p>R1: Participants did not reach consensus on whether “PECS” targets written language. R2 & R3: Participants did not reach consensus on whether case study with PECS targets semantics.</p>
<p>Aspect 1 R1: The interventions being categorized in the Delphi study were placed in into case studies so that participants consider the interventions in the same context as other participants.</p>	<p>Identification that participants may be considering multiple ways an intervention could be conducted.</p>	<p>R1: “This becomes tricky to categorize as often SLPs will adapt the programs or modify to suit the child’s needs [to] potentially any of these could be adapted and applied to meet client needs in any areas. This may mean that the program is not followed according to how it has been written. SLPs I have observed in my clinical practice ‘take parts’ for example, PECS, but do not follow this program.” R2: NA R3: NA</p>	<p>R1-R3: Lack of consensus on application of categories for describing the domains targeted by interventions.</p>
<p>Aspect 1 R1: NA R2: Clarification was provided to highlight that only the main domains that are explicitly</p>	<p>Identification that participants may be describing all possible domains involved in a task, rather than key</p>	<p>R1: NA R2: NA R3: “People are most likely assuming that, in order to have expressive skills & make requests, you require</p>	<p>R2 & R3: Lack of consensus categorization of case study one as targeting “semantics”</p>

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<p>targeted in an intervention are selected (and it is not implied that the intervention does not have any elements of other categories). Options for this aspect were reduced in the survey (i.e., participants could only select one other category in addition to categories that reached consensus in round 2).</p>	<p>domains being targeted by the intervention.</p>	<p>comprehension & thus comprehension is inherently required. Semantics is meaning so some overlap exists.”</p>	
<p>Aspect II R1: Change in category names for Aspect II i.e., “skill development” instead of “remediation” and “strategy-use” instead of “compensation.” Additional information was added to definitions to explain that skill development does not imply that full “remediation” will be achieved. R2: Clarification was provided to highlight that the main purpose of an intervention is selected (and it is not implied that the intervention does not have any elements of the other category).</p>	<p>Identification of possible overlap between categories of “skill development” and “strategy use”</p>	<p>R1: “The distinction between these two areas can be blurry for students with whom you still work on directly improving skills though they may not ever ‘catch-up’ and have the impairment fixed.” R2: “I don’t see skill development and strategy [use] to be mutually exclusive necessarily.” R3: “Is it because in teaching a strategy you are developing a skill?”</p>	<p>R1 & R2: Lack of consensus on categorization of intervention using PECS on Aspect II categories.</p>
<p>Aspect II R2: Correct terms for “skill development” and “strategy use” used in the round three survey.</p>	<p>Participants identified a that the round one terms were used in one of the round two survey questions by mistake.</p>	<p>R1: NA R2: “Definitions [of] the terms skill development/strategy use are used in the Delphi document; however change disorder/compensation are used in the survey.” R3: NA</p>	<p>R2: This was not linked to lack of consensus as the definitions for categories were correct.</p>
<p>Aspect II R1: The interventions being categorized in the Delphi study were placed in into case studies so that participants consider the interventions in the same context as other participants. R2: Further information was added to the definitions to identify that, although multimodal communication may replace speech production; interventions are categorized by according to purpose of the interventions in terms of language development.</p>	<p>Identification that SLPs may have less clarity regarding categorization of interventions for children who use multi-modal communication.</p>	<p>R1: “PECS could be either remediation or compensation, dependent on the client.” R2: NA R3: “I think if this doesn’t reach consensus it may be due to assuming AAC is a factor. However, the actual goal is communication intent and word production.”</p>	<p>R1 & R2: Lack of consensus on categorization of intervention using PECS on Aspect II</p>
<p>Aspect III R1: Change in category names for describing service method by replacing the terms “direct” and “indirect” with “delivered by SLP” and “delivered by others” (Aspect III).</p>	<p>Identification that terms “direct” and “indirect” may be ambiguous</p>	<p>R1: “...I think confusion will arise. Why do the terms direct & indirect need to be used? Why cannot it just be: SP administered, Other/non-SP administered?” R2: NA</p>	<p>R1: Lack of consensus on categorization of intervention using PECS on delivery method (Aspect III)</p>
<p>Aspect III</p>	<p>Identification that lack of clarity may exist</p>	<p>R1: “I feel this [these terms] is somewhat limited for some service delivery models and especially for those</p>	<p>R1: Lack of consensus on categorization of</p>

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<p>R1: Information was added to definition of “delivered by other” to explain that even though significant SLP time may be involved to support interventions “delivered by others,” these interventions are still categorized as such. It is beyond the scope of the taxonomy to describe the types of supports SLPs may use in “training” others.</p>	<p>with categorization of interventions conducted by others as these interventions may still require considerable input from SLP</p>	<p>[interventions] in which a more collaborative model is used or where the ‘therapy’ is implemented across a range of daily routines and programs with relevant training and upskilling of all staff.” R2: NA</p>	<p>intervention using PECS on delivery method (Aspect III)</p>
<p>Aspect III R1: NA R2: Further information was added to definition of “software” to clarify that this refers to interventions that are conducted predominantly through a computerized process.</p>	<p>Identification that lack of clarity may exist with categorization of interventions as “software” versus “delivered by others”</p>	<p>R1: NA R2: “Can’t software be delivered by another person, e.g., ELR [Extra Language Resource] - parents can pay for a subscription to this compute-based software intervention.”</p>	<p>R2: This was not linked to lack of consensus but was actioned to improve the clarity of definitions with the taxonomy.</p>
<p>Aspect III R1: Change in category name was made by changing “internet” to “information and communication technologies.” R2: Further information was added to clarify definition of “information and communication technologies” i.e., technologies used for two-way communication.</p>	<p>Identification that lack of clarity may exist with definition of terms “Internet” and “ICT.”</p>	<p>R1: “Examples of internet based are not all using the ‘internet’ so a possibly confusing term to use if covering other than ‘internet.’ Would technology or Information and Communication technologies (ICT) be better?” R2: “...does video-recording and/or audio-recording come under ICT?”</p>	<p>R1: Lack of consensus with identification of some interventions in this category. R2: This was not linked to lack of consensus but was actioned to improve definition.</p>
<p>Aspect III R1: The word “setting” was changed to “environmental context” and clarification and examples were added to the definitions of environmental context categories to highlight that these categories identify the environmental context and not the physical location. R2: Further clarification was provided to highlight that the categories in “environmental context” refer to environmental context and not the physical location.</p>	<p>Lack of clarity with definitions for “environmental context” with some participants interpreting this as being physical location, rather than “environmental context.”</p>	<p>R1: “Home setting could include ‘homework time.’” R2: “The setting (clinic vs community) may not be accurately distinguished. A structured assessment may occur at a school location, an observation in the classroom may provide assessment information, an everyday situation may be set up in a location where services are delivered, etc. Definitions need internalizing for accurate response (not intuitive).” R3: “Again people might get caught up on where the intervention physically took place, instead of considering the origin of the materials used in therapy.”</p>	<p>R1-R3: Lack of consensus with selection of “environmental context” categories to describe assessments.</p>
<p>Aspect III R1: The interventions being categorized in the Delphi study were placed in into case studies so that participants consider the interventions in the same context as other participants. R2: NA</p>	<p>Identification that participants may be considering multiple ways an intervention could be conducted.</p>	<p>R1: “There may be software versions of these interventions but I’m not aware of them.” R2: NA</p>	<p>R1: Lack of consensus on categorization of some interventions on delivery method and tier of support (Aspect III) R2: NA</p>
<p>Aspect IV R1: Examples were added to the definitions of “task types” to highlight distinctions between categories.</p>	<p>Identification that SLPs may perceive overlap between categories (particularly between</p>	<p>R1: “I think more examples are needed for each task type as I have thought about how I would categorize the therapy I do, and I would find it hard to differentiate between them without more examples.”</p>	<p>R1-R3: Lack of consensus with selection of Aspect IV “Task Type” categories to describe interventions.</p>

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<p>R2: The information contained within each definition was formatted under headings to highlight the key features being described by each term.</p>	<p>"contextualized" and "activity-focused").</p>	<p>R2: "Contextualized and activity focused interventions appear somewhat similar/may be seen as overlapping. Can these categories be further defined/differentiated to help clinicians understand the contrast between these categories?" R3: "Contextualized and Activity focused - both seem to include a focus on functional activities, which can be confusing when trying to select one category."</p>	
<p>Aspect IV NA (No changes after round three as this was the last round)</p>	<p>Identification that understanding and applying the taxonomy accurately takes time and consideration (i.e., high level of information processing).</p>	<p>R1: NA R2: NA R3: "Lots of information to digest and apply."</p>	<p>R1-R3: Lack of consensus with selection of Aspect IV "Task Type" categories to describe interventions.</p>
<p>Aspect IV R1: The interventions being categorized in the Delphi study were placed in into case studies so that participants consider the interventions in the same context as other participants. R2: NA</p>	<p>Identification that participants may be considering multiple ways an intervention could be conducted.</p>	<p>R1: "The robust vocabulary intervention is difficult to categorize as its more of a generic approach that can involve anything from speech pathologists' training of teachers to adopt the conceptual framework in their regular teaching, to an incidental inclusion of some direct vocabulary instruction in other therapy tasks, to a highly structured approach targeting direct vocabulary instruction alone. Maybe the issue is with the rather restricted explanation of this approach in the link? I've picked the 'best fit' but it wasn't clear cut." R2: NA R3: NA</p>	<p>R1-R3: Lack of consensus with selection of Aspect IV "Task Type" categories to describe interventions.</p>
<p>Aspect V R1: Information provided to Delphi participants to explain the distinction between "prompting," "linguistic" and "regulatory" techniques. R2: Further information was added to explain the distinctions between "prompting," "linguistic" and "regulatory" techniques.</p>	<p>Identification that lack of clarity exists with the structure of Aspect V.</p>	<p>R1: "I'm not quite sure about regulatory. It seemed like the techniques described were a conglomerate of techniques that were like 'other,' so I wasn't sure they fitted together that well." R2: "I think it's slightly unclear where the lines are drawn between some categories, e.g., under linguistic techniques, the example of a focused contrast is very similar to the of the regulatory technique of giving verbal explicit instructions." R3: "Regulatory techniques makes people think of how you monitor/regulate a skill, but your definition is more about teaching."</p>	<p>R1-R3: Lack of consensus on categorization of interventions across some categories in Aspect V.</p>
<p>Aspect V R1: An additional category was added to include "gestural prompting." The definitions for different "prompting techniques" were revised to improve the clarity of definitions. R2: NA</p>	<p>Identification that some non-verbal prompts are not clearly covered under category "visual prompts."</p>	<p>R1: "The nonverbal markers and steps involved in PECS that are essential to developing intentional communication don't seem to be acknowledged within these intervention techniques." R2: NA R3: NA</p>	<p>R1-R3: Lack of consensus on the presence of "visual prompting" in some interventions.</p>
<p>Aspect V R1: Examples were added to the definition of "verbal prompting" to include questions that prompt meta-cognitive thinking. R2: NA</p>	<p>Identification that lack of clarity exists with verbal promoting designed to elicit metacognitive thinking.</p>	<p>R1: "Add metacognitive techniques. For example, why do you choose that one? How did you know that was what I was asking for?" R2: NA R3: NA</p>	<p>R1: Lack of consensus on the presence of "verbal prompting" in some interventions.</p>
<p>Aspect V R1: Clarification was added to the definition of "feedback as repetition" to include feedback about whether child's own response sounds correct.</p>	<p>Identification that lack of clarity exists with the range of techniques covered by "repetition as feedback."</p>	<p>R1: "Add to Feedback - Repetition or Verbal - student's response may be repeated back verbatim and the student may be asked if that sounds right?" R2: NA R3: NA</p>	<p>R1: Lack of consensus on the presence of "repetition as feedback" in some interventions.</p>

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R2: NA			
Aspect V R1: NA R2: Information was added to definitions to further clarify the differences between “feedback” versus “rewards.”	Identification that lack of clarity exists with some definitions of “visual feedback,” “natural feedback” and “rewards.”	R1: NA R2: “Differentiating between visual feedback & rewards in the context of the year 8 class example was tricky...” R3: “Unsure if teacher writing words on the board constitutes as a visual prompt.”	R2-R3: Lack of consensus on categorization of interventions as “visual feedback” and “rewards.”
Aspect V NA (No changes after round three as this was the last round)	Identification that SLPs may have less clarity regarding categorization of interventions for children who use multi-modal communication.	R3: “Communication form (AAC) being interpreted as visual prompt or reward.”	R2-R3: Lack of consensus with use of “visual prompts and “rewards” for case study one (PECS).
Aspect V NA (No changes after round three as this was the last round)	Identification that understanding and applying the taxonomy accurately takes time and consideration (i.e., high level of information processing).	R1: NA R2: NA R3: “Perhaps because we use these techniques so naturally/ instinctively and often in combination with each other that when we look at a case and have to explicitly identify these behaviors, we are making unconscious knowledge conscious. This unfamiliar task of ‘coding’ the behavior may need practice as we are essentially ‘de-synthesizing!’”	R1-R3: Lack of consensus with selection of Aspect V categories to describe interventions.
Aspect V R1: The interventions being categorized in the Delphi study were placed in into case studies so that participants consider the interventions in the same context as other participants. R2: Participants instructed to select key teaching techniques used in each case study.	Identification that participants may be considering multiple ways an intervention could be conducted.	R1: “When using the above techniques, you might change these aspects (from what is specified in the manual/instructions) according to different / children’s needs/context.” R2: NA R3: “Some of these[techniques] could be used even though not explicitly stated?”	R1-R3: Lack of consensus with selection of Aspect V categories to describe interventions.
Overall Taxonomy NA (No changes after round three as this was the last round).	Participants identified as finding the taxonomy useful for conceptualising clinical work.	R1: NA R2: “I think it is a very comprehensive taxonomy, well thought through and a useful way of looking at our work generally and more specifically for children with language impairment.” R3: “...making teaching techniques explicit and separating/ coding them required much thought and checking with the reference document. This signifies the need for such a document (once the results are out) as I think we all agree language teaching techniques come across as ‘vague.’ Some look and sound so natural that it may not actually feel like a technique and is not recognized as such. A solid description and classification system may have fantastic implications for clinical education and parent training!”	NA
Overall Taxonomy NA (No changes after round three as this was the last round)	Participants identified that understanding and applying the taxonomy accurately takes time and consideration.	R1: NA R2: “Challenging to keep all parameters in mind. I hope I have not been too hasty in my responses.” R3: “It took me quite a while to work through.”	NA
Overall Taxonomy NA (No changes after round three as this was the last round)	Participants commented that the taxonomy and their understanding of the	R1: NA R2: “The changes made in this round are much better and clearer than the first.”	NA

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	taxonomy improved over rounds and that examples assisted in improving the taxonomy.	R3: NA	