An Appreciation of Learning Disabilities in the South African Context

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It is important that any education system should secure the provision of quality education to a diverse learner population. The development of Education White Paper Six (EWP6) special needs education, building an inclusive education, and training system (SA, 2001), reflects the South African government's commitment towards the development of an inclusive education system that would enable all learners to realize their potential. This article provides insight into the unique initiatives aimed at translating the EWP6 policy ideals that recognize the needs, and rights of all learners, including those with learning disabilities in the South African context, into practice. In addition, the article elucidates the etiology, epidemiology, and processes for diagnosing, assessing, and supporting learners with learning disabilities, and concludes with a brief reference to challenges that could stifle the provision of quality education for learners with learning disabilities.

Keywords: **learning disabilities, South Africa, causes for school failure, prevalence of disabilities.**

Introduction

Defining and discussing learning disabilities in the South African context is a profoundly complicated issue. Although the DSM-V (American Psychiatric Association, 2013) provides relatively clear-cut criteria for diagnosing a *specific learning disorder* there are several factors that play a role before a learner can be described as having a learning disability in South Africa. Although, it is acknowledged that some of the same debates that will be addressed in this article can be applied internationally a literature review will be presented in an attempt to create some understanding of how a learning disability is conceptualised in South Africa. Since the authors of this article do not have expertise on adults experiencing learning disabilities, the focus will only be on school-going learners.

William Shakespeare believed that a name is that "which we call a rose by any other name but would still smell as sweet". However, in this context giving a name can have rather different interpretations, and consequently has significant impact on how learners with learning disabilities are identified, assessed, and supported.

South African Educational Contextual Scenario

In order to comprehend fully how learners who have learning disabilities are identified, assessed, and supported it is important to firstly provide an educational contextual scenario of South Africa. Inclusive education is embraced as the primary approach to education in South Africa. In 2001 Education White Paper 6 (EWP6): *special needs education, building an inclusive education and training system*

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(SA, 2001), was introduced as policy to guide the implementation of inclusive education practices. This had a major impact on how learners who experience barriers to learning and development (including learning disabilities) should be identified and supported. Before EWP6 a medical model was implemented, where it is believed that the "deficit is within-the-child", thus requiring diagnosis and treatment (Department of Basic Education [DBE], 2014; Nel, 2013; Swart & Pettipher, 2011). The barrier to learning and development was therefore predominantly looked for within the child and as a result, many learners were categorized as having special needs, and subsequently placed into a special education setting. It is essential to emphasize here that although EWP6 required a new approach (socio-ecological model) to identifying, diagnosing and supporting learners who experience barriers to learning, the medical model is still being applied by schools and districts (Nel et al., 2014; Chataika et al., 2012; Swart & Pettipher, 2011).

Although the benefits of the medical model are not to be denied, EWP6 accentuates a more ecosystemic perspective (Donald et al., 2010). This perspective acknowledges that there is a relationship between human beings and interactions between groups of people (systems) (such as families, classroom and schools), and has a significant impact on diagnostic findings as well as the support process (Nel et al., 2014; Landsberg, 2011; Donald et al., 2010). EWP6 (SA, 2001) is therefore based on a socio-ecological model where the focus moves away from the "specialness" of learners, and the "special forms of education" it is assumed they "need" (DBE, 2014; Swart & Pettipher, 2011). This model promotes that all learners should be educated together, and that teaching practices must accommodate individual differences (UNESCO, 1994).

Defining a Learning Disability Within the South African Context

Defining a learning disability in the South African context is multifaceted. It is firstly necessary to mention that EWP6 (SA, 2001) recommended the use of intrinsic barriers to learning (this includes various disabilities) and extrinsic barriers to learning (i.e. environmental, systemic and pedagogical factors causing barriers to learning). The purpose of this was to move away from the categorization of learners as a result of their disability (medical model) to acknowledging that there are various factors (intrinsic and extrinsic) causing barriers to learning and development for learners (socio-ecological model).

In the context of learners experiencing learning disabilities terms such as learning disability, learning impairment, and learning difficulties are used interchangeably. Dednam (2011) clarifies this by explaining that a learning difficulty can be seen as mostly extrinsic in nature, and can be alleviated. Learning difficulties are only experienced in certain subjects, or certain aspects of subjects and when receiving more qualitative support from teachers the learners' achievement improves relatively quickly. A learning disability, or impairment, is primarily caused by intrinsic factors, and these learners continue to experience learning problems despite good teaching and additional support (Dunbar-Krige & Van der Merwe, 2010; Nel et al., 2012; Dednam, 2011). For the purpose of this article, learning disability will be used, since it is the more generally used term by literature. The discussion in the subsequent sections

will emphasize the intricate interplay between intrinsic and extrinsic factors in the manifestation of learning disabilities in the South African context.

The Etiology of Learning Disabilities

Very often, intrinsic and extrinsic factors work together, compounding the learning disability for a learner (Dunbar-Krige & Van der Merwe, 2010). This could make it difficult to establish whether intrinsic or extrinsic factors cause the learning disability (Dednam, 2011).

Intrinsic Factors Causing Learning Disabilities

A learning disability exists mainly because of a dysfunction in the central nervous system (Dednam, 2011), caused by genetic or physiological factors, malformation, and defects in the developing foetus, as well as medical factors (Hallahan & Kaufman, 2006; Jooste & Jooste, 2011).

Genetics

This refers to a familial transmission of learning disabilities that shows that there is often a family history of similar learning disabilities related to language, reading, or speech. It has been found that between 35 and 45 per cent of learners with learning disabilities have a parent who experienced disorders in, for example reading and mathematics (Hallahan & Kaufmann, 2006; Dednam, 2011)

Teratogenics

These are agents that cause malformation and defects. Prenatal exposure to harmful substances such as drugs, alcohol, nicotine, and pesticides as well as lead poisoning can affect the normal development of the foetus. These harmful substances are likely to contribute to attention disorders, behaviour problems, intellectual-, verbal-, and non-verbal-, as well as sensory disabilities (Heward, 2010; Jooste & Jooste, 2011; NASET, 2007, UNICEF, 2012).

Medical and health risk factors

According to Hugo (2006), as well as Lomofsky and Lazarus (2001), medical and health barriers call for attention to sensory barriers such as hearing loss and visual impairments, neurological disabilities (such as cerebral palsy), epilepsy, physical impairments (e.g. learners on crutches, or in wheelchairs), communication disorders, attention,distractibility, and memory problems. Perceptual and motor disorders, as well as health impairments, and chronically sick learners (Nel *et al.*, 2012), can threaten academic success. Medical problems at birth, such as premature births, anoxia, and damage to the brain after birth because of head injuries caused by accidents, or child abuse and illness, could contribute to learning disabilities (Dednam, 2011).

Cognitive and intellectual disabilities also form part of the group of medical barriers that can affect learning, reasoning, problem-solving, and memory and thinking, negatively (Jooste & Jooste, 2011). Learners who experience intellectual disabilities experience problems with conceptual competences for example, language, literacy, time and number concept, as well as self-direction. These learners usually lack social skills such as interpersonal skills, self-esteem, and the ability to follow rules.

Depending on the severity, these learners can also experience problems in applying practical skills for daily living, and personal care (Jooste & Jooste, 2011).

Developmental factors

Some children develop and mature at a slower rate as other children of the same age, which could manifest as delayed development of language and reading-, motor-, intellectual-, and social skills (NASET, 2007).

In addition, Landsberg (2005), Storbeck (2005) and Nel *et al.* (2012) point out that when learners cannot use their senses to recognize, discriminate, and interpret stimuli, it is indicative of poor perceptual development, which can manifest in the following areas:

- Visual and auditory perception: the ability to recognize, and interpret visual, or auditory sensory information.
- Visual and auditory discrimination: the ability to discriminate between sounds, or one object from another.
- Visual and auditory memory linked to the ability to recognize, and/or recall objects seen, or sounds heard.
- Visual and auditory sequential memory that involve the sequence in which stimuli are received, like the order of letters in a word, or the sequence of activities in a story.

Organic and ecological factors

Biochemical and metabolic factors which include an imbalance in neurotransmitters as a consequence of metabolizing, or hormone problems could cause attention deficits that contribute to learning disabilities. On the other hand, when proteins and vitamins are not effectively metabolized, or thyroxin is excessively discharged, hypo-, or hyper-activity could result (Dednam, 2011; Heward, 2010). A number of external risk factors are identified by South African educationists as risk factors that contribute to learning disabilities.

EXTRINSIC FACTORS CAUSING LEARNING DISABILITIES

Socio-economic factors

The society in which many South African children live, is characterised by poverty, under-development, poor living conditions, such as under-nourishment, lack of or, overcrowded housing and, unemployment, high levels of violence, crime, abuse and, a lack of basic services (Muthukrishna & Schoeman, 2010; Nel et al., 2012). In addition, other factors that place learners at risk, are the HIV/Aids epidemic,and substance abuse (Muthukrishna & Schoeman, 2010). All of these environmental conditions have harmful effects on the physical and socio-emotional well-being as well as development of children, and can disrupt learning (Heward, 2010). Poverty can affect the learning process severely, particularly when parents are unemployed, or are illiterate, and consequently struggle to support the learning of their children. According to Dunbar-Krige and Van der Merwe (2010), the aforementioned could lead to emotional stress that may affect learners so severely that they lose their ability to

fully take part in the learning process. A nutrient deficiency can contribute to mobility deficits, intellectual-, behavioural-, learning-, and mental disabilities (UNICEF, 2012:39). In areas of poverty there is usually a high incidence of physical, emotional, or sexual abuse, and could lead to absenteeism from school, and eventually dropping-out (Peterson & Hittie, 2003). The prevalence of learning disabilities in the South African context caused by socio-economic and environmental circumstances is quite high (Dednam, 2011; Prinsloo, 2001).

Systemic factors

A lack of basic and appropriate learning support material, and assistive devices, inadequate facilities at schools, inaccessible environments, inappropriate, and inadequate support services, lack of human resource development, including education and training of teachers, and other role players to deal with learning difficulties, overcrowded classrooms, and a lack of mother tongue teachers (Hugo, 2006; Donald et al., 2010; Lomofsky & Lazarus, 2010) can contribute to conditions that may cause systemic barriers to learning.

Pedagogical factors

Pedagogical barriers can be linked to an inflexible curriculum that causes learning breakdown, inflexible teaching and assessment approaches that do not cater for diverse learner needs and styles (such as visual, auditory, kinaesthetic), insufficient support from and to teachers, (Fleisch & Schöer, 2014; Geldenhuys & Wevers, 2013; Jones & Bender, 2002; Kruger & Adams, 2002; Lomofsky & Lazarus, 2001; Muthukrishna & Schoeman, 2010; Nel et al., 2012).

Other pedagogical factors include:

When, Sign-Language is not provided for learners with hearing impairments, and if there are no alternative communication strategies for learners with speaking difficulties, barriers to communication and understanding can be created (Lomofsky & Lazarus, 2001).

In South Africa, the language of learning and teaching (LOLT) for a majority of learners is not their first language. A large percentage of these learners are also not proficient in the LOLT, and consequently experience barriers to learning. Many teachers are teaching in their second language, and have limited proficiency in the LOLT. This results in many misunderstandings between teachers and learners. This issue is regarded by many researchers as one of the main causes of learners being mistakenly identified as learning disabled, and then placed into special education (Heugh, 2015, Kerfoot & Van Heerden, 2015; Nel & Theron, 2008).

Teacher development to cater for diverse learner needs, and support all learners to enable them to access the curriculum is considered as inadequate (Geldenhuys, & Wevers, 2013; Hay, 2012; Nel et al., 2014; Schoeman, 2012; Walton & Rusznyak, 2014). This has led to teacher insecurity, and a lack of novel practices in the classroom to address diverse learner needs (Donohue & Bornman, 2014; Magare, Kitching & Roos, 2010; Muthukrishna & Schoeman, 2010; Nel et al. 2014).

Diagnostic criteria

Keeping the above causes in mind the following characteristics are regarded as criteria in the diagnosis of learning disabilities (as with any kind of disability, the severity as well as the range of difficulties that are experienced will differ from learner to learner):

1. Difficulty to use cognitive strategies,
2. poor attention, memory, and organisational skills,
3. barriers with regard to auditory- and visual perceptual, as well as motor (fine and gross) skills,
4. poor sensory integration
5. a significant discrepancy between academic potential and achievement,
6. difficulties with receptive, as well as expressive language ability. The aforementioned difficulties result in barriers with regard to understanding and carrying out instructions, as well as communication of information in oral or written form. This includes difficulties to read and to spell,
7. many of these learners experience problems with mathematics which could be as a consequence of poor language ability or dyscalculia,
8. learners with learning disabilities generally also demonstrate social and emotional problems as a result of their constant failure to succeed academically; and
9. behaviour characteristics such as slow work pace or rushing through their work, clumsiness, shyness, hyperactivity, and impulsivity are also associated with learning disabilities (American Psychiatric Association, 2013; Cavendish, 2013; Dednam, 2011; Friend, 2008; Mortimore, 2008; Nel et al., 2012; Van Niekerk et al., 2014; Vermoter, 2011).

Since Attention deficit hyperactivity disorder (ADHD) occurs with more than 50% of learners with learning disabilities (Dednam, 2011) the DSM-V diagnostic criteria (American Psychiatric Association, 2013) are utilised to identify learners who experience this difficulty. Maladaptive and inconsistent behaviour with regard to inattention (sensorial inattentiveness), motor hyperactivity, and impulsivity are seen as features of a learner with ADHD.

Epidemiology of Learning Disabilities

South Africa does not yet have a standard and nationally accepted tool to measure the prevalence of disabilities. The most recent data on the prevalence of learning disabilities in the South African context are based on a comparative analysis of data collected during the 2001 Census, the 2007 Community Survey and the 2009 Annual General Household Survey (GHS) (UNICEF, 2012). Although the results of the 2011 Census are available, the results unfortunately do not distinguish between learner and adult disability. The 2001, 2007 and 2009 data analyses include an overview of a variety of disabilities, as it is important to acknowledge that although children with learning disabilities mainly experience problems in the brain's capacity to process, interpret, and store information (Vermoter, 2011), learning disabilities can also arise from visual, hearing, motor, or physical impairments, or because of emotional, environmental and economic circumstances (Nel et al., 2012).

Focus group discussions, stakeholder consultations, and key informant interviews were used to collect primary data, as well as literature and research material on childhood disability comprised secondary data sources for this UNICEF report.

The table below, table 1, summarizes the prevalence of disabilities among South African children according to gender, age group, population group, and province.

Although Table 1 reveals that, the most common disabilities are those related to sight and hearing, about one in 10 children was identified to have multiple disabilities. Over 100, 000 children (23% of all disabled children) were reported to be blind, or to have a severe visual limitation. Another 92, 500 (21% of all disabled children) were identified as deaf or hard of hearing. The two least prevalent types of disabilities were emotional and communication disabilities.

During Census 2001 it was determined that 2.5% of the total child population (436, 123), have some form of serious disability. Accounting for population growth over the past decade, and assuming that the prevalence of disability remained constant, about 474 000 children in South Africa live with severe disabilities (UNICEF, 2012). There are however, disparities based on context, gender, age, and other socio-economic factors. Variations across provinces range from 1.9% in the Northern Cape to 3.5 % in the Free State. Compared to the national average, children in the Free State Province were twice more likely to be deaf or hard of hearing than children in the Western Cape. Moreover, children living in rural areas more likely have a serious form of disability than children living in urban areas. The differences between areas in the country provide an indication of poverty level, and exposure to environmental, or other risk factors that contribute to disability. Male children (2.6%) were more likely as female children (2.4%) to have a disability. Disability also appears to increase steadily with age: 1.6% (0-4 years), and 3.2% (15-17 years). Disability prevalence is the highest among Black African children (2.6%), and lowest among Indian/Asian children (1.6%) (UNICEF, 2012).

Orphaned children appear to be more likely to have disabilities as non-orphaned children, with approximately 3.9% and 2.4% respectively. This result could be linked to the HIV epidemic in the country, as well as the fact that the children whose disability was caused due to HIV and Aids are more susceptible to become orphans. Furthermore, children who live in institutions or on the streets appear to be more likely to have some form of disability as compared to children living in a household. It is more likely that children, who live on the streets, and are more exposed to environmental risk factors, be prone for disability (UNICEF, 2012).

As there are no exact, clear, and immediate answers yet for the disparities noted for the increase in disability with age and between orphaned and non-orphaned children, further investigation in these areas is required. One could however argue that the increase in disability noted with age, could be attributed to the fact that it might be easier to identify learners with disabilities during their school going years.

A number of factors predispose South African children to health conditions that could lead to physical, cognitive, auditory, visual, intellectual, behavioural, and psychological disabilities that contribute to learning disabilities. These factors relate to the following: Central nervous system infections, fevers, unhygienic conditions, parasitic diseases, contaminated, and unclean water, lack of sanitation, nutrient deficiency, malnutrition, non-intentional child injury (falls, burns, environment haz-

ards), intentional injury (trauma, violence, and physical, emotional, and sexual child abuse, as well as child neglect) (UNICEF, 2012).

Processes and Procedures in the Diagnosis, Assessment and Support of Learners with Learning Disabilities

Within the previous South African medical model practice, a multidisciplinary or interdisciplinary approach was mainly employed in the identification, diagnosis, and treatment/intervention of learners. This approach entails that professionals with specific specialized knowledge and expertise in different health disciplines (e.g. medical doctors, psychologists, speech-, occupational-, and physical therapists) work independently with the child, and communicate with each other to share and complement their interventions (Engelbrecht, 2006; Nel et al., 2014). Currently, a transdisciplinary collaborative approach towards diagnosis and support in a socio-ecological model is encouraged, where all role players (including health professionals, parents, teachers and even the learners) interactively share their knowledge and expertise, support one another, and work collectively towards providing the most appropriate support for a learner experiencing barriers (DBE, 2010, 2014; Nel et al., 2014; Lindqvist et al., 2011; Strogilos et al., 2011).

With regard to learning support processes and procedures, it is, firstly, important to provide a brief background on the support structures. EWP6 (SA, 2001) constituted certain support structures. This includes a support team at school level, namely the School Based Support Team (SBST), and a District Based Support Team (DBST). The SBST comprises mainly of teachers at the schools, but may also involve health professionals from the community.

The DBST consists of a variety of support professionals (e.g. learning support educators, health professionals, and curriculum specialists) who provide support to all schools in the district area. Schools are divided into Special Schools as Resource Centres (SSRC) (for learners with a high intensity of support needs) and Full Service Schools (FSS) (for learners with a moderate intensity of support needs). Yet, these schools are not available in all districts, and are therefore accessible for only a limited number of learners. There are a relatively large number of special classes attached to mainstream primary schools in existence for learners with learning or mild intellectual disabilities. Conversely, no such resources are accorded to secondary schools. Consequently, many learners with learning disabilities are accommodated in the mainstream classrooms.

In 2008, a policy document for the Screening, Identification, Assessment and Support (SIAS) of learners who experience barriers to learning, was developed and implemented (DBE, 2008). Although this document provided systematized procedures and processes to be followed when learners, who possibly have a learning barrier, have been identified, in 2014 the revised SIAS document (DBE, 2014) stipulated clearer guidelines. The process outlined in this policy endeavours to assess the level and extent of support required in schools, as well as in classrooms in order to optimise learners' full participation in the learning process. It specifies a protocol, through a set of forms, that must be followed when a learner who experiences barriers to learning has been identified to enable an appropriate decision making process regarding the most suitable support. An important feature of this document is the

emphasis on collaboration between all role players (such as teachers, parents, SBST, DBST, and health professionals) throughout the process of identification, assessment, and support.

Since teachers and parents are regarded by the SIAS as central in the identification of a learning disability, they consequently need to be well informed, and educated with regard to the criteria and characteristics of learners who could have a learning disability (Bornman & Rose, 2010; DBE, 2014; Landsberg, 2011; Nel et al., 2014). According to the SIAS (DBE, 2014) assessment entails a multi-dimensional or systemic approach, meaning that it is acknowledged that barriers to learning at different levels (i.e. individual [learner and teacher], curriculum, school, family, community and social context) can impact on the diagnostic and support processes for a learner with a learning disability. The SIAS (DBE, 2014) requires that various forms of assessment (diagnostic and curriculum-based), representing various perspectives, should be used. Although the DSM-V (American Psychiatric Association, 2013) requires clinical assessment through standardised tests for the diagnosis of a learning disability, the SIAS asserts that these tests should be part of a range of strategies (including interviews and observations) used in the assessment process, and the ultimate aim should be to support the overall teaching and learning process addressing the nature and level of educational support needed for the specific learner as part of an Individual Support Plan (ISP). It should therefore not only be a clinical testing procedure to determine remedial intervention by specialist personnel aimed at fixing the problem-within-child (DBE, 2014; Landsberg, 2011; Nel et al. 2014; SA, 2001; Swart & Pettipher, 2011), but a holistic assessment approach incorporating a socioecological paradigm.

Since South Africa has a diversity of cultures and languages it is imperative to stress that standardised tests need to be chosen carefully with regard to cultural fairness. Although the SIAS acknowledges the importance of specialist assessment (e.g. medical, social, psychological and therapeutic – occupational therapy, speech therapy, and physiotherapy) it is required that the SBST and DBST must provide a motivation for such an assessment to prevent a dependence on the medical model approach. Yet, since most teachers feel unable to adequately identify and support learners with learning disabilities, and support structures are not functioning well, many schools employ private health professionals from their own funds to assist them with this. Parents who have the financial capability will also consult with these private practitioners outside of the education support processes.

With regard to support the SIAS (DBE, 2014) compels that support programmes must be designed in such a way that the learner gains full access to all learning opportunities (i.e. all school activities). Collaboration between all role players (parents, teachers, SBST, DBST, health professionals) is regarded as integral for the successful implementation of the support programme. Additional support provisions (i.e. specialist support), if needed, can be provided. This includes possible placement in SSRC's, FSS's or, special classes at mainstream schools. Within these settings, learners receive more specialist support than can be provided in a mainstream classroom. However, the SIAS (DBE, 2014:62) emphasizes that these kinds of "outplacements" should only be seen as a last resort.

Table 1. *Prevalence of disabilities in South Africa*

	Visual disability	Hearing disability	Communication impairment	Physical impairment	Intellectual/Learning difficulties	Emotional, behavioural difficulties	Multiple difficulties (two or more)
Sex							
Male	50 498	44 987	12 766	35 405	36 491	23 146	23 399
Female	49 847	47 562	9 382	29 506	32 058	19 684	21 390
Age							
0-4	15 577	15 705	3 814	11 993	9 494	7 166	7 577
5-9	26 002	27 552	7 068	17 861	17 708	11 063	12 176
10-14	34 715	31 981	6 805	21 183	25 434	14 763	14 982
15-17	24 051	17 312	4 461	13 874	15 914	9 838	10 055
Population group							
Black African	92 418	84 963	19 707	56 491	56 124	38297	34 493
Coloured	4 081	3 765	1 227	5 086	5 741	2 939	4 241
Indian/Asian	1 049	1 086	155	792	999	468	586
White	2797	2 735	1 059	2 541	5 685	1 126	5 471
Province							
Western Cape	4 726	4 776	1 589	5 209	5 999	3 240	4 583
Eastern Cape	10 396	14 029	3 970	11 106	10 679	6 994	5 018
Northern Cape	1 444	716	140	1 339	1 087	486	644
Free State	11 480	6 230	1 274	3 752	4 682	2 792	5 001
Kwa Zulu Natal	21 812	26 346	5 730	18 103	16 550	10 402	9 609
North West	9 819	5 474	1 651	5 137	4 900	3 308	2 630

Gauteng	14 240	7 784	2 669	7 070	9 620	4 489	5 674
Mpumalanga	10 778	9 539	1526	5 522	4 870	4 391	4 719
Limpopo	15 650	17 655	3 600	7 674	10 164	6 728	6 913
	100 345	92 549	22 148	64 911	68 550	42 830	44 790
% in child population	0.6	0.5	0.1	0.4	0.4	0.2	0.3
% among children with disabilities	23.0	21.2	5.1	14.9	15.7	9.8	10.2
Number of children affected	100 345	92 549	22 148	64 911	68 550	42 830	44790

(Source: UNICEF, 2012:34, 35)

Conclusion

Although EWP6 remains an important framework to ensure quality education for all children in South Africa and teaching approaches are geared to enact inclusive education, there are still a number of challenges that need to be addressed in order to ensure that all children have equal access to quality education. In particular, emphasis should be placed on empowering ordinary schoolteachers to become inclusive in their school cultures and practices to ensure that learners with learning disabilities receive the most beneficial support.

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