

Theory of Mind and Linguistic Acquisition

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Abstract

Theory of Mind (ToM) is a conceptual theory that is credited with enabling individuals to anticipate the mental states of others, including their beliefs, desires, emotions, intentions, and additional emotive circumstances (Flavell, 2004). Linguistic acquisition is a natural development that begins to develop in children from birth and enables communication. The cognitive domains necessary to comprehend language is also required in order for the formation of ToM to develop. The interpretations made through ToM presumptions can contain the discernment of another's false belief. In this context, the individual must be aware that the literal interpretation could be an inaccurate symbol or manufactured belief. This understanding requires a certain level of cognitive development in the child since the intention may be to signify something else and the child must be able to correctly process idiomatic expressions in order to accurately make ToM determinations (Caillies & Le Sourn-Bissaoui, 2008). This paper explores the relationship between ToM and linguistic acquisition in normally developing children, as well as those with various disabilities to ascertain the degree of cognitive development necessary in order to make ToM determinations. Exploration of this relationship reveals that linguistic and cognitive development are both essential in the construct of ToM perceptions in early childhood.

Keywords: language development, linguistic acquisition, theory of mind

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Theory of Mind & Language

Theory of Mind (ToM) is a relatively new field that studies the nature of cognitive development in regards to human comprehension of the introspective or conceptual environment of others (Garfield, Peterson, & Perry, 2001). The inception of the ToM theory over the past two decades has inspired a theoretical social cognitive competence under intensive examination, garnering a traditional definition as the understanding of another person's belief (Caillies & Le Sourn-Bissaoui, 2008). Essentially, the ToM concept illustrates the cognitive capacity of an individual to comprehend and attribute mental states to the self, as well as others (Goldman, 2012). The ToM concept includes elements of cognitive development that consists of personal individual "...beliefs, desires, emotions, thoughts, perceptions, intentions, and other mental states" (Flavell, 2004, p. 274).

Linguistic acquisition is vital to all aspects of life and communicative abilities affect how ToM is conceptualized (Grazzani & Ornaghi, 2012; Nettle & Romaine, 2000; Skotko, 1997). Although language development in early childhood is a perpetual process that begins at birth, the development of ToM requires the formation of specific cognitive domains that will enable the child to form the conceptual framework necessary to make such determinations (Ananthaswamy, 2009; Astington & Edward, 2010; Otto, 2010). Furthermore, association of the physical or emotional states attributed to ToM requires the attainment of semantic in addition to syntactic properties of sentential accompaniments in order to assist the expansion of the representational elements inclusive in ToM (Hale & Tager-Flusberg, 2003).

Empirical research has proven that in early childhood, linguistic acquisition is the foundation for cognitive learning (Ball, 2010). Comprehensive linguistic input is essential to the child's ability to acquire language competency. Other factors include cognitive development, personality, self-confidence, motivation, and the language competencies of those in the child's home environment (Morrison, 2009).

The broad connotations for the ToM concept has made exploration of particular interest within a wide range of disciplines, including developmental, social, clinical, comparative, cultural, and cognitive psychology, as well as philosophic, psychiatric, neuropsychology, educational professions, and numerous other fields of research (Flavell, 2004). This area is of particular interest to early childhood researchers because it illuminates various aspects of the cognitive development of children (Blijd-Hoogewys, van Geert, Serra, & Minderaa, 2008). Examination of ToM provides a comprehensive understanding of the development of early childhood thought process, as well as their facility to construct symbolic exemplifications that allow them to preserve images (Leslie, 1987).

Research Questions

The requisite of cognitive knowledge for both linguistic acquisition, as well as the construct of ToM concepts has inspired the research question: Is linguistic acquisition necessary for the development of ToM? In addition, age is a primary factor in both linguistic acquisition and ToM development in children since it is presumed that both occur during the same period in early childhood (Astington & Edward, 2010; Otto, 2010). This element prompts examination of ToM through an additional research question: Must children develop linguistic representations of the relative concepts in order to perceive these dynamics through ToM? In other words, is it necessary for children to be able to identify the perceived states of others that they interpret through ToM?

Research Methodology

This article will seek to answer the research questions by searching multiple databases including EbscoHost, Google Scholar, JStor, Muse, ProQuest, Sage, and WorldCat, using the specific keywords 'linguistic acquisition' and 'theory of mind.' From these databases, articles exploring the relationship between ToM and cognition of symbolic speech were collected, specifically research that concentrated on children with disabilities such as hearing, Autistic spectrum, or other disorders. This research examination employed archival techniques, which relies on the grounds established through existing studies. In this capacity, the research is both qualitative and quantitative, since it is based on the methods applied in the relevant studies, which includes both methodologies (Yoshikawa, Weisner, Kalil, & Way, 2008).

The data compiled from the empirical analysis in existing studies will be based on the instrumentation applied and will consist of observations, as well as examinations conducted in the referenced studies (Lieberman, 2012). The research procedure methods will be determined by the methods indicated in the relevant research materials and the data will be analyzed in accordance with the techniques performed in the context of the studies examined. The conclusions will be indicated based on the details represented in the compiled details representing relevant knowledge content with a bearing on the salience of the primary analyses established on the circumstance of these references.

The strength in archival research is in that if there is a wealth of available research, the archival design enables researchers to incorporate as little or as much research and widen or narrow their foci according to what they are trying to determine, as well as the availability of relevant data. However, the limitation is that the available research may not completely coalesce with the intentions of the study being conducted. Archival research encompasses conclusions drawn through analysis of current information resources including both public and private records to exploit the plethora of knowledge, which is the principle strength of this research method since it enables the consideration of trends from a temporal perspective (Newman, 2011). However, this is also the major limitation of this research method since it only draws upon available knowledge,

so if there is only a small amount of data existing, the research findings will be limited in this manner leaving the examiner with little control over the outcomes (Newman, 2011).

Illuminating the Concept of Theory of Mind

The term 'ToM' is generally used to indicate whatever understanding guides propositional viewpoint attribution, as well as provide an explanation and prediction of behavior by means of inner states and processes (Ahmed & Miller, 2011). Some researchers have indicated that ToM acquisition occurs through the development of social and linguistic interchanges, but does not precede them as an autonomous body of knowledge (Garfield, Peterson, & Perry, 2001). Existing analyses on ToM serves as a conceptual framework that analyzes the capacity of an individual to imagine or form opinions in regards to the cognitive states of other people (Marraffa, n.d.). The individual's capacity to characterize mental statuses, such as beliefs, desires, and intentions, to the self in addition to others helps comprehend predictive behavior, thus transforming understanding of social patterns (Al-Hilawani, Easterbrooks, & Marchant, 2002).

Researchers speculate that ToM develops in early childhood through language as children listen to people discuss their emotions and beliefs (Ananthaswamy, 2009). The representations established through ToM describe that individual's ability to include various perceptions and be cognizant of the possibility that they or others can have contrived opinions (Caillies & Le Sourn-Bissaoui, 2008). In early childhood, this is demonstrated when children are able to describe actions with words. At the onset of linguistic cognitive development, the "mental organ" is not yet in collaboration with other cognitive systems that facilitate responses such as motor control, perception, and reasoning (Pinker, 1995).

The individual must distinguish that the precise definitive expression could be a false representation or contrived belief when the speaker's purpose is to indicate something else (Caillies & Le Sourn-Bissaoui, 2008). According to this interpretation, ToM must exist despite the individual's ability to correctly interpret idiomatic expressions (Caillies & Le Sourn-Bissaoui, 2008). This correlates with the hypotheses that an affirmative or 'yes' bias exists as a predetermined response in three to five-year-old toddlers that have developed ToM capabilities (Moriguchi, Okanda, & Itakura, 2008).

It is the common interpretation that youth with ToM capabilities comprehend that people may hold erroneous interpretations, permitting the child to resist strange or incorrect recommendations, even when they come from adults (Moriguchi, Okanda, & Itakura, 2008). Presence of ToM is demonstrated in pre-linguistic children that have the ability to attempt the retrieval of a hidden item from a parent's closed hand. Children that are developing ToM abilities will also attempt retrieval even though the parent has visibly switched the object to another hand.

Patterns of Linguistic Acquisition

Language is a symbolic system of communication that encompasses internal, as well as external entities (Malle, 2002). Regardless of the nature of interactions, communication is essential to pass on knowledge, give directives, and survive, which is why all children must learn to use some form of communication. An essential element of language is that it proposes options in its representational repertoire (Malle, 2002). The first words children speak are in the language of their parents, primarily disregarding the individuals who voice a different language and this is the foundation that they establish their basis for linguistic development (Ball, 2010).

Linguistic diversity has an amazing persuasion on a student's talent to learn in schoolroom sceneries, which can become often harmful or damaging concerning the student when the educator has not received appropriate teaching courses to compliment the requirements of these children, as is primarily the illustration in local school environments (Otto, 2010). There are many elements that influence language acquisition in early childhood that the school practitioner must recognize, including the temperaments of the student, the societal background, and the superiority or aptitude of the linguistic contribution presented, all of which are significant elements in the facility to integrate the independent language (Otto, 2010).

Comprehensive verbal contribution is vital to the student's capacity to acquire the new language (Garfield, Peterson, & Perry, 2001). Linguistic and ethnic diversity influences student's capacity to learn from an instructor that is lacking in appropriate pedagogical educational methodologies that typically includes techniques to accommodate the needs of all individuals in public school settings (Otto, 2010). Additionally, a variety of characteristics within the learner's surroundings influence their aptitude to cultivate literacy skills that the teacher must consider (Ball, 2010). This includes the specific personalities of each student, the dynamics of the educational setting, and the qualitative elements of the linguistic input received within the home (Crim, et al., 2008).

In early childhood, reading provides linguistic input that encourages students to actively think about, as well as internalize language, which teaches them how to correlate sequences and follow plots or recurring themes throughout the story line. Through this type of linguistic input, children learn how to ponder relevant elements of the story, like mood, and determine what may come next in the story. This also gives children the confidence to explore their thoughts and ideas about the story to piece together their own meanings.

Linguist Naom Chomsky is the main theorist associated with the nativist linguistic developmental perspective on, which accentuates instinctive linguistic abilities as the principal influential aspect to language development in children (Morrison, 2009). This perspective of linguistic acquisition encourages educators to employ a curriculum that will allow numerous opportunities for children to explore language and explore various aspects of their growing

knowledge and keep their language acquisition device (LAD) active (Morrison, 2009; Myers-Scotton, 1993).

The cognitive development perspective is based on the theories of Jean Piaget and speculates that linguistic acquisition comes with maturation and cognitive development, which is the foundation for teaching language (Ball, 2010). This perspective of linguistic development encourages early childhood educators to pay close attention to the cognitive developmental stages of their students and encourage stimulatory activities as precursors to the onset of linguistic development (Hill, 2007). These stages of cognitive development cannot be rushed or induced through the accomplishment of any specific tasks, but will develop only as the child's experiential knowledge allows. In facilitating cognitive development, ritualized dialogue is an effective scaffolding technique in which the teacher provides all the dialogue, converses with the student, or allows the student to carry the dialogue, according to the age, linguistic capabilities, and experience of the student.

The behaviorist perspective highlights the role of "nature" and the stimuli, responses, and reinforcements that occur in the child's environment based on B.F. Skinner and his theory of 'operant conditioning' along with the notion that children are 'blank slates' before they are taught through various situations and learn language through imitative speech (Decker, Decker, Freeman, & Knopf, 2009). This perspective encourages teachers to focus on the types of stimuli and reinforcements regarding language that children encounter and would encourage them to communicate verbally.

The interactionist perspective is based on the sociocultural interactions that help children develop their linguistic capacities and is based on the theories of Lev Vygotsky, whose premise contends that language development in early childhood is formed through social interactions with those in their surroundings that create a language acquisition support system (LASS) (Giorgis & Glazer, 2008). This theory requires the adult to create conditions for effective development and to be aware of the child's zone of proximal development and know what the child can accomplish on their own and what will require scaffolding from the supervising adult. The meaning of language is singularly founded on the identity of the sender, which is developed through interpersonal communication (Borchers, 1999). The interpersonal communication we share with family, friends, colleagues, and others we associate with helps us develop our identity, and this identity plays a part in determining what slang we use and the meanings associated with its usage (Borchers, 1999). Interpersonal communication is spurred by three basic interpersonal needs: inclusion, control, and affection (Borchers, 1999).

Linguistic & ToM Development in Children with Disabilities

The relationship between mental-state language and ToM in primary school children remains in alignment with research indicating that the social use of language is one of the most powerful cognitive tools to understand others' minds (Gallese, 2007; Grazzani & Ornaghi, 2012). The linguistic, metacognitive and cognitive measures are used to evaluate their verbal ability, use of mental-state terms, perception of metacognitive language, grasp of second-order false beliefs, and emotion, which are relative to comprehension analyses acknowledging various brain areas related to ToM and therefore vital to student's efficient navigation of the social world (Grazzani & Ornaghi, 2012; Liu, Sabbagh, Gehring, & Wellman, 2009). Children can be assessed and given a verbal score, with the overall results indicating that "mentalizing" only occurred with non-decomposable idiomatic expression, particularly from the second-order competences (Gobbini, Koralek, Bryan, Montgomery, & Haxby, 2007; Moriguchi, Okanda, & Itakura, 2008).

Children with intellectual disabilities will display significant limitations in the areas of intellectual functioning and adaptive behavior. Adaptive behavior includes conceptual, social, and practical adaptive abilities in addition to the student's intellectual capacities. When dealing with students that are intellectually disabled, teachers need to focus on memory, motivation, and their ability to problem solve.

When determining the presence or extent of cognition in children demonstrating ToM characteristics, various testing methods can be employed to examine the relationship between executive function and ToM, adding new information to an unexplored area of research with the preliminary observation that ToM predicts prospective memory in young children (Ford, Driscoll, Shum, & Macaulay, 2012). The relation between children's ToM and their social interactions during the transition to primary school between age five to seven, which is the first stages of developing autonomy, as well as the stage that most children develop an increased awareness that mental states are internal, subjective experiences distinct from behaviors and contexts associated with them (Caputi, Lecce, Pagnin, & Banerjee, 2012; Gonzalez-Mena, 2009; Olson, Lopez-Duran, Lunkenheimer, Chang, & Sameroff, 2011). There is strong evidence that exposure to mental state language, such as references to beliefs, desires, emotions, and other expressions, directly predicts children's later ToM understanding (Remmel & Peters, 2009).

The critical factor in ToM development is not general conversational exposure to language about mental states and different perspectives but the acquisition of certain syntactic forms (Remmel & Peters, 2009). The acquisition of complement syntax where a proposition is embedded under a mental state or communication verb is necessary to represent false beliefs (Pinker, 2004). In support of this hypothesis, two studies found that training on complement syntax improved children's performance on false belief tasks (Remmel & Peters, 2009). A number of other studies

have found evidence that false belief performance is relative to language ability more generally and not mastery of complement syntax specifically (Remmel & Peters, 2009).

The Cognition Hypothesis claims that tasks should be designed and sequenced for learners on the basis of increases in their cognitive complexity, and that these design and sequencing decisions should be the basis of the task-based syllabus (Robinson, 2007). This theory specifies six dimensions where task complexity can be increased while simultaneously directing cognitive resources to the available and specific second language and/or foreign language (L2) linguistic means to meet task demands. Complex tasks on these dimensions require:

- i. reference to events happening in the past, elsewhere (There-and-Then tasks) which implicates and directs learner resources to e.g., the L2 means of encoding past time reference, and deictic expressions;
- ii. distinguishing between, and selectively referring to one or more among many elements or objects which implicates and directs attentional resources to, e.g., the L2 use of complex pre- and post-modification of noun phrases;
- iii. taking multiple, different perspectives on an event which implicates, e.g., the L2 use of first, second, third person pronominal reference and selection from event construal options available in L2 lexicalization patterns; and a further three dimensions which involve increasingly complex reasoning about;
- iv. spatial location;
- v. causality; and
- vi. other people's intentions in performing social actions (Robinson, 2007).

Of these six dimensions, the latter intentional reasoning dimension is operationalized as the basis for increasing the complexity of task demands in the present study (Robinson, 2007). Language used to refer to psychological states emerges in a predictable developmental sequence, with physiological terms such as, sleepy; desire words such as, want; and emotion words such as, happy being the earliest and most common psychological state terms to occur in children's speech (Robinson, 2007). Around the age of three years, children begin also to refer to cognitive states of others (Robinson, 2007).

For the majority of deaf children, namely those with hearing parents, language deficits often exist for those learning American Sign Language (ASL) (Schick, De Villiers, De Villiers, & Hoffmeister, 2007). Even with language delays, deaf children with hearing parents (DoH) are actively sociable (Schick, De Villiers, De Villiers, & Hoffmeister, 2007). However, deaf children who have deaf parents (DoD) that provide natural access and exposure to ASL demonstrate developmental benchmarks in language acquisition similar to typically developing hearing children (Schick, De Villiers, De Villiers, & Hoffmeister, 2007).

In other research, it was determined that children with cochlear implants (CIs) did not typically demonstrate significant, if any, linguistic developmental delays relative to the children with normal hearing, advanced relative to the late-signing deaf children with hearing parents, and at least comparable to the native signing deaf children (Rommel & Peters, 2009). This level of theory of mind performance demands an explanation, given that previous studies found that deaf children with hearing parents (whether oral or signing, and whether implanted or not) were quite delayed relative to both children with normal hearing and native-signing deaf children (Rommel & Peters, 2009). The most obvious explanation is that the CI children in this study had better language skills for their age than the deaf children of hearing parents in previous studies.

For instance, the four previous studies that have examined theory of mind in children with CIs found that both false belief performance and language skills were considerably delayed relative to hearing norms. In this study, however, the CI children showed good open-set spoken word recognition, excellent comprehension of complement syntax, and virtually no delay in average performance on standardized measures of receptive and expressive language (Rommel & Peters, 2009). Although we cannot claim that their spoken language skills were exactly equivalent to those of their hearing peers, they were clearly able to communicate effectively using spoken language, and most of them were functioning in fully mainstream educational settings without pull-out academic services (Rommel & Peters, 2009).

Essentially, children with disabilities can develop in the same accord as typically developing children, so their cognition, linguistic acquisition, and ToM development can also develop at the average rate without any hindrances given appropriate linguistic input. When dealing with developmentally or cognitively challenged students, it is very important to first determine what their capabilities and levels of development are, as you may not be able to simply select materials according to their age and run with it. Appropriate assessments should be made to gain knowledge of each student's abilities and if they will benefit from the curricular agenda even if the student body is not disabled.

Language & Theory of Mind

There are numerous factors that affect language acquisition, which must be considered by the teacher, such as the individual traits of the learner, the social setting, and the quantity and quality of the linguistic input the pupil receives, all of which are influential factors in the pupil's ability to assimilate the target language (Otto, 2010). The roots of this cognitive capacity can be traced to the first year of life, however, throughout the early years, children become more aware of their own minds and the minds of others, as well as how to mediate between the two (Hale & Tager-Flusberg, 2003). Crucial changes in ToM understanding occur at age four when children begin to be able to accurately interpret the contents of other minds, especially belief states (Hale & Tager-Flusberg, 2003).

The ability to conceptualize on the level of ToM develops at around four years of age for the average child and is a vital element in the creation of beliefs, aims, and wishes to other people, particularly in an effort to foretell their actions (Marraffa, n.d.). Extensive research indicates that ToM improves considerably during the preschool years, demonstrating that children's yes bias may result from a less-developed ToM since young children that understand another person's false belief reduce the yes bias because of this comprehension, enabling the child to comprehend idioms (Caillies & Le Sourn-Bissaoui, 2008; Flavell, 2004; Moriguchi, Okanda, & Itakura, 2008). The evaluated allegorical developmental vicissitudes that occur with ToM competence in children aged five to seven years to perform five ToM tasks consisting of "an appearance–reality task, three false-belief tasks and a second-order false-belief task and listened to decomposable and non-decomposable idiomatic expressions inserted in context, before performing a multiple choice task" (Caillies & Le Sourn-Bissaoui, 2008, p. 78).

The concept of ToM within the context of prospective memory denotes the act of remembering to perform premeditated actions at a designated future time, and how inhibition and false-belief performances relative to ToM affect children's ability to successfully implement tasks associated with these executive functions (Ford, Driscoll, Shum, & Macaulay, 2012). Executive function involves the organization of undertakings by carrying out higher-order cognitive actions to engage in goal-oriented behaviors, such as planning and sequencing, which are commonly considered tasks beyond the cognitive capabilities of early childhood (Ahmed & Miller, 2011; Bull, Phillips, & Conway, 2007).

Positive teacher-student interactions are vital to the child's ability to establish a caring, nurturing relationship since building this attachment is important to their development of self-esteem, their perceptions of their value and self-worth, and their desire for future learning, as well as cognitive development. Strong, healthy bonds between teachers and students facilitate extended peer exchanges, the ability to interpret emotional signals, and socially competent behaviors. The security created within the learning environment supports all phases of psychological development. Children develop socio-cognitive skills vital for future ToM comprehension, including recognizing deliberate actions, partaking in imaginary play, the ability to focus on multiple tasks, and imitation all within the first and second years of life and this longitudinal investigation tracked the subjects for several years, collecting data at three specific temporal intervals to assess the children on their ToM, pro-social behaviors, and verbal ability, as well as aggregate data on peer nominations (Blijd-Hoogewys, van Geert, Serra, & Minderaa, 2008; Caputi, Lecce, Pagnin, & Banerjee, 2012). In addition, ancillary links between early ToM cognizance and successively lower peer rejection with higher acceptance improved pro-social behavior coincides with established analyses delineating that after age four, language is able to influence reasoning once the child has mastered syntactic complementation, as though adjusting the language structures involved in complementation enabled new ways of reasoning about other minds (Caputi, Lecce,

Pagnin, & Banerjee, 2012; de Villiers, 2007). Overall, children generalize along some dimensions but not others according to their ToM development.

Discussion

The results of this research have numerous implications for teaching practices within early childhood education since, during the preschool period, core developments in ToM are formed along with self-regulation schemes that have been correlated to their performance in false belief activities, with executive function enabling the anticipation of false belief comprehension. Emotional and behavioural self-regulation were found to be insignificant to the model although adverse parenting contributed to specific differences in children's emerging ToM (Caputi, Lecce, Pagnin, & Banerjee, 2012; Jahromi & Stifter, 2008). Moreover, improved practices in linguistic instruction, since it is known that children do not maintain both literal and figurative meanings as different from the expression itself until age six or seven, making them able to comprehend non-decomposable idioms (Caillies & Le Sourn-Bissaoui, 2008).

Additionally, it has been established that preschool-age children who manifested high levels of aggressive peer interactions also showed lower levels of self-regulation and ToM understanding, therefore, encouraging self-help skills, providing instances for children to exert their control by providing choices, and establishing firm boundaries and limits will diminish confrontations and power struggles within classroom settings, as well as in the home as ToM understanding is inextricably tied to children's participation in social exchanges with other people (Caputi, Lecce, Pagnin, & Banerjee, 2012; Gonzalez-Mena, 2009; Olson, Lopez-Duran, Lunkenheimer, Chang, & Sameroff, 2011). The results of this research have numerous implications for early childhood education in that it has the potential to facilitate development of ToM in educational contexts and provides a contribution to research on the relationship between development of ToM and linguistic ability, as related to competence in specific types of lexicon (Grazzani & Ornaghi, 2012; Keysers & Gazzola, 2007).

When teachers are adequately taught and conscientious of the factors that influence language acquisition, they will be initially successful and supportive in helping the child have an effective learning experience so the student is able to become eloquent in their modern language terminology. However, traditional differences are also an empowered persuasive component in today's schoolrooms and instructors must be mindful of their individual cultural standards, which may affect their educational approach, as well as the traditions that are significant to their student's familial contexts.

Learning how to manage their environment helps the child develop a healthy autonomy gained through comprehension of the numerous concepts they are confronted with every day. Designing the input according to the child's cognitive level, age, and abilities will ensure the child

is able to successfully acclimate themselves to the new language and retain the knowledge being taught in the lesson. These three factors, along with continued opportunities for development in their mother tongue, are vital to the successful development of bilingualism in children of diverse linguistic backgrounds.

Parallels between children's use of perceptual state language and their capacity to perform ToM projects were modest, whereas associations between children's conception of abstract language and ToM abilities were high, illustrating the explicit dependence of ToM knowledge on the individual's familiarity with others inner life, as well as their ability to reflect upon the states of others and is connected to activity in the temporoparietal junction (TPJ) of the brain (Grazzani & Ornaghi, 2012; Keysers & Gazzola, 2007).

Additionally, regression analyses indicated that understanding of metacognitive language was key to children's performance in false belief tasks among others when verbal ability and age were delimited (Grazzani & Ornaghi, 2012). This incorporates the nature–nurture dichotomy, which references the factor that nativism or poverty-of-the-stimulus influences can be argued without evidence of negative language acquisition (Pinker, 2004). This argument assumes that the student's linguistic input is comprised of sentences and non-sentences classified as signals (Pinker, 2004).

The parameters of communication generally specify the ability to accurately convey messages to others through audio, physical, or other means. Humans have the ability to coherently express our thoughts, ideas, and opinions, which is vital to any and all relationships we have (Hybels & Weaver, 2007). There are thousands of different dialects that comprise human language and these are represented in many different forms of communication (Skotko, 1997). People also may communicate using gestures as language, such as winks, handshakes, smiles, and other forms of body language that demonstrates non-verbal communication (Hybels & Weaver, 2007).

Verbal communicative abilities prelude the childhood development of written communication skills (Balter, 2010). Tailoring the input according to the child's cognitive level, age, and abilities will ensure the child is able to successfully acclimate themselves to the new language and retain the knowledge being taught in the lesson. These three factors, along with continued opportunities for development in their mother tongue, are vital to the successful development of bilingualism in children of diverse linguistic backgrounds. Success in this area also depends on the availability of competent instructors that are able to engage the children and provide a multitude of opportunities for development of language.

Conclusion

The Theory of Mind perspective indicates that the formation of linguistic capabilities determines how language is interpreted (de Villiers, 2007; Lambek, 2010; Wheeler & DeMarree, 2009). The implications within this research can contribute to the broader understanding of how communication aids in the development of the child's linguistic skills and illustrates how such development is reliant on the language barriers that may exist in the home. For this reason, the child must be taught to communicate within the home and school settings concurrently, which is why the child's language and familial background must be considered when making the decision regarding what communicative approach to use for instructional purposes.

Activities that promote language development includes reading aloud to children, allowing children to dictate their thoughts, ideas, or a story to be read aloud to them, cooperative reading or discussion circles, independent reading and writing, and guided reading to foster print and phonemic awareness (Eliason & Jenkins, 2012). Furthermore, studying the role of ToM in a greater variety facilitates the understanding between the ability to reason about other people's beliefs and intentions, which is first-order reasoning using ToM, and reasoning about other people's beliefs about their own beliefs or intentions, which demonstrates second-order ToM reasoning (Flobbe, Verbrugge, Hendriks, & Krämer, 2008; Ford, Driscoll, Shum, & Macaulay, 2012).

Overall, research indicates that children that do not yet possess linguistic abilities are capable of constructing ToM cognitive paradigms (Skotko, 1997). Therefore, in answer to the first research question, linguistic acquisition is not necessary for the development of ToM; only cognition of language. This means that children do not have to be able to speak in order to be capable of expressing ToM concepts (Miller, 2006). This element is demonstrated in children that are younger than a year old that are capable of conceptualizing the emotions of adults with enough aptitude to manipulate their actions.

When examined in this context, since both linguistic acquisition and ToM development in children during the same period in early childhood, age is still considered as a primary factor because of the rate of cognitive development (Astington & Edward, 2010). This element resolves the second research question since cognition denotes the necessity for children to be able to identify the perceived states of others that they interpret through ToM. In order to make ToM determinations, children must develop linguistic representations of the relative concepts required to perceive these dynamics through ToM. However, this study is limited since the determinations are reliant upon existing empirical data. Further research can be conducted using child subjects and common ToM tests to affirm the assertions made in this study.

About the Author:

Dr. Ronnie Goodwin specializes in teaching Business Writing, English Composition, and Linguistics to college and university-level, high school, and adult learners. He is experienced in teaching intensive English for Academic Purposes (EAP) and English for Specific Purposes (ESP) courses.

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