

Appendix 1

Summary of Communication Development Stages Before Speech (Cited from Triple C: Checklist of Communication Competencies, Bloomberg & West 1999)

Descriptions of the Stages	
Stage 1 Pre-intentional reflexive stage	People in this stage present early and reflexive behaviors such as sucking and grasping in response to internal and external stimuli through vision and hearing organs. They gaze at people; this is known as ‘mutual gaze’, or objects and change activity level upon seeing an object. They react to loud sounds and voices, and vocalize comfort and distress, demonstrating different states of alertness.
Stage 2 Pre-intentional reactive stage	People in stage 2 display expanded range of body and limb movements and vocalizations. They search for sound sources such as speech and music, and respond to different tones of voice and facial expressions. “Any sound or movement made by the individual will have a major effect on the caregiver’s behavior. Mutual gaze is changed to shared attention where the individual and the caregiver may appear to be looking at the same object or event and the caregiver will comment on it” (p.6). They might anticipate and respond to familiar interactions and repeat a pleasurable action.
Stage 3 Pre-Intentional Proactive Stage	“There are the beginnings of acting purposefully on objects” (p.8). People in this stage repeat an action to make novel changes. They imitate and develop some behaviors such as waving, shaking and mouthing various objects. In addition, they reach for and look at an object to indicate preference and choice. The behaviors become intentional towards the end of the stage.
Stage 4 Intentional Informal Stage	People in intentional informal stage know how to use caregivers to get objects which they want. They use a variety of communication behaviors and gestures which include alternating gaze between a communication partner and an object or activity, and pointing to an objects. They can choose an item between two to four objects and respond to simple commands such as ‘give me’ and ‘sit down’.
Stage 5 Intentional Formal Stage	“The individual is able to communicate a wide range of intentions or functions to others in a way that is more conventionally understood e.g. through gestures, single words and vocalizations” (p.11). They start to use different objects for the appropriate purposes and also are able to solve simple problems through trial and error.
Stage 6 Intentional Referential Stage	People who reach intentional referential stage are able to solve simple problems by thinking about past experience rather than through trial and error. They learn joint action routines such as dressing and mealtimes so that anticipate these familiar routines. They produce around fifty single words or signs and use photographs or pictures for choice-making and communication.

*Triple C Checklist has been revised in 2009 and there are total 5 stages now. The first three stages in this appendix altered into two stages: unintentional passive communication stage and unintentional active communication stage.