The current research focused upon the development of a language assessment tool for adolescents between > 10 – ≤ 15.11 years. A total of 11 tasks tapping on semantics and morphology were developed in auditory and visual modalities. Test items were selected pertaining to statistical criteria, and the data collection was done using the same. The results were analyzed to obtain test reliability and validity of the language tool. The following discussion highlights the rationale for using each task along with the evidence of developmental trend and their application in language disorders.

**Contrastive Relations Task (Auditory and Visual)**

**Rationale for selecting the task**

The contrastive relations task (auditory and visual) received a high test-retest reliability, with all the items of the auditory and visual modalities receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.90) was attained at p<0.05 for both the modalities. This high reliability attained by the contrastive relations task (auditory and visual) implies that antonyms can be considered as a measure to evaluate the semantic skills of an adolescent. The antonyms which were used in the contrastive relations task (auditory and visual) were predominantly abstract words having different word classes (adjectives, verbs, nouns, and prepositions). This task comprised of relations that were mutually exclusive (e.g., item no. 21A as shown in Appendix E), mutually dependent (e.g., item no. 28A as shown in Appendix E), and having a relative degree of comparison (e.g., item no. 1V as shown in Appendix E). Similar relations were used in the Test of Adolescent and Adult Language – 4 (Hammill, Brown, Larsen, & Wiederholt, 2007). Soifer (2005) considered antonyms to be an important semantic aspect of language, which assesses a person’s knowledge of opposites. The use of such relations has been included in children’s rhymes, songs, and stories to help them attain linguistic competence. Justeson and Katz (1991) had opined that the frequency and exposure of antonyms in different contexts facilitates learning of such contrastive pairs. The influence of antonym learning on cognitive development has been demonstrated by Eisenberg, Murkoff, and Hathaway (1989). The assessment of semantics using antonyms have also been used in other tests such as the Test of Word Knowledge (Wiig & Secord, 1990); Detroit Tests of Learning Aptitude (Hammill & Bryant, 1991; Hammill, 1998), the Comprehensive Assessment of Spoken Language (Carrow-

Evidence of developmental trend of the task

The test items of the contrastive relations task (auditory and visual) consisted of antonyms which were age specific and increased in complexity with age. This task which followed a word level presentation consisted of a constructed response format at par with the Test of Adolescent and Adult Language – 4 (Hammill, Brown, Larsen, & Wiederholt, 2007), which followed a similar presentation and response format. This resulted in the generation of more than one correct/permissible response. These permissible responses of the target items had multiple relations which were found to increase with age. The complexity of the antonyms selected and the increase in permissible responses with age can be attributed to the lexical-semantic organization of adolescents as they develop. According to Waxman and Gelman (1986), this lexical-semantic organization is based on the taxonomic and thematic relations which are at the disposal right from the early years of development. These relations play a crucial role in the structuring of the child’s semantic network thereby controlling the retrieval of semantic knowledge. Children during their middle childhood undergo a rapid expansion of world knowledge and vocabulary which is a result of the shift from thematic to taxonomic relations. Lippman (1971) suggested a simultaneous syntagmatic-paradigmatic shift, which occurs with a predominance of paradigmatic over syntagmatic responses in mature language users. This predominance could be attributed to formal schooling which alters the individual’s interpretation skills of a particular task (Cole, 1990), the acquisition of reading (Cronin, 2002), and a shift in the conceptual organization (Nelson, 1977). Sheng, McGregor, and Marian (2006) advocated that the understanding of paradigmatic relations such as antonymy is crucial in the acquisition of adjectives which facilitates a shift to paradigmatic from syntagmatic relation. The responses generated by the participants in the present research would have also been influenced by the neighborhood frequency and neighborhood density, as suggested by German and Newman, (2004) and Newman and German (2002). According to Eisenberg, Murkoff, and Hathaway (1989), parents have to emphasize on antonymic terms to facilitate cognitive development. The National Literacy Strategy have also stressed on the need for exposure of antonyms throughout primary education, which may facilitate in the building of metalinguistic awareness, essential for
reading. Kagan (1984) opined that individuals of young ages are able to appreciate and grasp antonymy based relations quite naturally, indicating that the usage of such terms begin from an early stage of language development.

**Application of the task in language disorders**

The contrastive relations task (auditory and visual) received a good validity based on the Mann Whitney Test, with all the items of the auditory and visual modalities receiving a validity at \( p < 0.05 \). A good validity was attained at \( p < 0.05 \) for the total scores of both the modalities. This validity attained implies that antonyms can be considered as a measure to identify adolescents with language disorder.

The incorrect responses generated under the contrastive relations task (auditory and visual) were observed to contain words related to the target item (e.g., ‘shop’ for the target item ‘costly’), past-tense of the target item (e.g., ‘laughed’ for the target item ‘laugh’), past-tense of the permissible response (e.g., ‘sold’ for the permissible response ‘sell’), phonologically similar to the target item (e.g., ‘congruent’ for the target item ‘convergent’), synonyms to the target item (e.g., ‘far’ for the target item ‘distant’), words which contained the target item with an added prefix (e.g., ‘discreate’ for the target item ‘create’), words which contained the target item with an added suffix (e.g., ‘vertically’ for the target item ‘vertical’), words which contained a similar initial syllable to the target item (e.g., ‘temperature’ for the target item ‘temporary’), words which were similar to the target item with the omission of the first letter (e.g., ‘arrow’ for the target item ‘narrow’), words which were unrelated (e.g., ‘under’ for the target item ‘order’), words which were related and/or unrelated belonging to another language (Kannada, Hindi), words which were a repetition of the target item, and no responses. The ROC analysis done for the contrastive relations task (auditory and visual) revealed all groups to have attained a sensitivity of 80% and above, except for Group II-V which attained a sensitivity between 60 – 80%. The specificity of the task revealed all groups to have attained a specificity of 80% and above, except for Group I-A and Group VI-V which attained a specificity between 60 – 80%. This task which followed a constructed response format received cut-off scores within the range of \( \geq 1 - \geq 3 \), with a maximum score of 5 for each group.
The variety of incorrect responses that were generated by the adolescents with language disorder on the contrastive relations task (auditory and visual) could be attributed to difficulties in word retrieval, indicating weak links between the words at different levels (Dockrell et al., 1998). The unrelated responses that were generated indicated the adolescents to have a poor semantic knowledge. These semantic deficits could be a result of inadequate word learning, word leaning without following the use of it, or due to irregular word use (Bjork & Bjork, 1992). The errors generated by the adolescents with language disorder also indicate that these children may not have stored enough information to differentiate between the semantic neighbors. Stothard, Snowling, Bishop, Chipchase, and Kaplan (1998) opined that adolescents with persistent language impairment are found to have a delay in their acquisition of age appropriate lexical devices. The results of the contrastive relations task (auditory and visual) were also in accordance with findings reported by McGregor and Waxman (1998) on children with Word Finding Difficulties (WFDs). Other studies have also indicated WFDs commonly occurring in children and adolescents who are identified with learning disability, language disorders, aphasia and dyslexia (Aram, Ekelman, & Whitaker, 1987; Murphy et al., 1988). Studies done by Kail, Hale, Leonard, and Nippold (1984) and Kail and Leonard (1986) have revealed children with language difficulties to have a less developed language system than chronological age controls, indicating a restricted semantic input which indirectly affects the word retrieval. This was supported by McGregor, Friedman, Reilly, and Newman (2002) who obtained similar results. Studies on children with SLI have revealed deficits in the semantic domain (Brackenberry & Pye, 2005; Sheng & McGregor, 2010).

**Multiple Meanings Task (Auditory and Visual)**

**Rationale for selecting the task**

The multiple meanings task (auditory and visual) received a high test-retest reliability, with all the items of the auditory and visual modalities receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.87) was attained at p<0.05 for both the modalities. This high reliability attained by the multiple meanings task (auditory and visual) implies that synonyms can be considered as a measure to evaluate the semantic skills of an adolescent. The synonyms which were used in the multiple meanings task (auditory and visual) were predominantly abstract words having different word classes (adjectives, verbs, nouns, and
adverbs). The test items which were used in this task comprised of certain types of synonyms as per Palmer's (1986) guidelines. These items consisted of words that were used in different styles (e.g., item no. 25V as shown in Appendix E), words that differed in their emotive meaning (e.g., item no. 15A as shown in Appendix E), and words that overlapped in meaning or were near in meaning (e.g., item no. 19V as shown in Appendix E). These test items of the present task also varied in terms of their scales of synonymity (Cruse, 1986), consisting of items that were having absolute synonymy (e.g., item no. 7A as shown in Appendix E), and partial synonymy (e.g., item no. 30V as shown in Appendix E). Soifer (2005) considered synonyms to measure an individual’s semantic ability for the understanding of the meaning of a term. Being proficient in the use of multiple relations has found to be a crucial semantic ability that plays a main role in the understanding of written meaning. Therefore such relations can be considered as a measure of reading comprehension and semantics. Cruse (1986) stated that synonyms not only manifest a high degree of semantic overlap, but also exhibit a low degree of implicit contrastiveness. The assessment of semantics using synonyms have also been used in other tests such as the Screening Test of Adolescent Language-Revised (Prather et al., 1990), the Test of Word Knowledge (Wiig & Secord, 1990), the Comprehensive Assessment of Spoken Language (Carrow-Woolfolk, 1999), the Diagnostic Achievement Battery – Third Edition (Newcomer, 2001), the Woodcock-Johnson III (Woodcock et al., 2001), The Word Test: Adolescent – Second edition (Bowers et al., 2005), and the Test of Language Development: Intermediate – 4th edition (Hammill & Newcomer, 2008).

Evidence of developmental trend of the task

The test items of the multiple meanings task (auditory and visual) consisted of synonyms which were age specific and increased in complexity with age. This task which followed a word level presentation consisting of a constructed response format was at par with the Test of Adolescent and Adult Language – 4 (Hammill, Brown, Larsen, & Wiederholt, 2007), which also followed a similar presentation and response format. This resulted in the generation of more than one correct/permissible response. These permissible responses of the target items had multiple meanings which were found to increase with age. According to Marinellie and Johnson (2003), with the use of synonyms, the abstract and specific information increased with age among individuals between grades 6 and 10 and college students. The complexity of the synonyms
selected and the increase in permissible responses with age could be attributed to the lexical-semantic organization of adolescents as they develop. Waxman and Gelman (1986) stated that the taxonomic and thematic relations, which forms the lexical-semantic organization are at the disposal from the early years of development. These relations would have played an important role in the structuring of the child’s semantic networks thereby controlling the retrieval of semantic knowledge. They also suggested that children during their middle childhood undergo a rapid expansion of world knowledge and vocabulary which is a consequence of the shift from thematic to taxonomic relations. A simultaneous syntagmatic-paradigmatic shift also occurs with a predominance of paradigmatic over syntagmatic responses in the mature language users (Lippman, 1971). This predominance could be attributed to formal schooling which can alter the acquisition of reading (Cronin, 2002), the individual’s interpretation skills of a particular task (Cole, 1990), and cause a shift in the conceptual organization (Nelson, 1977). Sheng, McGregor, and Marian (2006) suggested that the understanding of paradigmatic relations such as synonymy is crucial in the acquisition of adjectives which facilitates a complete shift to paradigmatic from syntagmatic.

The process of children identifying concepts by the meaningful elements that words share or do not share, is the basis of the semantic feature analysis (Clark, 1973). These children develop a prototype for each concept that is learnt which is used to compare with a new probability of the concept that the individual encounters. Based upon the proximity of the prototypes with the new relation, the individual will be able to determine whether the concept will be included into the semantic category or not (Gleason, 2005). This development of word meanings is based on the semantic categories and how these categories incorporate new occurrences of the same word and their relation to the other words. The variety of permissible responses obtained in the multiple meanings task (auditory and visual), could also be explained with the probabilistic grounds theory. According to this theory, as individuals encounter new concepts, they tend to classify it into the most probable category that is formed, which is based on the important features that are identified. Subsequently, these associations are made based on the identified features as well as the established conceptual categories. The responses generated by the participants in the present research would have also been influenced by the neighborhood frequency and neighborhood density, as suggested by German and Newman, (2004) and Newman and German (2002).
The multiple meanings task (auditory and visual) received a good validity based on the Mann Whitney Test, with all the items of the auditory and visual modalities receiving a validity at p<0.05. A good validity was attained at p<0.05 for the total scores of both the modalities. This validity attained by the multiple meanings task (auditory and visual) implied that synonyms can be considered as a measure to identify adolescents with language disorder. The incorrect responses generated under the multiple meanings task (auditory and visual) were observed to contain words related to the target item (e.g., ‘travel’ for the target item ‘distant’), words that were past-tense (correct form) of the target item (e.g., ‘began’ for the target item ‘begin’), past-tense (incorrect form) of the target item (e.g., ‘pathed’ for the target item ‘path’), similar to the target item with a bound morpheme (e.g., ‘purchases’ for the target item ‘purchase’), root word of the target item (e.g., ‘independent’ for the target item ‘independence’), antonyms to the target item (e.g., ‘modern’ for the target item ‘ancient’), a superlative to the target item (e.g., ‘prettier’ for the target item ‘pretty’), another word class of the target item (e.g., ‘joyful’ for the target item ‘joy’), phrasal explanation about the target item (e.g., ‘go out somewhere’ for the target item ‘journey’), words which contained the target item with a prefix (e.g., ‘discommand’ for the target item ‘command’), words which contained the target item with a suffix (e.g., ‘investment’ for the target item ‘invest’), unrelated to the target item (e.g., ‘beast’ for the target item ‘brainy’), words which were a repetition of the target item, and no responses.

The ROC analysis done for the multiple meanings task (auditory and visual) revealed all groups to have attained a sensitivity of 80% and above, except for Group I-V and Group VI-V which attained a sensitivity between 60 – 80%; and Group II-A which attained a sensitivity between 40 – 60%. The specificity of the task revealed all groups to have attained a specificity of 80% and above, except for Group I-A, Group II-V, Group III-A, Group V-A, and Group VI-A which attained a specificity between 60 – 80%; and Group I-V and Group VI-V which attained a specificity between 40 – 60%. This task which followed a constructed response format received cut-off scores within the range of $\geq 1$ - $\geq 2$, with a maximum score of 5 for each group.

The variety of incorrect responses that were generated by the adolescents with language disorder on the multiple meanings task (auditory and visual) could be attributed to difficulties in word retrieval, indicating weak links between the words at different levels (Dockrell et al.,
Bjork and Bjork (1992) attributed the unrelated responses of the adolescents with language disorder to inadequate word learning, word leaning without following the use of it, or irregular word use. They suggested that the errors also indicated that these children might have stored less information to differentiate between the semantic neighbors. Adolescents with persistent language impairment are found to have a delay in the acquisition of age appropriate lexical devices (Stothard et al., 1998). Studies have indicated that WFDs commonly occurs in children and adolescents who are identified with language disorders, learning disability, dyslexia and aphasia (Aram, Ekelman, & Whitaker, 1987; Murphy, Pollatsek, & Well, 1988). Other studies have revealed children with language difficulties to have a less developed language system than chronological age controls, indicating a restricted semantic input, indirectly affecting the word retrieval (McGregor et al., 2002). Studies on children with SLI have also revealed semantic deficits (Brackenberry & Pye, 2005; Sheng & McGregor, 2010).

Associated Relations Task (Auditory and Visual)

Rationale for selecting the task

The associated relations task (auditory and visual) received a high test-retest reliability, with all the items of the auditory and visual modalities receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.80) was attained at p<0.05 for both the modalities. This high reliability attained by the associated relations task (auditory and visual) implied that associated relations can be considered as a measure to evaluate the semantic skills of an adolescent. The items which were used in the associated relations task (auditory and visual) included concrete and abstract words having different word classes (nouns, verbs, and adjectives). The test items of the associated relations task (auditory and visual) included word associations which were not only categorized on the basis of their meaning but also in their co-occurrence in line with Henriksen's (1999) suggestion indicating the complex association between lexical items. This task followed a selected response format which required the individual to identify the association between the set of words within an item, thereby finding the word which is unrelated to the rest. These related items were prepared using the principle of the hierarchical network model (Collins & Quillian, 1972). As suggested by these authors, the items of the present task were semantic concepts having superordinate and subordinate categories. For example, item no. 5A as shown in Appendix E consists of an item set which are subordinate...
categories of ‘vehicles’ (superordinate category). Yet the subordinate categories such as ‘car, cycle, and bike’ which are terrestrial vehicles differ from ‘plane’ which is an aerial vehicle. Gleason (2005) opined that semantic knowledge included all information about a word, its relations to other words, and its possible meanings. The assessment of semantics using word associations have also been used in other tests such as The Word Test: Adolescent – Second edition (Bowers et al., 2005), and the Test of Language Development: Intermediate – 4th edition (Hammill & Newcomer, 2008).

Evidence of developmental trend of the task

The test items of the associated relations task (auditory and visual) were age specific and consisted of words which were age specific and increased in complexity with age. There was also an evident increase in the number of abstract words with age, which was at par with the study done by Nagy et al (1993). Similarly, the items constructed for the younger groups were more tangible (e.g., item no. 1V as shown in Appendix E) than the items that were constructed for the older groups (e.g., item no. 21A as shown in Appendix E). The lexical organization of the test items of this task can be explained by the semantic models. The spreading activation model (Collins, 1969) suggested that the words which are strongly related or connected will be easily identified than the one which is poorly related. Similarly the semantic feature analysis theory (Clark, 1973) postulated that children learn and organize concepts by the process of identification of the meaningful elements that words share or do not share. According to Collins, word association tasks can generate information about the strength and number of links between the semantically associated words in an individual’s lexicon. The development of a systematized network with increase in age can consist of semantically associated words that are intricately linked (Nelson, 1977). Collins has reported increasing performance of word association task during childhood (Collins, 1969) indicating the development of semantic organization with increase in age. Lippman (1971) demonstrated a semantic reorganization which was observed using word association tasks, thereby reflecting the syntagmatic and paradigmatic shift occurring during 5 and 9 years. Nagy, Diakidoy, and Anderson (1993) suggested that words that are learnt by students in their younger years are words that express usual and more tangible concepts than those that are learnt later.
Application of the task in language disorders

The associated relations task (auditory and visual) received a good validity based on the Mann Whitney Test, with all the items of the auditory and visual modalities receiving a validity at p<0.05, except for item no. 30V which received a validity at p>0.05. A good validity was attained at p<0.05 for the total scores of both the modalities, except for Group VI which attained validity at p>0.05 for the visual modality. This validity attained by the associated relations task (auditory and visual) implied that word relations can be considered as a measure to identify adolescents with language disorder.

The ROC analysis done for the associated relations task (auditory and visual) revealed all groups to have attained a sensitivity of 80% and above, except for Group III-A, Group V-A, Group VI-A and Group VI-V which attained a sensitivity between 60 – 80%. The specificity of the task revealed all groups to have attained a specificity of 80% and above, except for Group I-V, Group II-A, Group III-A, Group IV-V, and Group VI-A which attained a specificity between 60 – 80%; and Group V-V and Group VI-V which attained a specificity between 40 – 60%. This task which followed a selected response format received cut-off scores within the range of $\geq 2 - \geq 3$, with a maximum score of 5 for each group.

The incorrect responses selected by the adolescents with language disorders on the associated relations task (auditory and visual) can be attributed to difficulties in word categorization, indicating weak links between the words at different levels (Dockrell et al., 1998). These incorrect selections could be a result of inadequate word learning, word leaning without following the use of it, or irregular word use (Bjork & Bjork, 1992). They indicated that the errors could be owing to these children with less stored information to differentiate between the semantic neighbors. Studies have also indicated that children and adolescents with language disorders, learning disability, dyslexia and aphasia exhibit WFDs (Aram et al., 1987; Murphy et al., 1988). Another indicator of word-retrieval deficits is the restricted semantic input children with language difficulties have when compared to their chronological age matched controls (McGregor et al., 2002). Sheng and McGregor (2010) have revealed children with SLI to have semantic deficits.
Convergent Naming Task (Auditory and Visual)

Rationale for selecting the task

The convergent naming task (auditory and visual) received a high test-retest reliability, with all the items of the auditory and visual modalities receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.80) was attained at p<0.05 for both the modalities. This high reliability attained by the convergent naming task (auditory and visual) implied that word definitions can be considered as a measure to evaluate the semantic skills of an adolescent. The test items of the convergent naming task (auditory and visual) consisted of definitions which were formatted following an Aristotelian style. For example, item no. 7A in the Appendix E consisted of a superordinate category (to perform some movement with the hands and legs) having one or more characteristics of the word (to become fit and healthy). Nippold (1998b) considered such definitions to provide a maximally informative explanation of a word in a brief and resourceful manner. The comprehension of word definitions requires an understanding of words and knowledge which is a combination of linguistic, metalinguistic and cognitive competencies. The convergent naming task (auditory and visual) involved word definitions which is crucial, as it is associated with measures of verbal ability, intellectual performance, and academic achievement in school-age children and adolescents (Wechsler, 1991). The assessment of semantics using word definitions have also been used in other tests such as the Fullerton Language Test for Adolescents- 2nd edition (Thorum, 1986), Test of Adolescent/Adult Word Finding (German, 1990), the Test of Word Knowledge (Wiig & Secord, 1990), and the Word Test: Adolescent – Second edition (Bowers et al., 2005).

Evidence of developmental trend of the task

The test items of the convergent naming task (auditory and visual) generated responses which were concrete and abstract words having different word classes. Majority of the permissible responses of the convergent naming task (auditory and visual) for the younger groups consisted of concrete nouns (e.g., item no. 4A and 8V as shown in Appendix E) compared to the older groups with abstract nouns (e.g., item no. 30V and 27A as shown in Appendix E). Whereas the other permissible responses consisted of abstract verbs (e.g., item no. 18V as shown in Appendix E) and abstract adjectives (e.g., item no. 19A as shown in Appendix E).
E), which was at par with the word classes used by Johnson and Anglin (1995), and Nippold, Hegel, and Sohlberg (1999). There was a gradual increase in the permissible abstract responses observed in this task. Similar studies have reported that such definitions develop from concrete and functional oriented to more conceptual and abstract (Storck & Looft, 1973) responses. The evidence of increase in permissible responses as well as the complexity of words with age in this research is at par with Paris (1978) indicating that older adolescents are able to recall a larger number of words when compared to their younger counter-parts. The ability of older adolescents in the convergent naming task (auditory and visual) to recall larger number of words can be attributed to the change in storage and retrieval as suggested by Nippold, Hegel, and Sohlberg (1999). This storage improves with the expansion of knowledge, which continues throughout childhood, adolescence, and adulthood. As school-age children and adolescents develop, they retrieve a larger number and range of words more effectively. According to Nippold, Hegel, and Sohlberg (1999), comprehending and using definitions advances slowly, with improvements in both form and content throughout childhood and adolescence. The facilitation of word recall in a convergent context can be attributed to the categorical organization of information in individuals (Kail, 1984). This lexical organization is explained by the functional core hypothesis (Nelson, 1974), wherein the meanings of words are based on the actions or functions that the concepts represent. In order to achieve an entirely developed lexicon, not only does the child require organizing his lexical system into an effective system, but also adding new entries to his vocabulary store. Similarly, the instrumental hypothesis (Anderson & Freebody, 1981) suggested that it is essential to increase the number of word meanings to improve understanding. The complexity of the permissible words which increased with age can also be attributed to the correlation between comprehension and vocabulary, which is due to their connection to the reader’s background knowledge about what is being read (Anderson & Freebody, 1981), as put forth by the knowledge hypothesis.

**Application of the task in language disorders**

The convergent naming task (auditory and visual) received a good validity based on the Mann Whitney Test, with all the items of the auditory and visual modalities receiving a validity at p<0.05. A good validity was attained at p<0.05 for the total scores of both the modalities. This validity attained by the convergent naming task (auditory and visual) implied that word
definitions can be considered as a measure to identify adolescents with language disorder. The ROC analysis done for the convergent naming task (auditory and visual) revealed all groups to have attained a sensitivity of 80% and above, except for Group II-A, Group IV-A, Group IV-V, Group VI-A, and Group VI-V which attained a sensitivity between 60 – 80%. The specificity of the task revealed all groups to have attained a specificity of 80% and above, except for Group I-V and Group VI-V which attained a specificity between 60 – 80%; and Group II-V which attained a specificity between 40 – 60%. This task which followed a constructed response format received cut-off scores within the range of $\geq 1 - \geq 2$, with a maximum score of 5 for each group.

The incorrect responses generated under the convergent naming task (auditory and visual) were observed to contain words related to the permissible response (e.g., ‘tiffin’ for the permissible response ‘lunch’), related to the words present in the target item (e.g., ‘helmet’ for the target item no. 29V as shown in Appendix E), linked to the personal emotional experience of the examinee (e.g., ‘good’ for the target item no. 30A as shown in Appendix E), which contain an emotional feeling related to the permissible response (e.g., ‘affection’ for the permissible response ‘patriotism’), which were present in the target item (e.g., ‘against’ for the target item no. 9V as shown in Appendix E), which were a subordinate category to the permissible response (e.g., ‘jana-gana-mana’ for the target response ‘anthem’), superordinate category to the permissible response (e.g., ‘van’ for the permissible response ‘ambulance’), the correct response in another language (Kannada, Hindi), unrelated to the target item (e.g., ‘date’ for the item no. 7A as shown in Appendix E), and no responses.

The incorrect responses that were generated by the adolescents with language disorder in the convergent naming task (auditory and visual) can be attributed to the word-retrieval difficulties, which indicate the presence of weak links between the words at different levels (Dockrell et al., 1998). The poor semantic representation could be a result of inadequate word learning, irregular word use, or word learning without following the use of it (Bjork & Bjork, 1992). Tasks such as these have found to be difficult for children with WFDs compared to their age matched typically developing peers (Dapretto & Bjork, 2000). McGregor and Waxman (1998) also found adolescents with language disorders to perform poorly in such tasks indicating that these children may not have stored enough information to select the appropriate lexical item. Dockrell, Messer, George and Ralli (2003) revealed a poorer performance in word definitions by
children with WFDs compared to their chronological age matched peers. These word retrieval difficulties can be considered as indicators of reading problems and poor performance in school (Wolf & Segal, 1992). Studies have also indicated that WFDs commonly occurs in children and adolescents identified with learning disability, dyslexia, aphasia and language disorders (Aram et al., 1987; Murphy et al., 1988). Studies on children with SLI have revealed deficits in this domain (Brackenberry & Pye, 2005; Sheng & McGregor, 2010). McGregor, Friedman, Reilly, and Newman (2002) opined that children with language deficits have a less developed linguistic system than age matched typically developing peers, indicating a restricted semantic input, indirectly affecting the word retrieval.

**Analogical Reasoning Task (Auditory and Visual)**

**Rationale for selecting the task**

The analogical reasoning task (auditory and visual) received a high test-retest reliability, with all the items of the auditory and visual modalities receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.88) was attained at p<0.05 for both the modalities. This high reliability attained by the analogical reasoning task (auditory and visual) implied that analogies can be considered as a measure to evaluate the analogical reasoning abilities of an adolescent. The test items of the analogical reasoning task (auditory and visual) were prepared using an Aristotelian style (X : Y :: A : B), with a forced choice format, as per Levinson and Carpenter's (1974) guidelines. The items that were selected for this task comprised of concrete and abstract analogies which were of six different types as suggested by Goldstein (1962). They were analogical relations based on characteristic property (e.g., item no. 18A as shown in Appendix E), part-whole (e.g., item no. 5A as shown in Appendix E), functional (e.g., item no. 4V as shown in Appendix E), superordinate-subordinate (e.g., item no. 8V as shown in Appendix E), causal (e.g., item no. 11V as shown in Appendix E), and sequential (e.g., item no. 4A as shown in Appendix E). Analogical relations such as these requires the manipulation, maintenance and inhibition of mental representations inorder to identify and draw inferences regarding higher-order similarity relationships which is essential for cognitive development and learning (Bunge et al., 2005, 2009; Cho et al., 2010; Soohyun Cho et al., 2007; Christie & Gentner, 2014; Green et al., 2006; Krawczyk et al., 2008; Morrison & Cho, 2008; Morrison, 2005; Morrison et al., 2004). Analogies are central to creative thinking, and involves particular
processes which may include the ability to gather knowledge or information pertinent to a
domain, and to hold several relations in mind across different domains (Gentner & Smith, 2013).
It permits one to understand and create inferences about new information and situations with the
things already understood and known (Dunbar & Blanchette, 2001). The competency in using
such analogies have been considered as a basic mechanism for learning in classroom (Csapo,
1997) and for early reading abilities (Kamhi & Laing, 2000). Walton, Walton, and Felton (2001)
have demonstrated that early readers do use good analogies if they have good phonological
skills. The assessment of analogies have also been used in other language tests such as the
Woodcock Reading Mastery Test – Revised (Woodcock, 1987), the Woodcock Language
Proficiency Battery – Revised (Woodcock, 1991), the Test of Language Development – Primary:
Third Edition (Newcomer & Hammill, 1997), the Illinois Test of Psycholinguistic Abilities –
Third Edition (Hammill, Mather, & Roberts, 2001), and the Test of Adolescent and Adult

Evidence of developmental trend of the task

The words present in the analogies were age specific which increased in complexity with
age. The younger groups in the present research were subjected to a larger number of concrete
analogies (e.g., item no. 8A and 6V as shown in Appendix E) compared to the older groups
which received abstract analogies (e.g., item no. 28A and 30V as shown in Appendix E).
Gallagher and Wright (1979) found younger children to have an age related improvement in
solving concrete analogies when compared to abstract analogies. The analogical reasoning task
(auditory and visual) comprised of types of analogies which were presented to the six groups,
with increasing complexity of occurrence. It was observed that the majority of the part-whole
and sequential based analogies occurred in the test items of the earlier groups (Group I and II),
the superordinate-subordinate and characteristic property based analogies occurred in the
intermediate groups (Group III and IV), whereas the functional and causal based analogies
occurred in the older groups (Group V and VI). A similar hierarchical organization of analogies
was used by Goldstein (1962) who opined that analogies having a characteristic property based
relationship were the easiest to solve, compared to the analogies of part-whole, superordinate-
subordinate relationships to have an intermediate difficulty, and analogies of functional,
sequential, and causal relationships to be the most difficult to solve. The comparison between the
elements (target and source) of an analogical problem play an important role in children’s acquisition of word meaning (Childers, 2008; Gentner & Namy, 2004). The comparison between the exemplars is particularly effective in conveying the relational information that is necessary for verb learning and other relational devices (Childers & Paik, 2009; Gentner & Namy, 2004; Haryu et al., 2011; Pruden et al., 2008). Brown (1990) considered analogical skills as a core to children’s reasoning which is crucial to educational advancement. Analogical reasoning has shown steady improvement throughout the elementary, middle and high school years (Kaufman & Kaufman, 1983; Sternberg & Downing, 1982; Sternberg, 1982) exhibiting greater use of systematic problem-solving abilities (Nippold, 1994).

**Application of the task in language disorders**

The analogical reasoning task (auditory and visual) received a good validity based on the Mann Whitney Test, with all the items of the auditory and visual modalities receiving a validity at p<0.05, except for the item no. 13A and 5V which received a validity at p>0.05. A good validity was attained at p<0.05 for the total scores of both the modalities, except for Group I which attained validity at p>0.05 for the visual modality, and Group III which attained validity at p>0.05 for the auditory modality. This validity attained by the analogical reasoning task (auditory and visual) implied that this task can be considered as a measure to identify adolescents with language disorder.

The ROC analysis done for the analogical reasoning task (auditory and visual) revealed all groups to have attained a sensitivity of 80% and above, except for Group I-V and Group III-A which attained a sensitivity between 60 – 80%. The specificity of the task revealed Group II-V, Group III-V, and Group IV-A to have attained a specificity of 80% and above, except for Group I-A, Group I-V, Group II-A which attained a specificity between 60 – 80%. Group IV-V, Group V-A, Group V-V, Group VI-A, and Group VI-V attained a specificity between 40 – 60%; whereas Group III-A attained a specificity below 40%. This task which followed a selected response format received cut-off scores within the range of 1 - 3, with a maximum score of 5 for each group.

The mis-selected words under the analogical reasoning task (auditory and visual) can be an indicator of poor analogical reasoning skills or also limited vocabulary of the adolescents with
language disorders. However, there was no particular pattern observed by the adolescents with language disorder, in response to the different types of analogies. The skill of analogical reasoning included the combination of cognitive and linguistic resources. Ransby and Swanson (2003) attribute deficits in phonological word processing to restrict the flow of information to higher levels of processing which can lead to this poor performance in analogical reasoning abilities. Similar to the analogical reasoning task (auditory and visual), Masterson et al. (1993) used a verbal analogy completion task consisting of analogies having a linear order, functional relationship, and a category membership, and found typically developing children performing better than children with language learning disabilities. Other studies have also used analogical reasoning tasks and found typically developing children to perform better than children with learning disabilities (Schiff et al., 2009), intellectual disabilities (Denaes, 2012). Similar disruptions in analogical reasoning were also evident in adolescents with Traumatic Brain Injury (Krawczyk, Hanten, et al., 2010; Levin & Hanten, 2005), older adults with dementia (Krawczyk et al., 2008; Morrison et al., 2004), deaf and hard of hearing adolescents (Edwards et al., 2011), and adolescents with autism (Morsanyi & Holyoak, 2010). Matte and Bolaski (1998) have suggested analogical reasoning abilities to be one of the deficits which can be attributed to poor performance in academics.

Morphological Derivations Task (Auditory and Visual)

Rationale for selecting the task

The morphological derivations task (auditory and visual) received a high test-retest reliability, with all the items of the auditory and visual modalities receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.81) was attained at p<0.05 for both the modalities. This high reliability attained by the morphological derivations task (auditory and visual) implied that morphological derivations can be considered as a measure to evaluate the morphological skills of an adolescent. The test items of the morphological derivations task (auditory and visual) aimed to assess the individual’s ability to use derived nominals (e.g., item no. 1A as shown in Appendix E) and derived adjectives (e.g., item no. 18V as shown in Appendix E), which commonly occur in school-based textbooks (Larsen & Nippold, 2007a). The items which consisted of sentences were taken from the academic textbooks, as suggested by Snow et al. (1989). The presentation method used for the morphological derivations task
(auditory and visual) was in line with the method used in the Test of Adolescent and Adult Language – Fourth edition (Hammill, Brown, Larsen, & Wiederholt, 2007). Studies have reported that such derived nominal and adjectives have been used to teach subjects such as mathematics, social studies, science, and literature in the upper-elementary grades and throughout college (Gibbons et al., 2003; Holt et al., 2000; Scott-Foresman, 2000). The morphological derivations task (auditory and visual) consisted of items which were presented in both spoken and printed words, which was in line with other studies (Rastle et al., 2004, 2000). The morphological derivations task (auditory and visual) which involved the production of word derivations included a less conscious and implicit processing of the morphological information (Deacon et al., 2008). Kuo and Anderson (2006) suggest that morphological awareness influences the phonological, semantic as well as orthographic awareness. According to Kuo and Anderson (2006), morphological awareness is a high-order ability, more than an ability to encode or decode morphemes. McBride-Chang, Wagner, Muse, Chow, and Shu (2005) found that by the fifth grade, morphological awareness becomes a stronger predictor for reading proficiency than phonological awareness (Mann & Singson, 2003). Studies have also indicated morphological analysis to be important for the development of spelling (Apel et al., 2004; Tsesmeli & Seymour, 2006), and reading (Carlisle & Stone, 2005; Carlisle, 2000; Casalis, Colé, & Sopo, 2004; Deacon & Kirby, 2004; Singson, Mahony, & Mann, 2000; Verhoeven & Perfetti, 2003) in school-age children. Carlisle (2003) indicated that cues for spelling, meaning and pronunciation can be derived from breaking down morphological words. Other language tests which also contains a subtask to assess morphology are the Test for Examining Expressive Morphology (Shipley, Stone, & Sue, 1983), the Fullerton Language Test for Adolescents – Second Edition (Thorum, 1986), the Test of Language Development – Primary: Third Edition (Newcomer & Hammill, 1997), and the Illinois Test of Psycholinguistic Abilities – Third Edition (Hammill, Mather, & Roberts, 2001).

Evidence of developmental trend of the task

The test items of the morphological derivations task (auditory and visual) consisted of bound morphemes which varied with age. The permissible responses of the items of Group I consisted of bound morphemes (suffixes) which were ‘-ion, -ful, -ment, -ation, -tion’; Group II consisted of ‘-ce, -ance, -age’; Group III consisted of ‘-or, -ative, -ey, -al’; Group IV consisted of
‘-ize, -ship, -city, -ity, -ve’; Group V consisted of ‘-sion, -itive, -ism’; and Group VI consisted of ‘-us, -cy and –ce’. A similar pattern of age-wise variation in using suffixes in words was observed in the study done by Nippold and Sun (2008). Researchers have recommended that the acquisition of these complex morphological words is a late linguistic achievement which is linked to the development of literate language (Nippold & Sun, 2008; Ravid, 2006), with the most rapid growth occurring between the fourth and eighth grade (Abu-Rabia, 2007; Nagy, Berninger, & Abbott, 2006). Windsor (1994) conveyed that children’s use of their knowledge of derivational morphology inorder to increase their written and spoken vocabularies becomes a crucial issue in language development. Similarly, Anglin (1993) also revealed a significant growth in vocabulary knowledge during the early and middle elementary school years, with improvement in the comprehension of derived words across grades 1 and 5. The relationship between reading and morphological awareness is reported to progress during elementary school years (Deacon & Kirby, 2004; Nagy et al., 2006). Morphophonological derivations are reported to improve during elementary school years with improvement in accuracy of responses (Jarmułowicz, 2006).

Application of the task in language disorders

The morphological derivations task (auditory and visual) received a good validity based on the Mann Whitney Test, with all the items of the auditory and visual modalities receiving a validity at p<0.05. A good validity was attained at p<0.05 for the total scores of both the modalities. This validity attained by the morphological derivations task (auditory and visual) implied that this task can be considered as a measure to identify adolescents with language disorder. The ROC analysis done for the morphological derivations task (auditory and visual) revealed all groups to have attained a sensitivity of 80% and above, except for Group I-V which attained a sensitivity between 60 – 80%. The specificity of the task revealed all groups to have attained a specificity of 80% and above, except for Group III-V, Group IV-A, Group IV-V, Group V-A, Group V-V, and Group VI-A which attained a specificity between 60 – 80%. This task which followed a constructed response format received cut-off scores within the range of ≥1 - ≥3, with a maximum score of 5 for each group.

The incorrect responses which were generated by the adolescents with language
disorder comprised of existent and non-existent bound morphemes (suffixes). The adolescents with language disorder of Group I generated bound morphemes such as ‘-ed and –ing’; Group II generated ‘-ment, -tion, -ion, -s, -ston’; Group III generated ‘-dation, -zation, -er’; Group IV generated ‘-ance, -able, -fy, -y, -tation, -ge’; Group V generated ‘-cs, -ism, -nation, -tational, -tional, -ness, -ly, -ation’; and Group VI generated ‘-ful, -ble, -ers, -es, -t, -ence, -al, -ers, -tionously’. The morphemic errors exhibited by the adolescents with language disorder were mostly substitutions (e.g., ‘nourishing’ for the permissible response ‘nourishment’), and additions (e.g., ‘circulational’ for the permissible response ‘circulation’). These errors were in accordance to the study done by Rubin et al. (1991) who found similar error patterns in children with language learning disability. Certain responses also consisted of the generation of the root word itself, and also addition of a prefix instead of a suffix (e.g., ‘unargue’ for the permissible response ‘argument’). Though the generated suffixes were incorrect, an increase in the number of suffixes was observed with age. Morphology which is considered as a strong tool increases English word learning (Baumann, Font, Tereshinski, Kame’enui, & Olejnik, 2002; Henry, 2003; Nagy, 2005; Scott, 2005; Templeton, 2004) for the English Language Learners. Performance on morphosemantic based tasks is likely to tap into the children’s lexical networks, sentence processing abilities, and the syntactic and semantic knowledge of the root and suffix. The adolescents with language disorder in the present research were found to be less sensitive to morphological aspects which are conveyed by derivational morphemes than typically developing children. Similar findings are reported in children with reading and language deficits (Anastasia, 2014). The incorrect responses generated can also be attributed to the poor understanding of grammatical structures, a weak working memory, and/or a poor morphological awareness which may lead to difficulties in recalling and applying spelling and syntactic rules and breaking-down spoken language. The pronunciation and spelling errors which were evident in the derivational suffixes are a characteristic of not only poor reading but also poor writing (Coleman et al., 2009). According to Casalis et al. (2004), the production of derived words are found to be predominantly challenging for children with language or reading difficulties. Kieffer (2014) suggested that the skills exhibited in morphological analysis can be used to differentiate skilled readers from students with reading difficulties. Children with dyslexia have been found to have deficits in morphological awareness (Dal, 2008; Ganschow et al., 2000; Simon, 2000). Schneider and Ganschow (2000) suggested that children find it challenging to develop metalinguistic
awareness of their written and oral language. Similar findings have also been demonstrated in children with dyslexia (including poor readers) having poor word-reading and reading comprehension (Abu-Rabia, 2007; Leikin & Hagit, 2006; Nagy, Berninger, Abbott, Vaughan, & Vermeulen, 2003; Siegel, 2008). Deacon, Parrila, and Kirby (2008), opined that morphological awareness may offer a compensatory path of training poor readers and children with dyslexia, and may also be the means by which certain adolescents overcome dyslexia. Other studies have also identified poor readers in middle and high school as well as in college to have a poor grasp over derivational suffixes (Nagy et al., 2006). According to Jarmulowicz, Taran, and Hay (2007), children who do not link phonological and orthographic representations of derived words are less competent word learners and less proficient readers.

**Double-Function Words Task (Auditory)**

**Rationale for selecting the task**

The double-function words task (auditory) received a high test-retest reliability, with all the items of the task receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.84) was attained at p<0.05. This high reliability attained by the double-function words task (auditory) implied that homographs can be considered as a measure to evaluate the semantic skills of an adolescent. The test items of the double-function words task (auditory) which consisted of sentences, and the permissible responses (homographs) were taken from the academic textbooks as suggested by Snow et al. (1989). Each of the permissible responses which were expected from the double-function words task (auditory) had a psychological and a physical meaning. Each of the words comprised of a pair of word classes (e.g., ‘bat’ which was a noun-noun pair; ‘train’ which was a verb-noun pair; ‘stable’ which was an adjective-noun pair; and ‘close’ which was a verb-adverb pair). Polysemous words such as homographs have multiple meanings which are considered to be important for the understanding of academic concepts which are presented in school (Durkin et al., 1985). Billow (1977) considered polysemous words to be metaphorical in nature, wherein the physical meaning refers to a literal sense and the psychological meaning a nonliteral sense. The assessment of semantics using polysemous words have also been used in other tests such as the Fullerton Language Test for Adolescents- 2nd edition (Thorum, 1986), Test of Language Competence – Expanded edition (Wiig & Secord, 1989), and The Word Test: Adolescent – Second edition (Bowers et al., 2005). The present task
is a less explored domain, and hence is recommended to be used in studies pertaining to the development of the understanding and use of homographs in children and adolescents.

**Evidence of developmental trend of the task**

Unlike the other tasks wherein the respective permissible responses increased in complexity with age, the items of the double-function words task (auditory) did not follow this pattern. However, Flores D’Arcais (1978) had found that the secondary meanings of the words used in these tasks are found to be confusing for school-age children when they were used in reference to comparison and quantitative relationships. Billow (1977) opined that, compared to the other types of polysemous words, the double function terms are acquired steadily throughout the school years. A complete understanding of such terms requires the person to be able to identify and explain how the psychological and physical meanings are related. Though Asch and Nerlove (1960) had studied the understanding of double function terms in younger children, they concluded that the psychological meanings of the double function terms are grasped years after the understanding of its physical counterpart. Similar findings were obtained by Schecter and Broughton (1991) who found that such terms that do not occur commonly may remain difficult to explain throughout adolescence and adulthood. Durkin et al. (1985) also indicated that the primary meanings of such polysemous words are mostly understood by preschool children, with the secondary meanings being acquired much later in school. This difficulty in the understanding of secondary meanings of polysemous words may continue well into adolescence (Schecter & Broughton, 1991). The semantic categorization of such terms can be explained based on the development or acquisition of a prototype of each concept that is learnt (Gleason, 2005), wherein the individual compares the prototype to a new probability of the concept that is encountered. This is the basis of the prototype theory. Nelson's (1974) functional core hypothesis also stated that the meanings of early words are based on the actions or functions that the concepts represent, indicating that these meanings can be modified based upon a new function which is encountered by that concept. Therefore, to achieve an entirely developed lexicon, the individual requires organizing his lexical system into an effective system, adding new entries to his vocabulary store.
Application of the task in language disorders

The double-function words task (auditory) received a good validity based on the Mann Whitney Test, with all the items of the task receiving a validity at p<0.05. A good validity was attained at p<0.05 for the total scores of the task. This validity attained by the double-function words task (auditory) implied that this task can be considered as a measure to identify adolescents with language disorder. The ROC analysis done for the double-function words task (auditory) revealed all groups to have attained a sensitivity of 80% and above. The specificity of the task revealed Group I and IV to have attained a specificity of 80% and above; Group II and III to have attained a specificity between 60 – 80%; and Group V and VI to have attained a specificity between 40 – 60%. This task which followed a constructed response format received cut-off score of ≥1, with a maximum score of 5 for each group.

The incorrect responses generated under the double-function words task comprised of words which were generated by listening to one of the two meanings (physical or psychological), synonymous to the target response. For example, the incorrect response ‘battery’ to the permissible response ‘cell’ for item no.17A in the Appendix E. Other incorrect responses were either related to the permissible response (e.g., ‘time’ for the permissible response ‘second’), or an unrelated response (e.g., ‘building’ for the item no. 10A in the Appendix E).

The incorrect responses generated by the adolescents with language disorders can be attributed to the weak links between the richness of semantic representation and word retrieval (Dockrell et al., 1998). Beck and McKeown (2007) opined that learning new vocabulary depended on forming associations with an established lexicon and prior knowledge, thereby enabling stronger lexical networks. The semantic deficits exhibited by the adolescents with language disorder may be a result of inadequate word learning, word leaning without following use of it, irregular word use, or from deficient stimulus cues (Bjork & Bjork, 1992). Such errors have also been noted to exist in both children with WFDs and chronological age matched control participants (McGregor, 1997). However, the adolescents with WFDs exhibited more errors than the typically developing age matched peers, suggesting poorer semantic representations. Such word retrieval difficulties are also considered as indicators of reading problems and poor performance in school (Wolf & Segal, 1992). Studies have also revealed such WFDs to
commonly occur in children and adolescents who are identified with learning disability, language disorders, aphasia and dyslexia (Murphy et al., 1988).

**Homophones Task (Visual)**

**Rationale for selecting the task**

The homophones task (visual) received a high test-retest reliability, with all the items of the task receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.83) was attained at p<0.05. This high reliability attained by the homophones task (visual) implied that homophones can be considered as a measure to evaluate the semantic skills of an adolescent. The test items of the homophones task (visual) consisted of sentences, and word choices which were taken from the academic textbooks as suggested by Snow et al. (1989). Polysemous words such as homophones are considered to have similar pronunciation but with a different orthographic form, which are considered to be important for the understanding of academic concepts which are presented in school (Durkin et al., 1985). The assessment of semantics using polysemous words have also been used in other tests such as the Fullerton Language Test for Adolescents- 2nd edition (Thorum, 1986), Test of Language Competence – Expanded edition (Wiig & Secord, 1989), and The Word Test: Adolescent – Second edition (Bowers et al., 2005). The present task is a less explored domain, and hence is recommended to be used in studies pertaining to the development of the understanding and use of homophones in children and adolescents.

**Evidence of developmental trend of the task**

The homophones task (visual) which was presented in a selected response format consisted of age specific word choices which increased in complexity with age. Schecter and Broughton (1991) reported that such polysemous words have shown a developmental pattern, but were not as prominent as the homographs. Gleason (2005) suggested that the semantic categorization of such terms can be explained based on the development or acquisition of a prototype of each concept that is learnt. This is the basis of the prototype theory, which proposes that the individual compares the prototype to a new probability of the concept that is encountered, after which the two alternative meanings of the word are stored within the lexicon. The functional core hypothesis put-forth by Nelson (1974) also stated that the meanings of early
words are based on the actions or functions that the concepts represent, indicating that these meanings can be modified based upon a new function encountered by that concept. Therefore, to achieve an entirely developed lexicon, the individual requires organizing his lexical system into an effective system, adding new entries to his vocabulary store.

**Application of the task in language disorders**

The homophones task (visual) received a good validity based on the Mann Whitney Test, with all the items of the task receiving a validity at p<0.05. A good validity was attained at p<0.05 for the total scores of the task. This validity attained by the homophones task (visual) implied that this task can be considered as a measure to identify adolescents with language disorder. The ROC analysis done for the homophones task (visual) revealed Group III and V to have attained a sensitivity of 80% and above, except for Group I, II, IV, and VI which attained a sensitivity between 60 – 80%. The specificity of the task revealed Group I to have attained a specificity of 80% and above; Group II, V, and VI which attained a specificity between 60 – 80%; and Group III which attained a specificity between 40 – 60%. This task which followed a selected response format received cut-off scores within the range of ≥2 - ≥3, with a maximum score of 5 for each group.

The mis-selected words by the adolescents with language disorders can be attributed to the weak links between the richness of semantic representation and word retrieval (Dockrell et al., 1998). According to Beck and McKeown (2007), the learning of new vocabulary does depend on forming associations with an established lexicon and prior knowledge, thereby enabling stronger lexical networks. Bjork and Bjork (1992) suggested that the semantic deficits exhibited by the adolescents with language disorder may be a result of word learning without following the use of it, inadequate word learning from deficient stimulus cues, or irregular word use. Similar errors have been noted to exist in children with WFDs, indicating poorer semantic representations (McGregor, 1997). Difficulties in word retrieval are also considered as indicators of reading problems and poor performance in school (Wolf & Segal, 1992). Studies have also revealed such WFDs to commonly occur in children and adolescents who are identified with learning disability, language disorders, aphasia and dyslexia (Murphy et al., 1988).
Compare/Contrast Task (Auditory)

Rationale for selecting the task

The compare/contrast task (auditory) received a high test-retest reliability, with all the items of the task receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.93) was attained at p<0.05. This high reliability attained by the compare/contrast task (auditory) implied that this task can be considered as a measure to evaluate the semantic skills of an adolescent. The test items of the compare/contrast task (auditory) consisted of sentences, and word choices which were taken from the academic textbooks as suggested by Snow et al. (1989). The multiple choices consisted of words of different word classes (nouns, verbs, adjectives). The present task is a less explored domain, and hence is recommended to be used in studies pertaining to the development of the understanding and use of confusable words in children and adolescents.

Evidence of developmental trend of the task

The compare/contrast task (auditory) which was presented in a selected response format consisted of word choices which were age specific and increased in complexity with age. This lexical organization indicated the relation between vocabulary and comprehension which is exemplified with the background knowledge and overall language competency the individual has. This was the basis of the knowledge hypothesis (Anderson & Freebody, 1981) and the language proficiency hypothesis (Stahl & Fairbanks, 1986). The instrumental hypothesis proposed by Anderson and Freebody (1981) suggested that these word choices indicated that it is essential to increase the number of word meanings inorder to improve understanding. Similarly, with the increased opportunities to read, the understanding of the meanings of new words will also be better. This was the basis of the byproduct hypothesis as proposed by Ruddell (1994).

Application of the task in language disorders

The compare/contrast task (auditory) received a good validity based on the Mann Whitney Test, with all the items of the task receiving a validity at p<0.05, except for item no. 7A which received a validity at p>0.05. A good validity was attained at p<0.05 for the total scores of the task, except for Group II which attained validity at p>0.05. This validity attained by the
compare/contrast task (auditory) implied that this task can be considered as a measure to identify adolescents with language disorder. The ROC analysis done for the compare/contrast task (auditory) revealed Group I, III, and VI to have attained a sensitivity of 80% and above, except for Group II, IV, and V which attained a sensitivity between 60 – 80%. The specificity of the task revealed Group I and III to have attained a specificity of 80% and above, except for Group II, IV, and V which attained a specificity between 60 – 80%; and Group VI which attained a specificity between 40 - 60%. This task which followed a selected response format received cut-off scores within the range of \( \geq 2 \leq 3 \), with a maximum score of 5 for each group.

The mis-selected words by the adolescents with language disorders can be attributed to the weak links between the richness of semantic representation and word retrieval (Dockrell et al., 1998). The learning of new vocabulary does depend on the formation of associations with an established lexicon and prior knowledge, thereby enabling stronger lexical networks (Beck & McKeown, 2007). Bjork and Bjork (1992) suggested that the semantic deficits exhibited by the adolescents with language disorder may be a result of word learning without the use of it, inadequate word learning, from deficient stimulus cues, or irregular word use. Similar errors have also been noted to exist in children with WFDs, indicating poorer semantic representations (McGregor, 1997). Difficulties in word retrieval are also considered as indicators of reading problems and poor performance in school (Wolf & Segal, 1992). Studies have revealed such WFDs to commonly occur in children and adolescents who are identified with learning disability, language disorders, aphasia and dyslexia (Murphy et al., 1988). Studies on children with SLI have also revealed deficits in the semantic domain of children (Brackenberry & Pye, 2005; Sheng & McGregor, 2010). These children with language difficulties have a less developed language system than chronological age controls, indicating a restricted semantic input which indirectly affects the word retrieval (McGregor, Friedman, Reilly, & Newman, 2002).

Proverbs/Idioms Task (Visual)

Rationale for selecting the task

The proverbs/idioms task (visual) received a high test-retest reliability, with all the items of the task receiving a Kappa value of 1.0 at \( p<0.001 \). A high intra-class correlation coefficient
(>0.84) was attained at p<0.05. This high reliability attained by the proverbs/idioms task (visual) implied that this task can be considered as a measure to evaluate the higher-linguistic skills of an adolescent. The test items of the proverbs/idioms task (visual) comprised of proverbs and idioms which were taken from the academic textbooks, as suggested by Snow et al. (1989). Though other adolescent language tests such as the Screening Test of Adolescent Language-Revised (Prather et al., 1990) and the Fullerton Language Test for Adolescents- 2nd edition (Thorum, 1986) assessed figurative expressions using an explanation task, the proverbs/idioms task (visual) followed a multiple choice format in the present tool. This was based on the suggestions given by Mueller and Gibbs (1987) that figurative expressions were better understood on multiple tasks than explanation based tasks. According to them, explanation based tasks were more demanding on the individual’s metalinguistic skills than multiple-choice based tasks. Similar conclusions were drawn by Gibbs (1991), who also found multiple-choice to be easier than explanation based tasks. Proverbial and idiomatic expressions assesses an individual’s imaginative outlook towards literacy materials (Perrine & Arp, 1982). Proverbs are considered to be a metalinguistic skill, reflecting an individual’s abstract reasoning ability, general intelligence, cultural knowledge and verbal competence (Van Lancker, 1990). The exposure to proverbs is also an important part of cultural learning (Hirsch et al., 1988). McDevitt (1993) considered idioms to be an indicator of one’s fluency in his/her language, irrespective of the language spoken. The idioms that were used in the proverbs/idioms task (visual), carry information that can be understood with the help of cognitive mechanisms, but may still be learnt as a whole (Galera Masegosa, 2010). Veale, Hao, and Guofu (2008) advocated that, the requirement for students to acquire these sophisticated linguistic expressions in both written and spoken modalities has become the highest priority for instructors in certain countries, resulting in stronger emphasis on literary accomplishment in educational setups. Being competent with the usage of such figurative expressions have become an essential aspect of becoming a socially literate and a linguistically superior person (Nippold, 1998). Nikitina and Furuoka (2008) have considered these figurative expressions as a research tool in the fields of general education and language pedagogy. According to Nippold, Allen, and Kirsch (2000), the figurative language comprehension encompasses higher-order cognitive processing, requiring an integration of processes such as understanding the context of occurrence of figurative expressions, understanding linguistic information that includes the abstract sense of words, and inferring from
real-world experiences. Using figurative expressions such as proverbs and idioms helps in the elaboration of an idea, and pursues to highlight and organize the meaning of word/phrase based on something familiar to the discourse partner, paving way to achieve a special meaning (Abkarian et al., 1992). The usage of such figurative expressions was found to form an intimacy between the discourse partners (Bukatko & Daehler, 2001). The understanding of proverbs and idioms are considered to be a good indicator for achieving success in school (Nippold, Hegel, Uhden, & Bustamante, 1998; Nippold, Uhden, & Schwarz, 1997), especially in terms of their reading and listening skills (Nippold, Moran, & Schwarz, 2001a, 2001b). The assessment of figurative expressions have also been used in tests such as the Test of Language Competence – Expanded edition (Wiig & Secord, 1989), and the Test of Word Knowledge (Wiig & Secord, 1990).

**Evidence of developmental trend of the task**

Descriptive statistics which was done to obtain the mean and standard deviation of the scores of the proverbs/idioms task (visual), revealed Group I and II attaining the lowest mean accuracy scores (standard deviation) of 31.84 (±6.43) and 34.62 (±7.81) respectively; Group III and IV attaining higher mean accuracy scores (standard deviation) of 40.75 (±8.64) and 40.41 (±8.24) respectively; and Group V and VI attaining the highest mean accuracy scores (standard deviation) of 45.89 (±9.35) and 45.11 (±9.63) respectively. One-way ANOVA revealed a main significant effect at p<0.001 which was obtained for the proverbs/idioms task (visual) across the six groups, indicating an overall development in the comprehension of proverbs and idioms. However, post-hoc analysis revealed significant differences (p<0.001) only between Group II and III, and Group IV and V, which indicated that not all groups exhibited a significant difference between them. This implied that when considering the comprehension of proverbs and idioms, a steady improvement in the interpretation of these expressions was not evident when compared between groups. In order to account for the poor significance attained between the groups for the development of proverbs and idioms task, the responses obtained were analysed from a cognitive perspective, based on the suggestions given by Billow (1975). In contrast to the chronological perspective of studying the six groups, the groups were classified into Piaget’s cognitive stages. Group I and II between 10 - 11.11 years was considered under the ‘concrete-operational stage’; Group III, IV and V between 12 – 14.11 years as the ‘late concrete-early
formal operational stage’, and Group VI between 15 – 15.11 years, as the ‘formal operational stage’. Similar statistical measures of one-way ANOVA and post-hoc analysis were performed to determine the level of significance across and between the Piaget groups for the proverbs/idioms task (visual). With the attainment of a main significant effect at p<0.001, the concrete-operational stage and late concrete-early formal operational stage revealed a significant effect at p<0.05. However, no significant difference (p>0.05) was obtained between the late concrete-early formal operational stage and the formal operational stage.

Studies have revealed that older children do understand and begin using language with a figurative sense (Nippold, Moran, et al., 2001a), which is at par with the present research. Language tasks such as these, which are metasemantic in nature, play a crucial role in the development of figurative comprehension throughout school-age and adolescent years (Nippold et al., 1997). According to Nippold et al. (1998), preadolescents showed greatest variance in their performance in proverb understanding, indicating that such tasks would be informative to evaluate the preadolescents thoroughly. Researchers have argued that children may have little or no understanding of proverbs before adolescence (Lutzer, 1988). Similarly, Nippold (2001) also suggested that the comprehension of idioms are considered to be an extended process in development, involving top-down and bottom up processing.

The poor level of significance which was observed between the late concrete-early formal operational stage and the formal operational stage can be attributed to the presence of a transition period between the two stages. Adolescents within this transition period may exhibit performance patterns which may be at par with its subsequent or preceding stages. According to Pollio and Pickens (1980), the preadolescents between 9 and 12 exhibit an abrupt acceleration in figurative competency. In addition, these adolescents also display a parallel advancement into the formal operational stage of cognitive development (Inhelder & Piaget, 1958). A parallel development across the cognitive stages and figurative language (Cometa & Eson, 1978; Lodge & Leach, 1975) have been reported in the past. The present research showed a gradual improvement in the comprehension of figurative language which begins in early childhood, progressing steadily through the adolescent years, at par with the findings of (Nippold, 2006). The fact that the oldest group in the present research had still not attained 100% accuracy in the interpretation of the figurative devices (proverbs and idioms) indicates that the figurative
language development is incomplete and ongoing even after attaining 16 years of age. Miller and Gildea (1987) also opined that such enhancement of the metasemantic system continues even after high school.

**Application of the task in language disorders**

Certain test items of the proverbs/idioms task (visual) received a good validity at \( p<0.05 \) based on the Mann Whitney Test, as indicated in Table 32. However, the task also consisted of items which received poor validity at \( p>0.05 \). A good validity was attained at \( p<0.05 \) for the total scores of the task, except for Group II which attained validity at \( p>0.05 \). The validity attained by the proverbs/idioms task (visual) implied that this task can be considered as a measure to identify adolescents with language disorder. The ROC analysis done for the proverbs/idioms task (visual) revealed all groups to have attained a sensitivity of 80% and above, except of Group IV and VI which attained a sensitivity between 60 – 80%. The specificity of the task revealed Group V to have attained a specificity of 80% and above; Group II, III, IV, and VI which attained a specificity between 60 – 80%; and Group I which attained a specificity below 40%. This task which followed a selected response format received cut-off scores within the range of \( \geq 20 \) - \( \geq 38 \), with a maximum score of 60.

Descriptive statistics which was done to obtain the mean accuracy scores of the proverbs/idioms task (visual) by the adolescents with language disorder, revealed Group I and II attaining the lowest mean accuracy scores of 27.2 and 27.4 respectively; Group III and IV attaining higher mean accuracy scores of 32.6 and 32.9 respectively; Group V attaining 29.7; and Group VI attaining the highest mean accuracy scores of 36.3. Though an over-all increase in the mean accuracy score was evident with age, the group-wise mean score was lower than their corresponding typically developing group. It was interesting to note that the performance of the language disorder group was comparable to performance of typically developing children at a lower age. Studies done by Abrahamsen and Sprouse (1995) have found proverbs to be essential in the identification of adolescents with language disorder. Likewise, Nippold, Allen, and Kirsch (2001) also opined that preadolescents who are less skilled in reading, do experience difficulty understanding proverbs and hence have poorer reasoning skills and vocabulary. Similar deficits in figurative language processing have been encountered by children with language impairment (Rinaldi, 2000; Spector, 1992), Language Learning Disabilities (Qualls et al., 2004), SLI
Botting & Adams, 2005; Van der Merwe & Southwood, 2008; Norbury, 2004), Autism Spectrum Disorders (Botting & Adams, 2005; MacKay & Shaw, 2004; Norbury, 2004); Semantic Pragmatic Language Disorder (Kerbel & Grunwell, 1998); Williams Syndrome (Naylor & Van Herwegen, 2012; Thomas et al., 2010), Hearing Impairment (Iran-Nejad et al., 1981), Intellectual Disability (Ezell & Goldstein, 1991), and adolescents with brain injury through trauma or strokes (Papagno & Caporali, 2007). Children with poor reading comprehension of written text were found to have poor inferencing skills than good readers who were producing more figurative interpretation of dual expressions (Cain, Oakhill, Barnes, & Byrant, 2001; Cain, Oakhill, & Lemmon, 2005; Levorato, Nesi, & Cacciari, 2004).

Similes Task (Auditory)

Rationale for selecting the task

The similes task (auditory) received a high test-retest reliability, with all the items of the task receiving a Kappa value of 1.0 at p<0.001. A high intra-class correlation coefficient (>0.99) was attained at p<0.05. This high reliability attained by the similes task (auditory) implied that this task can be considered as a measure to evaluate the higher-linguistic skills of an adolescent. The test items of the similes task (auditory) were presented following a similar method used in the study done by Van Der Merwe and Adendorff (2012). According to Pretorius (1989), tasks such as simile comprehension or production assessed the child’s ability to define and categorize words and to make appropriate comparisons. The interpretation of similes which were used in the present research required abstract thinking which is complex, and mental manipulation with more than one idea (Smith, 1967). The similes varied based on perceptibility - temperature (e.g., item 1A), perceptibility – physical (e.g., item 4A), perceptibility - taste (e.g., item 27A), operability- physical (e.g., item 2A), operability – mental (e.g., item 18A), integrity – mental (e.g., item 3A), integrity – physical (e.g., item 10A), integrity – social (e.g., item 24A), and enjoyability (e.g., item 12 A). According to Veale, Hao, and Guofu (2008) simile based figurative devices allow rapid identification of important stereotypes of a culture and language. They advocated that, the requirement for students to acquire these sophisticated linguistic devices in both written and spoken modalities has become the highest priority for instructors in certain countries. Being competent with the usage of such figuratives have become an essential aspect of becoming a socially literate and a linguistically superior person (Nippold, 1998).
Nikitina and Furuoka (2008) have considered the similes as a research tool in the fields of general language pedagogy and education. Nippold, Allen, and Kirsch (2000) opined that the figurative language comprehension encompasses higher-order cognitive processing, which requires an integration of the understanding of the context of occurrence of figurative expressions, understanding linguistic information, and inferring from real-world experiences. Usage of similes also helps in the elaboration of an idea and pursues to highlight and organize the meaning of word/phrase based on something familiar to the discourse partner, paving way to achieve a special meaning (Abkarian et al., 1992). These figurative devices are found to form an intimacy between the discourse partners (Bukatko & Daehler, 2001). The assessment of similar figurative devices have also been used in tests such as the Fullerton Language Test for Adolescents- 2nd edition (Thorum, 1986), Test of Language Competence – Expanded edition (Wiig & Secord, 1989), and the Screening Test of Adolescent Language-Revised (Prather et al., 1990), and the Test of Word Knowledge (Wiig & Secord, 1990).

**Evidence of developmental trend of the task**

Descriptive statistics which was done to obtain the mean and standard deviation of the scores of the similes task (auditory), revealed Group I and II attaining the lowest mean accuracy scores (standard deviation) of 12.14 (±4.75) and 12.22 (±4.43) respectively; Group III and IV attaining higher mean accuracy scores (standard deviation) of 15.16 (±4.37) and 17.16 (±4.41) respectively; and Group V and VI attaining mean accuracy scores (standard deviation) of 16.48 (±4.16) and 16.35 (±4.25) respectively. One-way ANOVA revealed a main significant effect at p<0.001 which was obtained for the similes task (auditory) across the six groups, indicating an overall development in the comprehension and production of similes. However, post-hoc analysis revealed no significant differences between any of the groups, indicating that an improvement in the interpretation of these expressions was not evident when compared between groups. In order to account for the poor significance attained between the groups, the development of the comprehension and production of similes was studied from a cognitive perspective at par with the suggestions by Billow (1975) incorporated for proverbs/idioms task (visual). Similar statistical measures of one-way ANOVA and post-hoc analysis were performed to determine the level of significance across and between the groups for the similes task (auditory). With the attainment of a main significant effect at p<0.001, the concrete-operational
stage and late concrete-early formal operational stage revealed a significant effect at p<0.05. However, no significant difference (p>0.05) was obtained between the late concrete-early formal operational stage and the formal operational stage.

The similes task (auditory) consisted of varying number of permissible responses across the items. It was observed that certain items exhibited an increase in the number of permissible responses with age. For example, item no. 1A consisted of four permissible responses (ice, freezer, ice cream, snow) generated by Group I. Whereas, Group III generated an additional two responses (fridge and penguin) for the same item. A similar performance pattern was also evident for item no. 6A, 7A, 11A, 12A, and 29A between younger and older groups. However, there were items which consisted of the similar number of permissible responses across all age groups. For example, item no. 3A consisted of only one permissible response (fox) generated by all six groups. A similar performance pattern was also evident for item no. 8A, 15A, 16A, 20A, and 24A. The responses generated by the younger and older groups consisted of vocabulary which was pertinent to their language age. The increase in permissible responses can be attributed to the learning of such expressions during their academic program. This can be directed to the development of the language skills as described by the knowledge hypothesis (Anderson & Freebody, 1981) and the language proficiency hypothesis (Stahl & Fairbanks, 1986).

Studies have revealed that older children do understand and begin using language with a figurative sense (Nippold, Moran, & Schwarz, 2001a), which is at par with the present research. The understanding of similes are considered to be a good indicator for achieving success in school (Nippold, Hegel, Uhden, & Bustamante, 1998; Nippold, Uhden, & Schwarz, 1997), especially in terms of their reading and listening skills (Nippold, Moran, et al., 2001a; Nippold, Moran, & Schwarz, 2001b). Language tasks such as these, which are metasemantic in nature play a crucial role in the development of figurative comprehension throughout school-age and adolescent years (Nippold et al., 1997). The poor level of significance which was observed between the late concrete-early formal operational stage and the formal operational stage can be attributed to the presence of a transition period between the two stages. Adolescents within this transition period may exhibit performance patterns which may be at par with its subsequent or preceding stages. According to Pollio and Pickens (1980), the preadolescents between 9 and 12
exhibit an abrupt acceleration in figurative competency. In addition, these adolescents also
display a parallel advancement into the formal operational stage of cognitive development
(Inhelder & Piaget, 1958). Similar studies also reported a parallel development across the
cognitive stages and figurative language (Cometa & Eson, 1978; Lodge & Leach, 1975). The
present research showed a gradual improvement in the comprehension of figurative language
which begins in early childhood and progressing steadily through the adolescent years (Nippold,
2006). The fact that the oldest group in the present research had still not attained 100% accuracy
in the interpretation of the similes indicates that the figurative language development is
incomplete and ongoing even after attaining 16 years of age. Miller and Gildea (1987) also
opined that such enhancement of the metasemantic system continues even after high school.

Application of the task in language disorders

Certain test items of the similes task (auditory) received a good validity at p<0.05 based
on the Mann Whitney Test, as indicated in Table 36. However, the task also consisted of items
which received poor validity at p>0.05. A good validity was attained at p<0.001 for the total
scores of the task. This validity attained by the similes task (auditory) implied that this task can
be considered as a measure to identify adolescents with language disorder. The ROC analysis
done for the similes task (auditory) revealed all groups to have attained a sensitivity of 80% and
above, except of Group VI which attained a sensitivity between 60 – 80%. The specificity of the
task revealed all groups to have attained a specificity of 80% and above. This task which
followed a constructed response format received cut-off scores within the range of ≥2 -≤14, with
a maximum score of 30.

Descriptive statistics which was done to obtain the mean accuracy scores of the similes
task (auditory) by the adolescents with language disorder, revealed Group I attaining the lowest
mean accuracy score of 0.4; Group II attaining 3.0; Group III attaining 5.9; Group IV attaining
4.4; Group V attaining 5.8, and Group VI attaining 7.6. Though an over-all increase in the mean
accuracy score was evident with age, the group-wise mean score was lower than their
Corresponding typically developing group. It was interesting to note that the performance of the
language disorder group was comparable to performance of typically developing children at a
lower age.
The incorrect responses that were generated by the adolescents with language disorder, were words that were either antonyms (e.g., ‘hot’ for the item no. 1A) or synonyms (e.g., ‘tough’ for the item no. 10A) of the target item, words which were paradigmatically (e.g., ‘sweet’ for the item no. 27A) related to the target item but not figurative, words that were of the same semantic field (e.g., ‘elephant’ for the item no. 18A) however not figurative, words that were unrelated (e.g., ‘apple’ for the item no. 27A), words that were of a different tense form of the target item (e.g., ‘cooled’ for item no. 25A), and words that were a repetition of the target item. Studies have revealed deficits in figurative language processing which have been encountered by children with language impairment (Rinaldi, 2000; Spector, 1992), Language Learning Disabilities (Qualls et al., 2004), SLI (Botting & Adams, 2005; Norbury, 2004; Van Der Merwe & Southwood, 2008), Autism Spectrum Disorders (Botting & Adams, 2005; MacKay & Shaw, 2004; Norbury, 2004); Semantic Pragmatic Language Disorder (Kerbel & Grunwell, 1998); Williams Syndrome (Naylor & Van Herwegen, 2012; Thomas et al., 2010), hearing impairment (Iran-Nejad et al., 1981), adolescents with brain injury through trauma or strokes (Papagno & Caporali, 2007), and intellectual disability (Ezell & Goldstein, 1991).

The tasks that were selected for the present research assessed the adolescent language in auditory and visual modalities. The purpose to focus on the bimodal presentation of the tasks was in view of educational setup which includes teaching and learning in both these modalities, laying equal weightage to both during their academic program. Moreover, bimodal learning is a prerequisite in the curriculum. According to Puranik and Lombardino (2006), young children begin the process of comprehension through listening to language, which they later use to comprehend written text. Studies have revealed that reading being a language-based skill is parallely related to the spoken language skills (Perfetti et al., 2005; Share & Leikin, 2004).

The ROC analysis which was done to obtain cut-off scores for each of the tasks resulted in different degrees of sensitivity and specificity. It was noted that compared to the proverbs/idioms task (visual), the similes task (auditory) received lower cut-off scores indicating that similes are more demanding than proverbs and idioms. However, this can also be attributed to the response format of both the tasks. Since the proverbs/idioms task (visual) followed a selected response format, the accuracy scores might have been more, compared to the constructed response format followed for the similes task (auditory). Earlier studies have also
laid more importance on multiple choice tasks compared to explanation based tasks (Gibbs, 1991).

The varying sensitivity and specificity can be attributed to the gradual development of language which takes place during adolescence. The language development in this population is found to follow a varied pattern for different tasks unlike the younger children who exhibit an evident developmental trajectory. Nippold (2007) opined that this language performance in adolescence is difficult to measure using standardized tools as the development in this stage is marked by subtle improvement in skills. Therefore Nippold, Schwarz, and Undlin (1992) suggested that these linguistic changes may not be obvious unless the group is widely separated and studied (for e.g., 10-year-olds vs. 13-year-olds).