



# Hindering the Metacognitive Development of the Hearing- Impaired Children as Depicted in Sara Novic's *True Biz*

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## **Hindering the Metacognitive Development of the Hearing- Impaired Children as Depicted in Sara Novic's *True Biz***

### **Abstract:**

Hearing loss is a serious impairment that hinders proper communication and social integration. Language deprivation leads to frustration and isolation that result in negative cognitive, emotional, social and psychological consequences. The study elucidates the definitions of metacognition and highlights its functions. It discusses the differences between metacognition on the one hand, and cognition and theory- of- the mind on the other hand. Moreover, it expounds how deafness hampers sending and receiving information and consequently hinders almost all cognitive skills. The study reveals the sufferings of the main characters of Sara Novic's *True Biz* (2022) and concentrates on their retarded cognitive abilities as a result of their deafness. Being a deaf herself, Novic managed to depict thoroughly the world of the Deaf. Furthermore, she also collaborates with a deaf talented artist, Brittany Castle to illustrate the novel with many symbols of the American Sign Language (ASL). In addition, Novic highlights the burdens of the families of the Deaf, the rigidity of the political and educational systems, the shortcomings of the medical devices and rehabilitation methods available to them.

**Keywords:** Metacognition, cognition, theory – of- the mind, deafness, cochlear, implantation, sign, language, Sara, Novic, True, Biz

Senses are the main conduits to a person's brain. Therefore, it is expected that any total or even partial malfunction in any of the senses results in countless unique and often traumatic problems of adjustment to cope with society. However, it is the deterioration of the sense of seeing or hearing that constitutes a horrible problem. The sense of hearing in particular, is of crucial importance to communication which is the main tool of social interaction. This is due to the fact that hearing is "the key to learning spoken language and is important for the cognitive development of children" (World Health Organization [WHO] 4). Accordingly, Hearing loss hinders both proper education and social integration as it blocks spoken language development and communication means. As a result of many communication barriers a hearing- impaired person is subjected to negative cognitive, emotional, social and psychological consequences.

The purpose of this paper is to tackle the social and psychological hardships experienced by deaf people and highlight their retarded cognitive abilities as a result of their hearing loss. It traces the psychological plight undergone by the main characters of Sara Nović's *True Biz* (2022) as a consequence of their lack of means of communication and social isolation. Moreover, the paper thoroughly concentrates on the hardships of the world of the deaf as revealed by the deaf authoress Sara Nović. She not only honestly depicts the sufferings of the main characters but also emphasizes the predicament of the families of the deaf, the rigidity of the educational system, and the shortcomings of the rehabilitation methods and the medical devices offered to them.

Most of the previous studies that handle cognition or metacognition present different definitions of metacognition like

Baker's and Brown's "Metacognition Skills and Reading"(1984) and J.H.Flavell's "Metacognition and Cognitive Monitoring: a New Area of Cognitive Developmental Inquiry"(1979). Some other studies compare and contrast metacognition with other similar fields like that of Flavell and Noushad. Flavell's "Cognitive Development: Children's Knowledge about the Mind"(1999) highlights the points of differences between metacognition and theory- of- the mind. Whereas, P.P.Noushad in his "Cognitions about cognitions: The Theory of Metacognition"(2008) focuses on the major differences between cognition and metacognition. These studies elucidate the theory of metacognition and its application on normal children or adolescents. They traced the natural development of mental abilities and skills of normal people. They do not concentrate on the disabled children to reveal their particular troubles that face cognition development.

Similarly, even those who studied the deaf, their problems, and their needs did not examine thoroughly the impact of deafness on their metacognition. Dan G. Blazer and Debara L.Tucci in their article "Hearing Loss and Psychiatric Disorders: A Review", discuss the relationship between hearing impairment and depression, anxiety, psychosis outcomes and auditory hallucinations. They only touch upon the causal relationship between hearing loss and neurocognitive disorders ascribing them to the language barrier and isolation as a result of it. Moreover, William Nobel's study "Preventing the Psychological Risks of Hearing Loss" handles the psychological and social effects of hearing loss concentrating on the deaf withdrawal from society as a consequence of their lack of self-confidence and the feeling that they are stigmatized persons.

Likewise, in their article "Social and Psychological Problems of Deaf People"(1971), Boyce R. Williams and Allen E. Sussman handle the problems faced by deaf students at public schools and the limited effectiveness of medical intervention. They also examine the necessity of establishing specialized organizations for the deaf to be a kind of resort to them but they do not discuss these organizations elaborately. Similarly, Holly Reed quickly touches upon the impact of hearing loss on cognition but he gives his greater care to the social effects of this impairment.

However, it is the study produced by the Chinese researchers Bo Gao and Yi Li in 2023 that tackles in more detail the psychological characteristics of hearing- impaired children and their relationship with metacognition theory. Though they discuss the relationship of metacognition with intelligence and information acquisition and how they are negatively affected by deafness, they concentrate more on young children rather than adolescents. They conclude their study suggesting that the abilities of deaf students can be promoted to reach the level of normal students so that they can join ordinary schools. Yet, this suggestion is the opposite of the call of Sara Nović's *True Biz*. Throughout the novel, Nović calls for the establishment of private schools for the deaf in order to provide them with a positive, proper environment to facilitate communication among them.

Almost all studies that discuss Sara Nović's *True Biz* (2022) hail her choice of the world of the deaf as her main subject. They approve her distinctive writing style as she gives the reader, within the chapters, a background information about the culture of the deaf, some of their historical background, and illustrations of many symbols of American Sign Language (ASL). However, these studies do not analyze intensively how the deaf circumstances

negatively affect their cognitive abilities particularly when they are obliged to use spoken language rather than sign language. It is the primary purpose of this paper to examine thoroughly the impact of deafness on the metacognitive skills, psychological and social states of the coming-of- age students who represent the main characters of the novel.

Concerning metacognition theory, John H. Flavell (1979) was the first to define metacognition as the "knowledge that takes as its object or regulates any aspect of any cognitive endeavor"(608). Later, in "Speculations about the Nature and Development of Metacognition" (1987) he defined it as "knowledge and cognition about cognitive objects"(23). Noushad thinks that Flavell also connected metacognition with "executive processes, formal operations, consciousness, social cognition, self-efficacy, self-regulation, reflective self-awareness, and the concept of psychological self or psychological object"( Noushad 3).

In their "Metacognition Skills and Reading"(1484) Baker and Brown define metacognition as "an awareness of what skills, strategies, and resources are needed to perform a task effectively"(354). For them metacognition helps a person to regulate his thoughts and techniques to reach a successful achievement of a definite task. In 1999 Flavell considers metacognition "thinking about thinking" (32) because it involves knowing, thinking, analyzing, reaching conclusions and trying to apply the required results. Students should know how their minds work to be able to remember, learn and think of proper solutions to their learning problems and to perform other cognitive tasks. However, Hacker (1998) highlights the differences between "cognitive tasks" like remembering previous information and

"metacognitive tasks" like arranging the problem-solving process (Noushad 5). He also emphasizes the necessity of knowing the thinking process. By and large, many thinkers believe that metacognition is "both knowledge about and control over thinking process"(Noushad 5).

In this context, it is worth distinguishing metacognition from cognition and theory – of- mind. In his article "Development of Children's Knowledge about the Mental World"(2000) John H. Flavell discusses three major differences between theory-of-mind and metacognition. The first difference is that most of theory-of-mind researchers study children's "initial knowledge about our basic mental states- desires, percepts, beliefs, knowledge, thoughts, intentions, feelings, and so on"(17). Such studies try to investigate how children at these early stages are aware of these various states of mind and the behavior that suits them. Conversely, researchers of metacognitive development concentrate on task- related mental activities to trace how a person uses his mind to solve a problem or perform a task. Therefore, most of metacognition studies are "problem- centered and goal- oriented" so that they can be considered "applied theory-of- mind"(17).

The second difference between metacognition and theory-of-mind according to Flavell, is the age stage of their samples of study. While theory-of-mind examines infants and young children, metacognition investigates older children and adolescents to be able to express their more complicated mental states. The last difference discussed by Flavell is connected with the applicable nature of metacognition that focuses on "what the subject knows about how to use his/her own mind rather than somebody else's"(17). In contrast, the primary concern of theory-of-mind is the person's

"understanding of some other person's mind, or minds in general"(17).

On the other hand, Noushad traces the main differences between cognition and metacognition. According to him, cognition is the purposeful thinking that is based on experiential data. Therefore, cognition "mediates between the learner and the experiential world and the objects of cognition are real objects, ideas and abstractions" (Noushad 5). However, when the purposeful thought is concerned with problem- solving, it is metacognition. Thus, metacognition "mediates between the learners and their cognition"(Noushad 6). Whereas cognition traces how the learners' minds react with the real world, metacognition examines how their "minds act on their cognition"(6). According to this, when the tasks are more challenging or when they are problem- solving, they concern the field of metacognition. That is why "metacognitions are second-order cognitions: thoughts about thoughts, knowledge about knowledge, or reflections about actions"(Noushad 6).

Noushad defines the functions of metacognition in three main stages namely awareness, evaluation and regulation. By metacognitive awareness he means how the person is aware of his present place in the learning process or in the process of solving a problem. He should be aware of what he needs to achieve the acquired competencies and enhance his mental processes. Moreover, metacognitive evaluation indicates how an individual judges his own thinking process, capacities, and strategies to be able to regulate them. Furthermore, metacognitive regulation comes when individuals resort to their skills to direct their knowledge and thinking. It depends upon knowledge "(about self and strategies...)" and use of "executive skills (such as planning,



self- correcting, setting goals) to optimize the use of their cognitive resources"(Noushad 15).

Considering Flavell as the advocate of metacognition, Gao and Li interpret his concept of it as "knowledge about personal cognitive processes as well as the knowledge and control over thinking and learning activities"(108). They agree with other many researchers that metacognition "expresses the self- reflection, self-control and self-regulation of cognitive process"(108) when people think of their cognitive ability. In this sense, metacognition is considered the core of intelligence and hence it influences not only learning motivation but also "information reception, processing and self- regulation"(108). Naturally such a complicated process of thinking, evaluating, modifying behavior, and regulating techniques is negatively hindered by hearing loss.

The association of hearing loss with neurocognitive disorders is confirmed. Those who have a moderate or severe hearing loss find conversation difficult and consequently they feel isolated. This isolation, in turn leads to cognitive decline. The hearing- impaired persons suffer impaired verbal communication that results in information degradation and emotional deprivation. These circumstances lead to cognitive decline and psychological problems like depression, anxiety disorders and feelings of social isolation.

The classification of disabled persons defines hearing impairment as "permanent hearing impairment in both ears to varying degrees due to various reasons, and the inability to hear or understand the ambient sound and speech sound, thus affecting their daily life and social participation"(Gao and Li 108). Hearing impairment negatively affects language, thinking, and concentration. These factors, in turn affect the acquisition of

metacognition as they hamper receiving information and developing the executive functions of the hearing- impaired person. Moreover, as the sense of hearing is one of the main channels to the brain for the greater part of human learning, the deaf person's experience and store of knowledge are limited. He faces a lot of challenges in his daily life, so he is required to exert a greater effort than the normal person.

The major handicap facing the hearing- impaired is the communication problem which hampers nearly every aspect of his life. To be able to perform any activity one should send and receive information. However, the deaf is inefficient at both sending and receiving any kind of information. He has an inferior level of language particularly if he is born deaf or lost his hearing within a very short time after his birth. Those cannot communicate except with signs and gestures as they are deficient in articulation and spoken language is difficult for them. In contrast to this category of the deaf, other hearing- impaired people lost their hearing after acquiring some spoken language. Those persons can have some intelligible speech and in their case, medical intervention can be more effective.

Normal hearing is a must for normal speech. Without hearing, speech does not develop properly. To acquire a spoken language and correctly produce it, one should be frequently exposed to it. Adequate exposure to a certain language is a prerequisite for producing it. As the Deaf person is "shut off from these normal learning patterns, he does not acquire language or speech without special training procedures" (Williams and Sussman 17). Thus, the deaf face great difficulty in developing relationships or expressing feelings. They undergo a feeling of loss as a result of being isolated from others. Their feeling of isolation can sometimes result in their

"withdrawal from all relationships"(Reed 6). Moreover, when deaf people are obliged to ask for repetition, they feel inferior, self-conscious and uneasy. Hearing loss reduces self-confidence and makes deaf people feel "stigmatized" because they are considered by others as "dumb, stupid, mentally disabled or prematurely aged"(Reed 10).

Gao and Li notice that hearing- impaired children have many mental health problems because their "psychological patience, resilience, emotional control, cognitive and interpersonal abilities are generally lower than those of ordinary children"(109). Furthermore, when faced by a traumatic event, deaf children become anxious, depressed or they resort to withdrawal. They are basically hampered by communication barriers. They feel lost because of their lack of information and their failure to achieve their individuality in society. They also feel unable to correctly judge their own emotions or the emotions of others.

Hearing loss causes profound changes in the life of the deaf. They not only lose normal social communication and intimate relationships but they also avoid "the difficulty of trying to converse" by "withdrawing from social situations"(Nobel 592). Moreover, they are deprived of many social practices such as using the telephone or conversing with hearing people. Furthermore, deaf people are often "portrayed as a stigmatizing persona" who considers the question "Are you deaf?" as "an accusation not an inquiry"(Nobel 592). This intensifies the levels of isolation and depression. Nobel thinks that other "psychological impacts of hearing loss include embarrassment, loss of confidence, irritability and anger, dependence on others, and fatigue"(592). These hardships begin to have varied expression in many literary works.

The emergence of disability studies is accompanied by many writings by disabled people themselves. Geethu Vijayan believes that disabled people's writings give "a true portrayal of the lives of disabled folk, their sufferings, hardships, agonies and how they overcome challenges that they face" (18). Sara Nović is a deaf novelist who is the author of *Girl at War* and *America is Immigrants*. She is a deaf rights activist who writes about social justice issues, disability and its representation in media. Moreover, she teaches creative writing and Deaf studies at Emerson College and Stockton University.

Sara Nović was born hearing but lost her hearing in middle school. When she learned sign language in her adolescence, she experienced great joy and got rid of the exhaustion of trying to communicate in spoken English. She explains that lip-reading and other clues are considered by the Deaf as "listening fatigue" because they require a lot of guessing (Nović, personal interview with the author, July 4, 2022). She confirms that American Sign Language (ASL) and English are two completely different languages and it is ASL which is more flexible and vivid than spoken English. *True Biz* is New York Times Bestseller, and American Library Association Alex Award Winner. The title "True Biz" is a deaf idiom that means "seriously", "real talk", or "I'm not kidding". It thus suits the main subject of the novel that is immersed in the world of the deaf.

Nović's coming –of-age novel is set in the fictional town of Colson, Ohio. The main setting is River Valley, a residential school for the Deaf. The author shifts points of view throughout the novel, moving among the three major characters namely February Waters, Charlie Serrano, and Austin Workman. February Waters is the headmistress of River Valley and a child of deaf adults (CODA).

She is responsible for her deaf mother who also has dementia and she devotes herself to her deaf students at school. In addition to February, Austin Workman is the school deaf star kid who belongs to a family with generational deafness. It is a privilege that enables him to develop his self-confidence and be an expert in sign language. Though Austin's father is a hearing person, his mother and grandparents are deaf and all his family is proud of its deaf heritage. However, Charlie Serrano is the central protagonist of *True Biz*. She is a deaf girl whose hearing parents are newly divorced. Charlie was enrolled by her mother in a mainstream school where she suffered a lack of communication and failed to achieve any perceptible academic progress. Her mother thought that Charlie's deafness could be overcome by a cochlear implant and speech therapy. Unfortunately, the device proved to be ineffectual and faulty for several years and caused her daily physical discomfort. Yet, under her father's custody, Charlie is recently enrolled in River Valley School for the Deaf and also participates in its night classes for sign language.

Charlie suffered a lot from formal education at her mainstream school. Formal education of deaf children begins with what is known as "the oral method" that uses "only speech, lip-reading vibration, amplification, writing and natural gestures" to develop the child's language (William and Sussman 17). However, oral training of deaf children proves to be unsuccessful for the majority of them. The deaf student finds himself in a constant struggle to comprehend what is being said. Therefore, these oral techniques form a communication plight for the deaf. At the mainstream school Charlie's educational term was "oral failure" (Nović 16). Though she was not stupid, "she sounded stupid when she talked" (16). Moreover, the environment of the public school classroom was "not at all conducive to learning" (Nović 17). The classroom teems with

tumult of moving furniture and students' chatter. In addition, teachers sometimes discussed lessons with their backs to the class while writing on the board. This of course hindered Charlie's lip-reading so that she could only understand sixty percent of what was going on. Naturally, sixty percent was still not a good achievement.

Though Charlie spent long hours with a therapist learning about mouth shapes and airflow by "blowing out candles, or holding her nose, or pressing an upside- down spoon on her tongue", many sounds were still undistinguishable to her (53). When students began learning to read and spell, she could not interpret the questions and so she did not have answers. She was scolded by her teachers who enquired at parent conferences if she had "additional disabilities" (Nović 53). They were not convinced that she could not hear because she had a cochlear implant. Yet, they did not imagine that the device did not work. Her predicament becomes more complicated because, like any hearing- impaired child, Charlie's mental health is affected by the communication relationships with their teachers and their peers.

Thus, the regular public school usually provides the young deaf with a threatening psychological environment. They feel alien, frustrated and helpless. The young deaf can be the object of normal children's ridicule and silly attitudes. Furthermore, untrained teachers are unable to properly treat or interact with them. At the mainstream school Charlie tried to "chase down the sensation of belonging" (172) as she felt as an isolated outcast. Moreover, in the field of education "money ruled the day, and deaf education had been hyper-stratified by the rise of the cochlear implant" (163). Wealthy families could pay for the expensive surgery and rehabilitative therapies, so their children were successful at the mainstream schools while the kids of poor families failed. They had

to join deaf schools but with "vast cognitive deficits" (163) as they wasted long periods of their lives deprived of proper communication and hence their cognitive abilities were restrained.

To explain the mutual relationship between communication and mental understanding, Flavell (2000) gives an example of deaf children. He notices that deaf children whose hearing parents are ignorant of sign language perform more poorly on tests than deaf children of fluent- signing deaf parents. He thinks that such findings reflect the "importance of social – communicative experiences for the development of mentalistic understanding" (20). In its turn, this understanding helps to develop social skills and make them more available. In this context, February diagnoses the problem of her adolescent students as "a simple lack of language" (117). She thinks that the simple vocabulary and logic that was adequate for them in childhood has become inadequate "in the face of new and much more complex challenges and emotions" (117).

Fortunately, schools for the deaf adopt techniques of instructing that is called "total communication" (Williams and Sussman 19). This method includes speaking, writing, fingerspelling and singing. It is an inclusive method that utilizes the deaf person's intelligence and vision. This creates vital language reservoir that is essential for improving their expression and their cognitive abilities. Therefore, hearing – impaired students should be helped with language rehabilitation to be able to develop their cognitive and social skills. With the help of using gestures, visual aids and signs, hearing-impaired persons can be taught to have a sense of responsibility, independence and cognitive understanding.

As harmonious and safe school environment leads to effective and balanced emotional interactions, at River Valley Charlie's "language was burgeoning"(170). During the school day she

concentrated on the hands and any clues of her teachers. Moreover, she went on going to the night classes with her father as partners and they experienced telling each other the events of the day. Besides this she practiced sign language in the cafeteria with other ASL users. She admired sign language as it was more concentrated of expression so that "concepts that took up whole spoken phrases encapsulated in a single sign"(171). She knew another sign which came to be a version of "real talk" and it was "transliterated for her alternately as true business and true biz" (171).

In addition to learning and enjoying sign language, Charlie took great delight in the technological facilities offered to her at River Valley with the help of her fellow students. One of the boys took her phone and downloaded many applications for her. An application flashed a light to alert her to loud sounds, another to send video messages, and several other applications that accurately translated speech to text. Certainly, these technological facilities made communication for Charlie much easier than before. Moreover, her fellow students were "patient with her" (172) not sarcastic or aggressive like her previous fellows at the mainstream school. She was no longer "the deaf girl" because "deafness was the baseline and plenty of kids had implants" (190). Undoubtedly, River Valley offered Charlie an encouraging, healthy environment to enhance her knowledge, intelligence and cognitive abilities besides feelings of confidence and self- worth.

The school for the deaf offers deaf children psychological comfort and protective environment to cope with their peers. In such a way it can offer what is required by research of metacognition theory to rehabilitate the hearing- impaired children. For example, it can "form effective cognitive learning strategies,[...], achieve better development in metacognitive



ability, and then promote the improvement of learning ability" (Gao and Li 109). Thus, the transition to River Valley protects students from the pressures and restrictions of oral education and enhances their sense of belonging and self-worth. River Valley "was synonymous with safety, a place where they could understand and be understood" (Novic 75).

Besides the suitable school, the role of parents is of crucial importance in the life of the deaf. They should be their trainers and their teachers in order to help them build their trust and sense of self-worth. The hearing-impaired child is dependent on his family to be connected with the outside world. Parents of deaf children play a transitory role. At first, they try to help their children acquire oral language in order to look normal. However, they gradually lose hope of oralism. Therefore, they either begin to learn signs and fingerspelling to help their children communicate successfully, like Charlie's father or they may lose interest as they become unsatisfied with the performance of their young children like Charlie's mother. Furthermore, the economic status of the family determines the rehabilitation level of the deaf child. In the meantime, the mental health of the hearing-impaired child is affected by the convenient environment of the family. Thus, the divorce of Charlie's parents promotes her psychological instability and enlarges the emotional distance between her and her mother.

Parents of deaf children "must deal with specific challenges, are often at greater risk of stress, have higher-out-of-pocket expenses and lose more work days than other parents" ([WHO] 4). Moreover, the families of the Deaf suffer the consequences of misunderstandings and extra financial and psychological burdens. At her school February encounters many examples of children who cannot have a conversation with their own families. She believes

that high poverty rates lead to fewer cochlear implants and less money for private therapy, so her school becomes a refuge for many deaf students. Geographically, River Valley is "at the center of a wide pool of people" who are really in need for it (42). Parents agree with February that the dormitory is the best place for deaf students to communicate and practice their sign language. However, the attitudes of parents are varied as some of them are in tears while others are indifferent to their children's departure.

Some parents deprive their children of sign language as it is socially stigmatized. In this way they are unknowingly locking their children's minds. They think that by doing so, they can motivate their children's speech. Yet, in reality they are blocking their children's effective way to thinking and knowledge. They hamper their cognition and impose isolation on them.

The negative attitudes of some parents towards their deaf children appear plainly to February before holiday breaks. As a headmistress, the emptying of the dormitory becomes one of her most difficult tasks. This is because not all parents are willing to take their children for holiday. Some young children wait for a long time screaming for their families. Though February feels "protective" of them, she feels "an acerbic mix of pity and anger toward the parents" (199). February appreciates the extra efforts and high costs that most parents sacrifice, but she cannot endure to see children punished because of their fate. There are also the foster children whose parents neglect them or plainly refuse to retrieve them. February encounters in her career such kind of "parent who would rather not have their kid" (199). The Malloys exemplify such hateful attitude when they are threatened by Child Protective Services before releasing the loving kid, Jamie into their custody. In addition to the Malloys, there are the Schneiders who have a

hearing kid besides Emily, the deaf one. Comparing Emily to her hearing older brother, make the Schneiders so indignant at her that they exert "persistent parental efforts to forget her" (200). This reveals the shameful attitudes of some parents towards their deaf children and shows how these victims turn to be more helpless, dependent creatures.

Such severe parents support Dan Goodley's view that the non-disabled think of the disabled as a great problem hindering the harmony of a physically perfect society. He refers to Deb Marks who observes that "disabled people constitute a huge problem for non-disabled society precisely because they disrupt the normative individual" (Goodley 639). According to this view, the person whose speech cannot be easily interpreted, collides with the cultural norms of the proper way of speaking. Moreover, the person who cannot walk deserves the pity of others as he does not meet the usual standards of idealized mobility. Also, students with learning difficulties are rejected from mainstream schools because they do not have the necessary educational requirements. Goodley concludes that individuals "who depend on – or require connections with – others to live are not individuals at all. They are burdens" (640). That is why Sara Nović in her interview with Jennifer Blankfeir announces that by writing *True Biz* she hopes to teach the hearing world that "we are not broken versions of you- we're just different" (Nović, personal interview with the author, July 4, 2022). In order to prove their efficiency, the deaf should be assisted by rehabilitation programs.

Persons with hearing disorders should be referred to appropriate specialists. "Otolaryngologists often work in concert with audiologists to provide in –depth evaluation of the hearing loss" (Blazer and Tucci 895). The hearing- impaired persons are either

totally deaf or hard of hearing. The hard of hearing are "those whose loss ranging from very slight to very severe" (Williams and Sussman 14). They still depend on their ears to communicate with others. Moreover, their hearing disability may improve by drugs, surgery or hearing aids. In contrast to them, the deaf person relies totally on his eyes to communicate with others. When he does not see the speaker, he cannot comprehend anything.

Unfortunately, medical intervention is rarely effective as the deaf person's hearing impairment is mostly irreversible. The use of hearing aids may offer some help but they cannot restore hearing to normal. Moreover, hearing aids are expensive and difficult to fit because of their adjustment and their costs of batteries and repair. Advanced hearing – assistive technologies are cochlear implants where a device is placed in the inner ear to improve the perception of sound for persons who do not benefit from amplification. The placement of the internal portion of the cochlear implant is a surgical procedure that lasts about two hours. It is an expensive and complicated surgery of which there is no certain improving result. Furthermore, auditory rehabilitation is necessary for the success of technological assistance. Audiologists design programs to help the deaf to "adapt to their loss, become familiar with hearing assistive technologies, learn strategies for better listening and communication, and provide psychological support" (Blazer and Tucci 895). Therefore, training and "other adjustment services are fundamental in reducing the handicapping aspect of this profound hearing impairment" (Williams and Sussman 14). They can compensate for their loss of hearing by using their intelligence and other points of strength.

Thus, hearing – impaired children should be helped with language rehabilitation and development of their cognitive and

social skills. Rehabilitation programs that introduce alternative means of communication are more useful. These means include sign language and total communication in which all methods of communication such as gestures, body language, lip-reading and other means are used. They also include "bilingual / bicultural (bi-bi) teaching, cued speech and lip-reading approaches" ([WHO] 13). During "(bi- bi)" teaching, professionals concentrate on both hearing and deaf cultures in the classroom. Furthermore, cued speech is a visual communication system that is built on mouth movement to make the phonemes of oral language seem different. With the help of using sign language and visual advanced technology, hearing- impaired persons can promote their self-confidence, independence and cognitive skills.

Throughout the depiction of Charlie's character Nović demonstrates the hardships undergone by the deaf because of some faulty medical devices. Charlie's suffering from cochlear implant is severe. From time to time she is agonized by strong headache so that she once feels "wraparound headache, pain slicing from ear to temple, across her vision, and down her neck" (176). The headache increases till she feels pressure in her brain. These horrible physical pains prove to be a direct consequence of the defective implant that Charlie has. That's why she protests against her father's argument that it is the only way to help her to speak. She sharply replies, "plenty of people don't talk at all, ...And they've had more normal lives than me" (204). At that moment she is completely convinced that sign language is not only satisfying but it is also richer, more enjoyable and expressive than spoken language.

Charlie also thinks that if her mother's motivation to implant her is love, then it is a "tough love" (205). The emotional gap between Charlie and her mother is summed up by her thought that

"the most truly unfair thing was the expectation that a mother should completely understand another human being just because she'd given birth to them" (205). She thinks that a mother should consider her children independent human beings and so they are not her own possession. The main problem between Charlie and her mother is a lack of understanding and absence of flexibility. She does not give her the chance to decide for herself.

At Colson children's hospital Charlie is accompanied by her mother and Austin to check her implant. Knowing that there is no auditory discrimination improvement, the doctor ordered x- ray. Then examining the on- screen images of Charlie's head, he informed them that the implant had been recalled. Coldly, he told them that the company worked first with the self- reported malfunctions when the users complain of problems "to avoid unnecessary panic" (307). The doctor talked indifferently and in a matter of fact tone about the implant's defect. He did not consider the agony that the Deaf suffered as a result of the defects of such a crucial device. Moreover, he talked as if the Deaf were not human beings and that they are destined to suffer.

Unfortunately, the doctor explains that the internal components of the implant should be removed because there is damaged tissue and this causes the horrible headache for Charlie. Here, Charlie shouts angrily "Surgery again?". This naturally summarizes her agony with the defective device. She sharply explodes at her mother, who is asking about a new better implantation, and challenging her that she will not do another surgery. Yet she has to do a rapid one to remove this "chunk of rusting metal" from her head (309). Charlie thinks of the device implanted in her head as "trash, and it was their fault. They knew, and nobody said anything. All the headaches, the struggles in school, they had been somebody

else's failings" (309). Charlie was a helpless victim of the corruption and greed of others. She protests against her mother's suggestion of a new implant in the other ear saying "But it's my head, not an oil field. You can't just drill around in there until hit eureka" (310). In "A Note from the Author" published by PRH Library, Novic declares that *True Biz* had "its origin in a news clipping I read about a cochlear implant company facing legal repercussions for implanting malfunctioning devices in deaf patients" (Nović A Note, April 11, 2022). She denounces this inhuman misdeed and calls for severe punishment for this scandal because it is a horrible experience for the Deaf.

In the morning of the school play, Charlie suffers a double vision and headache returns full force. Before the performance her agonizing pain increases so that she rebukes her mother saying, "you only care about stuffing my head with enough metal to pretend with your shitty friends I'm normal!" (316). The insistence of Charlie's mother on implantation enlarges the distance between her and Charlie. Unfortunately, this implant proved to be defective not helpful like the other cochlear devices. It not only makes no hearing improvement, but it also causes dangerous harm to her. Just before being on the school stage Charlie feels her "whole body shaking – not a rhythm but an open run of voltage from her head and down her neck" (316). Though she snatches the processor from her head, she feels her mouth "thick, her jaw tight" and her body is a "hummingbird's thrum" so that she can no longer see at all (316). This horrible state develops suddenly till she faints and is taken to the Intensive Care Unit. In the ICU doctors learn that her implant is defective and has leaked into her brain and electrocuted her. After an urgent surgery to remove the implant out of her head, Charlie blames her mother saying "My implant electrocuted me. In the head" (324). This conveys the extent to which she undergoes

horrible moments of pain and danger. However, her mother thinks of re-implantation but the doctor tells her that Charlie has too much tissue damage to re-implant. To interpret her nervousness, Charlie sharply answers her mother "YOU'RE what's wrong with me! " (335). She angrily accuses her "you're trying to kill me with these fucking- she pointed to her scar- thing!" (335). After acquiring a rich expressive language like ASL, Charlie gains a lot of self-confidence and personal will. Now she has become mature enough to protect her own head and her own body from the devastating plans of her mother.

Though Charlie's mother was not ill- intended, she throws her daughter in a physiological as well as psychological whirlpool where she enduringly twirls in pain. During the rapid surgery of the implant removal, her mother defends herself "I'm not a monster. I only tried to do what was best for her"(319). She demonstrates how she was shocked when Charlie still was not talking at two and how both of her and Charlie's father began the circuit of different medical examinations. On discovering Charlie's deafness, doctors advised her of "miraculous new technology" meaning cochlear implantation. The mother sacrificed her grandfather's inheritance in order to be able to pay for the expensive device, surgery, and necessary therapy. The father helped with extra money to "give her every opportunity" according to the promises of doctors (319). Therefore, by the standards of a normal loving mother who wants to facilitate her child's life by all possible means, Charlie's mother is not that bad. However, it is her close- mindedness and her care for appearance that widens the gap between her and Charlie. In addition to this, it is a matter of ill fortune that makes her purchase such a defective device from unrespectable company and hence agonize her daughter. However, the development of Charlie's character and her enhanced feeling of self- worth enable her to type



to her mother with defiance "i will filibuster you until im 18" (335). Here, the mother is astonished not only at Charlie's challenging tone but also at her knowledge of such a long word "filibuster". She becomes aware of the progress of her stock of vocabulary and her cognitive thought. She is confirmed that Charlie's resistance of re-implantation will be more severe.

Throughout the novel Nović criticizes the insistence of the medical community on strongly advising parents to implant their deaf children though implantation is not useful in all cases. Cochlear implants do not cure deafness. They are not the magical solution to deafness as suggested by the medical professionals. Moreover, she condemns the close-mindedness of the medical community in fighting sign language claiming that it hinders spoken English language. They thus deprive deaf children of the cognitive benefits of practicing two languages. Therefore, February believes that kids who are unable to acquire at least a language before age five, can experience "permanent cognitive damage" (20). This is because they fail to express their needs, feelings, wishes or anything. February is astonished that though "fear of bilingualism in two spoken languages had been dismissed as xenophobic nonsense" (21), medical circles still discourage ASL. Rejecting sign language was the principal cause of Charlie's prolonged suffering.

Unlike Charlie whose mother does not accept her deafness and resists sign language; February Waters has a strong relationship with her deaf mother. Being a CODA enables her to be fluent in both spoken and sign language. CODAs are a privileged category of deaf culture as they are native signers who communicate with their deaf parents and, in the meantime, they are hearing people communicating normally with the hearing world. As the

headmistress of River Valley School, February is active, self-confident, serious, talented administrative, and broad-minded. She is cooperative and merciful with her deaf students and always thinks of solutions to their problems. On knowing of the perplexity of Charlie when she first comes to River Valley, February assigns Austin, the cleverest boy at the school, to be her mentor in order to help her practicing sign language. February sympathizes with almost all her deaf students. Moreover, she is completely devoted to her work and proud of her efficient teachers.

Like the other main characters namely Charlie and Austin, February confronts a major problem in her life. She is horrified by the news of River Valley's impending closure because of extreme budget cuts. This means that February will lose both her job and also her school-owned house. She tries to "reverse the decision with some good old-fashioned civic action" (162) like drafting pleading letters to the state legislature. She can neither imagine the collapse of her school nor sending her deaf students to hearing schools. In addition to this disaster, February faces the worsening condition of her mother so that she is obliged to place her in a nursing home where she eventually dies.

The third central character in the novel is Austin Workman, a fifth generation Deaf person in a family that is proud of its Deaf heritage. In contrast to Charlie, Austin had a charming childhood surrounded by sign language and people who totally understand him. While his friends were considered by their own mothers as "broken babies", Austin's mother told him many times that "he was perfect" (48). Moreover, his teachers consider him "a linguistic role model" because of his long-life exposure to sign language (49). As he destroys the language barrier, he can achieve identity and self-confidence. Therefore, he has privilege and prestige among his

fellows. When assigned as Charlie's mentor and tour guide, they develop a romantic relationship.

Like February and Charlie, Austin faces a major anxiety in his life. When his new born sister is declared to be hearing, Austin is shocked at his hearing father's reaction so that he thinks that " his father's secret hopes and dreams laid bare" (101). He is disappointed at his father's pleasure as a result of this news. Unfortunately, when the baby is revealed to be deaf, the father is depressed. He told Austin that he wished someone to share spoken language with him. Therefore, Austin's parents intend to fit the baby with a cochlear implant. Being aware of Charlie's horrible experience with implantation, Austin protests that it is against Deaf pride. The situation of his sister was perplexing to Austin but it opened his eyes that his father wished her an easier life.

Austin and Charlie find solace in each other and their relationship becomes closer with the progression of the novel. Shocked and frustrated by the imminent closure of River Valley, Charlie suggests leading a protest like the one she learns about in her history class. However, February thwarted her plan and warned Charlie, Austin and his roommate, Eliot of imprisonment. This reveals the extent to which these students are angry and depressed because of the injustice of the social and political systems of their country. The imminent closure of the school is an insulting slap at the face of the Deaf children who are in crucial need for it. The novel is deliberately open- ended in order to let the reader imagine who will win the battle between the Deaf children and the authorities.

A distinguished feature of *True Biz* is Sara Nović's writing style. The use of dialogue is fascinating. No quotation marks are used throughout the book. The signed communication is written indebted

and in italics while spoken language in plain type as normal text so that the reader can tell who signs and who talks. Moreover, there are also interludes at the end of some chapters that are dedicated to ASL history and Deaf culture. Furthermore, there are diagrams that explain the different functions of each sign to reveal the linguistic richness of ASL. Though Nović avoids being "didactic", she exploits the chance of explaining this valuable information to Charlie who does not know it (Nović, personal interview with the author, April 5, 2022). In doing so, Nović does not interrupt the overflow of the events of the story.

Through these interludes, Nović inserts exciting explanation of the symbols of sign language, the ASL manual alphabet, nouns, verbs and adjectives of ASL, visual syntax and the art of storytelling. Furthermore, deaf mythology is explained to know that "utopia is called Eyeth because it's a society that centers the eye, not the ear, like here on Earth" (86). In another chapter she explains some idioms of sign language to reveal how this is very enjoyable. She also handles markers of time and how they are added as separate signs in ASL. In another chapter, she sheds light on Thomas Gallaudet, the cofounder of the American school for the deaf explaining that he had learned sign language from a French teacher of the deaf in the late nineteenth century. Another chapter gives useful information about Black American Sign Language (BASL). This background helps readers to understand the reactions of Kayla, the black deaf student at River Valley. Throughout this academic section, the reader learns that BASL is a dialect of ASL that is heavily used in Southern states of America. It also becomes clear that BASL includes linguistic variations in phonology, syntax, and vocabulary that differentiate it from ASL. Moreover, in another chapter Nović tackles the "Deaf President Now" movement which is discussed in their history lessons (329). This lesson shows

students how the first deaf university in the world, Gallaudet had never had a deaf president till March 1988. At that time protesting students marched to confront the board who selected a hearing candidate rather than any of the other two deaf candidates. The demonstrators barricade campus gates and burn effigies to impose their demands till they gain widespread national support. The deaf president was selected and the protesters were not punished. Near the end of the novel Charlie, Austin and Eliot plan for a protest against River Valley's closure following "Deaf President Now" style.

Naturally, these details of sign language, historical achievements of the Deaf, and concentrated information about deaf culture give pleasure to the reader. They pave the way for later events in the novel and add a sense of reality and justification to many of these events. The reader becomes more familiar with the incidents and actions he reads about so that he feels completely immersed in Deaf culture and challenges.

In addition to these interludes, Sara Nović collaborates with Brittany Castle whose illustrations add weight and pleasure to the novel. Brittany Castle is a talented deaf artist who naturally has a great expertise in ASL. By delineating multitudes of figures of her rich sign language, she creates a visual expressive connection in the novel. Using italicized ASL dialogues besides the wonderful illustrations make hearing readers enjoy the beauty and playfulness of sign language.

Thus, through Sara Nović's depiction of the central deaf characters of the novel, their hardships, challenges and sufferings, she urges the hearing readers to consider the Deaf as their equals and sharers in humanity. *True Biz* demonstrates different examples of the troubles they continuously face particularly with inefficient

political and social systems that put more burdens on them. The language barrier they confront leads to their lack of self – confidence and isolation. Consequently, their cognitive abilities and metacognitive skills are negatively affected. Nović calls for respecting sign language as an efficient means of expression. She also calls for supporting suitable rehabilitation programs instead of depending on medical devices such as cochlear implants. After reading *True Biz*, readers feel that disability is "a kind of challenge, and it is the responsibility of all of us to accept among us those who are challenged, since they are not less human than anybody else" (de Oliveira 36).

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## عرقلة التطور فوق المعرفى للأطفال المعاقين سمعياً كما تصورها رواية تروبيز (حديث حقيقى) للكاتبه سارة نوفيتش

### الملخص:

يعد فقدان السمع إعاقه خطيرة تعرقل التواصل المناسب والاندماج الاجتماعي ويؤدى الحرمان من لغة للتفاهم إلى الإحباط والعزلة التى بدورها تؤدى إلى عواقب سلبية معرفيا، وعاطفياً واجتماعياً ونفسياً. وتتناول الدراسة تعريف مفهوم ما فوق المعرفة ووظائفه ومظاهر الاختلاف بينه من جانب وبين كل من مفهوم المعرفة ونظرية العقل من جانب آخر. كما تشرح أيضا كيف يعيق الصمم إرسال واستقبال المعلومات ومن ثم فهو يعيق كل المهارات المعرفية. وتكشف الدراسة مدى المعاناة التى يمر بها الأبطال الرئيسيون فى رواية سارة نوفيتش تروبيز (حديث حقيقى) ٢٠٢٢.

وتركز على تدهور قدراتهم المعرفية كنتيجة لفقدانهم حاسة السمع. وتتجح الكاتبة الصماء سارة نوفيتش فى تصوير عالم الصم بعناية فائقة كما تستعين بالرسامة الصماء المبدعة بريتانى كاسيل لتزود الرواية بالعديد من الرسوم الإيضاحية لرموز لغة الإشارة الأمريكية. وبالإضافة إلى ذلك فإن نوفيتش تبرز الأعباء الملقاة على عاتق أسر الأطفال الصم وما يتكبده من ضغوط نفسيه ونفقات باهظه وأيضا غلظة النظم السياسية والاجتماعية مع الصم فى المجتمع بالإضافة إلى عيوب الأجهزة الطبية الخاصة بهم وطرق التأهيل المستخدمة معهم.

**الكلمات المفتاحية:** فقدان السمع، نظرية العقل، ما وراء المعرفة، مفهوم المعرفة، التأهيل، زراعة القوقعة، لغة الإشارة، ساره نوفيتش، تروبيز.