

# Nonverbal Learning Disability in Relation to the Semantics and Pragmatics of Humor

**Rabih Joseph Nabhan, Mireille Garabed Sarkissian**

English Language and Literature Department, Holy Spirit University of Kaslik (USEK), Kaslik, Lebanon

**Email address:**

[rabihnabhan@usek.edu.lb](mailto:rabihnabhan@usek.edu.lb) (R. J. Nabhan), [rabihnabhan@gmail.com](mailto:rabihnabhan@gmail.com) (R. J. Nabhan)

**To cite this article:**

Rabih Joseph Nabhan, Mireille Garabed Sarkissian. Nonverbal Learning Disability in Relation to the Semantics and Pragmatics of Humor. *Arabic Language, Literature & Culture*. Vol. 3, No. 4, 2018, pp. 43-47. doi: 10.11648/j.allc.20180304.11

**Received:** December 5, 2018; **Accepted:** January 16, 2019; **Published:** April 22, 2019

---

**Abstract:** The purpose of this research is to identify difficulties in understanding humor caused by deficits in language in relation to Learning Difficulties (LD) such as Non-Verbal Learning Disabilities (NVLD) with respect to the fields of semantics and pragmatics. The first phase of the paper assesses social development and perception of humor with regards to social, cognitive, and linguistic skills. The second phase pinpoints patterns of humor as well as the perception of humor by individuals with NVLD. The final phase involves surveying the fields of semantics and pragmatics of humor by identifying patterns and deficits, which are later used to identify solutions and suggestions. Seemingly, the ability to comprehend, assess, or develop humor is tied to social and cognitive skills, and any deficits in learning may hinder the understanding of humor. The studies examined in this paper illustrate that learners with NVLD find it difficult to comprehend or assess jokes that are phonological in nature. However, these learners can understand lexical and congruity jokes. Provided the context and linguistics patterns, learners with NVLD can perceive jokes and derive meaning through context. Hence, in order to reduce the effects of NVLD, learners should be provided with language awareness in order to overcome their learning difficulties. Moreover, adjustment tools can be taken into consideration, such as providing individuals with safe learning environments and developing curriculums that fit their needs. Since individuals with NVLD do not comprehend humor on the phonological level, they can gradually learn how to overcome this difficulty by probing the field of phonology. Also, learners with NVLD can also master lexicology and cognitive congruity in order to understand better the mechanics of humor and language.

**Keywords:** NVLD, Perception, Humor, Semantics, Pragmatics

---

## 1. Definition of Terms

Over the course of time, numerous approaches and perspectives have been provided to apprehend the social development of individuals. One of the viewpoints states that the social development of individuals stems from their interaction with others and that individuals construct judgments that are accepted by the society's traditions and practices [1]. A shared perspective is demonstrated by Freud, Watson, and Skinner and it signifies that social development involves adapting to customs, principles and practices within a given society [2-4]. On one hand, the term Learning Disability (LD), according to Semrud-Clikeman and Glass, refers to the struggles individuals face while processing written, oral, or nonverbal information [5]. On the other hand, Non-Verbal Learning Disability (NVLD) indicates difficulty processing nonverbal information in specific. In

order to grasp the mechanism of NVLD and humor, it is important to tackle the linguistic fields of semantics and pragmatics. These fields have different associations although they are usually interrelated. To explain, semantics refers to the study of meaning in language, while pragmatics refers to the study of meaning within a certain context [6].

## 2. Introduction

Social development is one of the most crucial aspects of an individual's intellectual, emotional, and social success. Similarly, the ability to comprehend verbal humor indicates intellectual and linguistic skills [7]. Because humor is tightly tied to social, cognitive, and linguistics skills, any deficits in learning may hinder the social development of an individual. The social function of humor is undeniable, in fact, it has been the object of study by numerous researchers. To

illustrate, many assert that humor fosters relationships, reduces anxiety, and voices out certain emotions in a socially acceptable way [8-10]. In this manner, several researchers incorporate humor when studying social behaviour that is associated with NVLD. Given the research done by Nash, it is marked that humor is generic, linguistic, and interactional [11]. Generic stands for the literary conventions and cultural facts while linguistic refers to patterns of syntax, semantics, and sounds. Additionally, interactional entails the pragmatic relationship between the many components of a humorous expression. This paper aims at shedding light on the relationship between NVLD and humor with respect to the fields of semantics and pragmatics in an attempt to comprehend and overcome incompetency in grasping humor.

### 3. Literature Review

#### 3.1. Learning Disability (LD) and Non-Verbal Learning Disability (NVLD)

Although the area of learning disabilities has been the subject of many studies, researchers have failed to agree upon a definition that could be referred to globally. Diesfield notes that the term LD reflects an expectation of those mental capacities which are required for “normal functioning” in society [12]. Even though most definitions rely on the fact that individuals with LD do not require the same mental capacities as regular individuals, a number of researchers worry that the term is given a broad definition that does not apply to all individuals with LD. Hence, the definition adopted by the Scottish Government takes into account the diverse nature of individuals and their learning disabilities [13]. To illustrate, the term LD is defined as a condition that has multiple components such as “reduced understanding of new or complex information and skills, inability to cope independently, and a condition that has lasting effects on the individual” [13]. As mentioned previously, LD indicates difficulties in processing information that is either written, oral, or nonverbal whereas NVLD refers to the difficulties individuals have while processing nonverbal information. Semrud-Clikeman and Glass amplify the definition of NVLD by pinpointing some characteristics that accompany this type of LD [5]. Accordingly, the two researchers designate primary and secondary deficits of NVLD. To illustrate, characteristics such as high verbal skills combined with low visual-spatial skills, trouble with nonverbal and abstract problem solving, and social skills deficits compose the primary deficits. However, difficulty with math, poor perception, poor reading comprehension, and confusion with time or directionality are among the secondary characteristics [5]. Nonetheless, the most important aspects highlighted in the research of Semrud-Clikeman and Glass are difficulties in semantic and pragmatic language use and comprehension, in addition to the conception of humor [5]. NVLD has recently triggered the attention of researchers, although the term is first described and tackled in the studies conducted by Cole and Kraft [14]. Other learning disabilities such as dyslexia

and attention deficit hyperactivity were more prevalent in research because NVLD is often more challenging to measure [15]. Moreover, the works of Semrud-Clikeman and Glass illustrate that learners with NVLD are often neglected if they do not show clear signs of deficits when learning math, which later leads to social neglect and withdrawal, depression, and suicide in some severe cases [5]. Henceforth, a number of scholars tackle humor in their research whenever they wish to study the connection of NVLD and social withdrawal.

#### 3.2. Developmental Patterns of Humour

Investigations associated with the development of humour in young children demonstrate clear developmental patterns. Evidently, as children grow older, their appreciation and conception of riddles and jokes escalates. For example, engaging in the telling of jokes or riddle-like-jokes are often the interest of first and second graders. Despite their humoristic abilities, first and second graders do not show ability in understanding the origins of humor. By the third and fourth grade, children participate in uttering and assessing more complicated riddles that have homonymic aspects with two different implications. The use of complicated riddles increases as children grow into upper-elementary grades, as they start operating on complex cognitive incongruity [16]. Producing a wide variety of humor becomes very enjoyable when children incorporate knowledge and cognitive mechanisms. According to Schultz, incongruity in children is an essential feature in the production of humor and that the resolution phase becomes more important in the understanding of humor as children develop cognitively [17]. In a similar research on verbal humor, Schultz and Horibe state that between the ages of 6 and 8, the transition from the stage of pure incongruity to incongruity occurs [18]. Developmental changes in cognition and language allow children to react to abstract incongruities by the age of six. Nonetheless, McGhee claims that children must have a clear understanding of the real world before they develop the ability to understand humor [19]. Additionally, Bariaud, McGhee, Sroufe and Waters, and Croufe and Wunsch believe that children’s engagement in producing verbal humor is another developmental pattern associated with humor [20-23]. Therefore, as children grow, their ability to grasp and generate humor becomes better and more advanced. Nonetheless, not all children or adults have similar developmental patterns when it comes to humor. As illustrated in the works of Semrud-Clikeman and Glass, many problems interfere in the emotional involvement necessary to understand humor, such as difficulties in facial recognition, managing and identifying discomfort, and poor development of empathy [5]. These difficulties are associated with individuals with NVLD and might add up to the struggles in understanding humor. The most applicable investigation could be that of Masten, who believes that the production of humor, comprehension, and mirth are certainly related to academic and social aptitude. Her study revolves around the fact that social awareness facilitates humor and

social competence [10]. The study conducted by Masten also concludes that mirth can be attributed to IQ and performance anxiety, although there is no subtle connection between humor and academic performance [10]. Therefore, it could be concluded that social awareness and humor influence one another and could trigger efficient social understating.

### **3.3. Perception of Humor by Individuals with LD and NVLD**

As stated previously, the ability to understand humor is an indicator of social development and intellectual and linguistic skills. Yet, the perception of humor by individuals with LD and NVLD is different than those who do not associate with any types of learning disabilities. Bruno, Johnson, and Simon led a study on the perception of humor by students with learning disabilities or mild retardation by comparing their results with those of regular students [24]. The subjects selected for the study were from a school in Ohio, and they all met the criteria for one of the three educational sections. In order to test the perception of humor among the three groups, the learners were given three tasks. The tasks included many categories and the first one was classified by humor with phonological characteristics, as humor was derived from words that have similar sounds but multiple meanings. The second category was lexical, where the same words were used in different meanings. Cognitive incongruity was the third category used in the study. On the phonological level, regular students scored higher than students with LD and mental retardation. However, students with LD scored between the two groups on lexical and incongruity jokes. Interestingly, students with LD showed the best variability in explaining jokes. Nevertheless, after assessing the justification of jokes provided by students with LD, the examiners concluded that this group had a difficulty explaining phonological jokes, whereas they found it less challenging to explain lexical or cognitive congruity jokes. The results of the study conclude that learners with LD develop and perceive the concept of jokes or riddles, but have troubles with certain parts of their format. Learners with LD find it challenging to understand jokes or riddles that are phonological in nature. The study conducted by Sermund-Clikemen and Glass also examines the comprehension of humor, more specifically in children with NVLD [5]. In order to assess the comprehension of humor in children with NVLD, the researchers compared them with groups of learners with reading disabilities and a group of learners who do not possess any learning disabilities. The fifty five participants of this study were aged 12-15, since by this age humor has complex linguistic elements, and were chosen to represent three groups. Hence, participants represented groups with visual-perceptual deficits, language-based learning deficits, and ADHD deficit. The tests linked with humor were composed of jokes and cartoons. As it was hypothesized, learners with NVLD performed more poorly and committed more errors than the other participants. When analysing the errors committed by the group that consisted of NVLD learners, researchers discovered that there were no

differences between the learners with NVLD when perceiving humor. However, when the NVLD group was divided into two groups with and without deficits in social perception, the results demonstrated a significant distinction in humor comprehension. Therefore, Sermund-Clikemen and Glass prove that learners with NVLD have difficulties in comprehending humor because of poor social perception, and not necessarily visual-spatial perception [5]. These findings contribute to the fact that humor is highly associated with social perception, and subsequently with social development.

### **3.4. The Semantics and Pragmatics of Humor**

Since humor has a crucial role in social development, many researchers study the origins of humor, its types, roles, development, and perception. In order to understand the relationship between humor, semantics, and pragmatics in relation to NVLD, it is important to differentiate between the two types of humor. Firstly, referential humor depends on semantic and pragmatic incongruity. Secondly, verbal humor relies on linguistic form such as puns, ambiguous humor, and repetitions such as alliteration. Verbal humor merges the aspects mentioned previously in order to result in semantic or pragmatic implications. One of the most prominent researchers in the semantics of humor is Victor Raskin. The conditions necessary for a text to be humorous are introduced by Raskin as a semantic theory that must consist of scripts available for speakers and a set of combinatorial rules [25]. These rules combine possible meanings of the script provided and remove those that do not deliver coherent meaning. This theory relies on the degree of competence given a certain humoristic phrase/situation. Moreover, Raskin does not set any boundaries between the study of semantics and pragmatics as he believes one field leads to the other [25]. He also believes that humor does not follow Grice's Principle of Cooperation, which refers to the conversational contribution individuals are expected to make. Irony is another aspect of humor which can be approached by the field of pragmatics because irony is all about the change in literal meaning to express figurative meaning. Since semantics refers to the study of meaning in language, one must give careful thought to the language used and the way it is used in order to draw meaningful conclusions. Yet, learners with LD and NVLD in specific lack the aspects regular learners have in order to derive certain conclusions and meanings. The field of semantics can provide those individuals with a clearer idea on how semantics works and how proper meanings can be derived. Similarly, pragmatics is about gaining meaning but through a certain context. Since humor can be ambiguous, provided the context, learners with LD and NVLD can refer to the context and derive certain meanings and succeed in perceiving a joke or a riddle. Despite their broad branches, the fields of semantics and pragmatics contribute to the study of humor with regards to LD and NVLD by suggesting methods that can initiate better understanding of humor.

## 4. Solutions and Suggestions

Although learning disabilities such as dyslexia has been the subject of numerous research, studies on NVLD are relatively new. According to Hakvoort and Thoonen, it is difficult to suggest clear treatment and solutions for NVLD mainly because the seriousness of NVLD is different from one individual to another [26]. However, a few steps can be taken into consideration in order to reduce the effects of NVLD among individuals. One step could be introducing NVLD individuals to their abilities and disabilities. When they understand what they can or cannot do, they would gain the awareness they need to develop their points of strengths and work more to overcome limitations. Another step that can be spreading awareness among parents and teachers and provide them with adjustment tools. Adjustments within the classrooms are suggested by Molenaar-Klumper, such as providing NVLD learners with safe environments, working on the organization of classroom/curriculum to fit the needs of the learners, and lessening the consequences of learning disabilities [27]. Because language is an important aspect in the learning process and the perception of humor, it could be used as a tool to overcome difficulties learners with NVLD face and support their strengths in certain areas of language. To illustrate, the studies discussed earlier on the perception of humor in children with LD and NVLD provide a clear idea that individuals with learning difficulties face problems with certain aspects of language. One of the studies draw conclusions on the fact that LD and NVLD learners do not comprehend humor which works on the phonological level. Hence, by introducing the field of phonology to these learners, they might gradually overcome their weaknesses in phonological humor. When working with individuals with LD and NVLD, it is important to shed light on the strengths of the learners. By concentrating on their points of strength, such as in lexicology and cognitive congruity illustrated in the previous studies, learners would focus on the positive side of their learning experience and use these points of strengths to overcome obstacles. Last but not least, by integrating the use of semantics and pragmatics in the classroom, learners with NVLD could slightly grow further from their struggles when they finally understand the facets of ambiguity, irony, implicatures, speech act, and anaphora. Additionally, by emphasizing the use of linguistic pragmatics, learners with NVLD would outshine themselves. To illustrate, Cardillo, R., Basso Garcia, R., Mammarella, I. C., and Cornoldi argue that children with NVLD generally perform better than learners with different learning difficulties, especially when language is significantly involved [28]. Moreover, the study conducted by Cardillo, R., Basso Garcia, R., Mammarella, I. C., and Cornoldi concludes that learners with NVLD may be stronger in linguistic pragmatics and theory of mind skills than learners with dyslexia and associated language difficulties, which conflicts with a generally-held assumption [28]. Further research within NVLD and humor in relation to NVLD may help uncover further approaches and solutions in the future.

## 5. Conclusion

An individual's emotional, intellectual, and social success is a result of social development. Social development is achieved if the individual is able to process and comprehend humor. In addition, the ability to understand humor is an indicator of one's linguistic and social skills. Since the individual's assessment of humor is tied to social, cognitive, and linguistics skills, deficits in learning may hinder social connections. According to research, humor has an undeniable social function, such as fostering relationships, reducing anxiety, and voicing out emotions and concerns that are difficult to express. Non-verbal learning disability has been associated with humor when examining the social behavior of individuals. According to Nash, humor is of two types, generic and interactional [11]. Therefore, by shedding light on literary conventions, facts, patterns of syntax, semantics, and sounds, the processing of humor would become natural. Nevertheless, the perception of humor differs from one person to another, specifically with individuals with LD and NVLD. Because humor depends on semantics and pragmatics incongruity, delving deeper into these two fields may offer a better understanding of humor and its components. Hence, the fields of semantics and pragmatics may offer solutions that help overcome or reduce the effects of NVLD within individuals. Moreover, by insuring that learners with LD and NVLD are provided with safe learning mediums and language awareness, these individuals would become confident learners. Therefore, social development and perception is tied with the comprehension of humor, which has been the subject of numerous research. By integrating the use of semantics and pragmatics in the curriculum, individuals with NVLD may have a better understating on the dynamics of humor, which would lead to overcoming difficulties in social development.

---

## References

- [1] Piaget, J. (1995a). Explanation in Sociology. In J. Piaget (Ed.), *Sociological Studies* (pp. 30–96). London: Routledge. Piaget, J. (1995b). Problems of the Social Psychology of Childhood. In J. Piaget (Eds), *Sociological Studies* (pp. 287–318). London: Routledge.
- [2] Freud, S. (1930). *Civilization and Its Discontents*. New York: Norton.
- [3] Watson, J. B. (1924). *Behaviorism*. New York: The People's Institute.
- [4] Skinner, B. F. (1971). *Beyond Freedom and Dignity*. New York: Knopf.
- [5] Semrud-Clikeman, M., & Glass, K. (2008). Comprehension of Humor in Children with Nonverbal Learning Disabilities, Reading Disabilities, and without Learning Disabilities. *Annals of Dyslexia*, 58 (2).
- [6] Cruse, A. (2006). *A Glossary of Semantics and Pragmatics*. Edinburgh: Edinburgh University Press.

- [7] McGhee, P. E. (1979). *Humor: Its Origin and Development*. San Francisco: W. H. Freeman.
- [8] Chapman, A. J. (1976). Social Aspects of Humorous Laughter. In A. J. Chapman, & H. C. Foot (Eds.), *Humor and Laughter: Theory, Research and Applications* (pp. 155-186). New York: Wiley.
- [9] Martineau, W. H. (1972). A Model of the Social Functions of Humor. In J. H. Goldstein, & P. M. McGhee (Eds.), *The psychology of Humor: Theoretical Perspectives and Empirical Issues* (pp. 101-125). New York: Academic.
- [10] Masten, A. S. (1986). Humor and Competence in School-aged Children. *Child Development*, 57, 461-473.
- [11] Nash, W. (1985). *The Language of humour*. London: Longman.
- [12] Diesfield, K. (1999). International Ethical Safeguards: Genetics and People with Learning Disabilities. *Disability and Society*, 14 (1), 21-36.
- [13] Scottish Executive (2000). *The Same As You? Review of Learning Disability Services in Scotland*. Edinburgh: The Stationery Office.
- [14] Cole, M., & Kraft, M. B. (1964). Specific Learning Disability. *Cortex*, 1, 302-313.
- [15] Pennington, B. F. (1991). *Diagnosing Learning Disorders*. New York: Guilford.
- [16] Whitt, J. K., & Prentice, N. M. (1977). Cognitive Processes in the Development of Children's Enjoyment and Comprehension of Joking Riddles. *Developmental Psychology*, 13, 129-136.
- [17] Schultz, T. R. (1972). The Role of Incongruity and Resolution in Children's Appreciation of Cartoon Humor. *Journal of Experimental Child Psychology*, 13, 456-477.
- [18] Schultz, T. R., & Horibe, F. (1974). Development of the Appreciation of Verbal Jokes. *Developmental Psychology*, 10, 13-20.
- [19] McGhee, P. E. (1974). Cognitive Mastery and Children's Humor. *Psychological Bulletin*, 81, 44.
- [20] Bariaud, F. (1988). Age Differences in Children's Humor. *Journal of Children in Contemporary Society*, 20, 15-45.
- [21] McGhee, P. E. (1971). Development of the Humor Response. *Psychological Bulletin*, 76, 31.
- [22] Sroufe, L. A., & Waters, E. (1976). The Ontogenesis of Smiling and Laughter: A Perspective on the Organization of Development in Infancy. *Psychological Review*, 83, 173-189.
- [23] Sroufe, L. A., & Wunsch, J. P. (1972). The Development of Laughter in the First Year of Life. *Child Development*, 43, 1326-1344.
- [24] Bruno, R. M., Johnson, J. M., & Simon, J. (1987). Perception of Humor by Regular Class Students and Students with Learning Disabilities or Mild Mental Retardation. *Journal of Learning Disabilities*, 20 (9).
- [25] Raskin, V. (1985). *Semantic Mechanisms of Humor*. Dordrecht/Boston/Lancaster: D. Reidel.
- [26] Hakvoort, F. J. & Thoonen, G. (1999) [NLD en aspecten van schoolvaardigheden en -tekorten.] Congrespresentatie 10 december 1999: Het NLD-syndroom: theorie en praktijk, 20-21. Tilburg/ Oisterwijk: Katholieke Universiteit Brabant and De Hondsberg.
- [27] Molenaar-Klumper, M. (2002). *Non-Verbal Learning Disabilities: Characteristics, Diagnosis, and Treatment within an Educational Setting*. London: Jessica Kingsley.
- [28] Cardillo, R., Basso Garcia, R., Mammarella, I. C., & Cornoldi, C. (2018) Pragmatics of language and theory of mind in children with dyslexia with associated language difficulties or nonverbal learning disabilities, *Applied Neuropsychology: Child*, 7:3, 245-256, DOI: 10.1080/21622965.2017.1297946