"Analecta Cracoviensia" 46 (2014), s. 255–277 DOI: http://dx.doi.org/10.15633/acr.966

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## Examining teachers' perceptions about specific characteristics of twice exceptional students

Although there has been much research conducted on the matter of twice exceptional students, researchers and educators still have not reached a consensus on proper identification and assessment, which leaves too many of those students being unidentified, therefore restrained from developing their strengths and minimalizing their weaknesses.<sup>1</sup>

There are many reasons why more twice exceptional students are not identified, one of the most important one being teachers' perceptions about gifted students with learning disabilities. Inadequate knowledge and stereotypical beliefs of teachers that gifted students are successful on every area of learning, and that students with disabilities cannot be gifted, prevents them from seeing both exceptionalities of those students.<sup>2</sup>

The teachers who meet these students every day in their classroom, have to be educated well to see identifying characteristics of twice exceptional students,

<sup>&</sup>lt;sup>1</sup>L. E. Brody, C. J. Mills, *Gifted Children with Learning Disabilities: A Review of the Issues*, "Journal of Learning Disabilities" 30 (1997) no. 3, p. 282–296, http://dx.doi.org/10.1177/002221949703000304; L. M. Ruban, L. M. Reis, *Identification and Assessment of Gifted Students With Learning Disabilities*, "Theory into Practice" 44 (2004) no. 2, p. 115–124, http://dx.doi.org/10.1207/s15430421tip4402\_6; S. M. Reis, M. S. Baum, E. Burke, *An Operational Definition of Twice-Exceptional Learners: Implications and Applications*, "Gifted Child Quarterly" 58 (2014) no. 3, p. 217–230, http://dx.doi. org/10.1177/0016986214534976.

<sup>&</sup>lt;sup>2</sup> S. Minner, *Teacher Evaluations of Case Descriptions of LD Gifted Children*, "Gifted Child Quarterly" 34 (1990) no. 1, p. 37–39, http://dx.doi.org/10.1177/001698629003400108; C. Wormald, *Teachers' Knowledge of Gifted Learning Disabled Students in NSW*, http://www.aaegt.net.au/ DEEWR%20Books/20110324%20Dual%20Chap%2009.pdf (16.09.2013).

to encourage students to develop their gifts and talents, to offer help in overcoming the weaknesses of students, while it is also important that twice exceptional are offered giftedness development and remedial instructions.<sup>3</sup>

Identification, assessment and provision of services depend on teachers' perceptions of students with disabilities and their knowledge of gifted characteristics.<sup>4</sup>

If twice exceptional students gifts and weaknesses are not being properly identified and served, they are in risk for not having possibility to develop their strengths, and possible under-achievement of those students can reduce their chances of continuous studies and compromises their personal development.<sup>5</sup>

# 1. Twice exceptional students; who are they and how are they identified

Gifted with learning disabilities are, as mentioned before, a heterogeneous group of students, which has unique educational needs that require to be served bestowing to their abilities and exceptionalities.<sup>6</sup> This group of students is according to some authors one of the most underrepresented groups of children with exceptionalities.<sup>7</sup> Learning disabilities are masking their giftedness, or either one of theirs exceptionalities is being overlooked. Since their emotional and educational needs are not being identified and properly addressed, they cannot reach the fullness of their potentials.

<sup>&</sup>lt;sup>3</sup> M. Foley Nicpon, G. S. Assouline, N. Colangelo, *Twice-Exceptional Learners: Who Needs to Know What?*, "Gifted Child Quarterly" 57 (2013) no. 3, p. 169–180, http://dx.doi. org/10.1177/0016986213490021; B. Jackson Gilman, V. D. Lovecky, K. Kearney, et al., *Critical issues in the identification of gifted students with co-existing disabilities*, "SAGE Open" 3 (2013) no. 3, p. 1–16, http://dx.doi.org/10.1177/2158244013505855; L. Magajna, *Prepoznavanje in razumevanje nadarjenih učencev s specifičnimi motnjami učenja*, [in:] *Učenci s specifičnimi učnimi težavami: skriti primanjkljaji – skriti zakladi*, ed. G. Reid, M. Kavkler, et al., Ljubljana 2007, p. 168–180.

<sup>&</sup>lt;sup>4</sup> M. Bianco, N. L. Leech, *Twice-exceptional learners: Effects of teacher preparation and disability labels on gifted referrals*, "Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children" 33 (2010) no. 4, p. 319–334, http://dx.doi.org/10.1177/0888406409356392; S. M. Reis, M. S. Baum, E. Burke, *An operational definition of twice-exceptional learners: Implications and applications*, op. cit., p. 217–230.

<sup>&</sup>lt;sup>5</sup> M. Tomori, Šolska neuspešnost kot dejavnik tveganja za celostni osebni razvoj, [in:] Šolska neuspešnost med otroki in mladostniki: vzroki – posledice – preprečevanje, ed. K. Bergant, K. Musek Lešnik, Ljubljana 2002, p. 16–18.

<sup>&</sup>lt;sup>6</sup> L. A. Krochak, G. T. Ryan, *The challenge of identifying gifted/learning disabled students*, "International Journal of Special Education" 22 (2007) no. 3, p. 44–53.

<sup>&</sup>lt;sup>7</sup> L. E. Brody, C. J. Mills, *Gifted children with learning disabilities: A review of the issues*, op. cit., p. 282–296; L. M. Ruban, L. M. Reis, *Identification and assessment of gifted students with learning disabilities*, op. cit., p. 115–124.

Twice exceptional students, their identification, programming and services offered to them, are a subject of research for at least the last thirty years, which results in evolving understanding of this phenomena.<sup>8</sup>

Researchers and educators have had problems in the past with accepting two exceptionalities like giftedness and deficits combined, because they perceived them as so different and exclusive to be far from compatible. Today it is commonly accepted among experts that students with co-occurring gifts and learning disabilities exist and that gifted students can have a coexisting disability.<sup>9</sup>

Joint Commission on Twice Exceptionality from United States of America proposed a new working definition of twice exceptionality and guidelines for identification and education of twice-exceptional students.<sup>10</sup>

"Twice exceptional students are students who demonstrate the potential for high achievement or creative productivity in one or more domains such as math, science, technology, the social arts, the visual, spatial or performing arts or other areas of human productivity AND who manifest one or more disabilities as defined by federal or state eligibility criteria. These disabilities include specific learning disabilities; speech and language disorders; emotional/behavioral disorders; physical disabilities; Autism Spectrum Disorder (ASD); or health impairments, such as Attention Deficit/Hyperactivity Disorder (ADHD). These disabilities and

<sup>9</sup> S. Baum, Gifted but learning disabled: A puzzling paradox, "Preventing School Failure: Alternative Education for Children and Youth" 34 (1989) no. 1, p. 11-14, http://dx.doi.org/10.1080 /1045988X.1989.9944546; M. Bracamonte, Twice exceptional students: Who are they and what do they need?, "Exceptional Newsletter" 39 (2010), http://2enewsletter.com/article 2e what are they. html (22.08.2013); L. Brody, C. J. Mills, Gifted children with learning disabilities: A review of the issues, op. cit., p. 282-296; S. S. Coben, S. Vaughn, Gifted students with learning disabilities: What does the research say?, "Learning Disabilities: A Multidisciplinary Journal" 5 (1994), p. 87-94; M. Foley Nicpon, A. Allmon, B. Sieck, D. R. Stinson, Empirical investigation of twice-exceptionality: Where have we been and where are we going?, "Gifted Child Quarterly" 57 (2011) no. 3, p. 3–17, http://dx.doi.org/10.1177/0016986210382575; B. J. Lovett, R. L. Sparks, The identification and performance of gifted students with learning disability diagnoses: A quantative synthesis, "Journal of Learning Disabilities" 44 (2013) no. 4, p. 304–316, http://dx.doi.org/10.1177/0022219411421810; M. Neihart, The identification and provision of services to twice exceptional children, [in:] Handbook of giftedness in children: Psycho-eduacational theory, research, and best practices, ed. S. Pfeifer, New York, p. 115-138; S. M. Reis, M. S. Baum, E. Burke, An operational definition of twice-exceptional learners: Implications and applications, op. cit., p. 217-230.

<sup>10</sup> S. M. Reis, M. S. Baum, E. Burke, *An operational definition of twice-exceptional learners: Implications and applications*, op. cit., p. 217–230.

<sup>&</sup>lt;sup>8</sup> L. E. Brody, C. J. Mills, *Gifted children with learning disabilities: A review of the issues*, op. cit., p. 282–296; L. M. Ruban, L. M. Reis, *Identification and assessment of gifted students with learning disabilities*, op. cit., p. 115–124; L. Vespi, C. Yewchuk, *A Phenomenological Study of the Social/Emotional Characteristics of Gifted Learning Disabled Children*, "Journal for the Education of the Gifted" 16 (1992) no. 1, p. 55–72, http://dx.doi.org/10.1177/016235329201600107.

high abilities combined to produce a unique population of students who may fail to demonstrate either high academic performance or specific disabilities. Their gifts may mask their disabilities and their disabilities may mask their gifts.

Identification of twice exceptional students requires a comprehensive assessment in both the areas of giftedness and disabilities, as one does not preclude the other. Identification, when possible, should be conducted by professionals from both disciplines and when at all possible, by those with knowledge about twice exceptionality in order to address the impact of co-incidence/co-morbidity of both areas on diagnostic assessment and eligibility requirements for services.

Educational services must identify and serve both the high achievement potential and the academic and social-emotional deficits of this population of students. Twice exceptional students require differentiated instructions, curricular and services, specialized instructions, acceleration options, and opportunities for talent development that incorporate the effects of their dual diagnosis.

Twice exceptional students require an individual education plan (IEP). This comprehensive education plan must include talent development goals, as well as compensation skills and strategies to address their disabilities and their social and emotional needs."<sup>11</sup>

Gifted students with learning disabilities are a group in risk, which is often overlooked; we cannot say they are the sum of special needs and giftedness, but a combination of both.<sup>12</sup>

Due to their exceptionalities and good compensation skills, they are often not identified as gifted or as students with one or more learning disability. Amongst the reasons of why they are not identified neither as gifted students nor as students with learning disability, lays an important reason that learning disabilities can lower results of intellectual ability tests,<sup>13</sup> because of their compensation skills they develop compensation strategies that makes them work and achieve at the level of their peers, on an average level.<sup>14</sup>

<sup>&</sup>lt;sup>11</sup> Ibidem.

<sup>&</sup>lt;sup>12</sup> M. Ozbič, D. Kogovšek, *Nadarjeni z učnimi težavami: ali jih prepoznamo*, [in:] *Inkluzija v sodobni šoli*, ed. D. Hozjan, M. Strle, Koper 2012, p. 213–233.

<sup>&</sup>lt;sup>13</sup> D. B. McCoach, T. J. Kehle, A. M. Bray, D. Siegle, *Best practices in the identification of gifted students with learning disabilities*, "Psychology in the Schools" 38 (2001) no. 5, p. 403–411.

<sup>&</sup>lt;sup>14</sup> M. Bianco, *The effects of disability labels on special education and general education teachers' referrals for gifted programs*, "Learning Disability Quarterly" (2005) no. 28, p. 285–293, http://dx.doi.org/10.2307/4126967; C. Wormald, *What knowledge exists in NSW schools of students with learning difficulties who are also academically gifted?*, "Australasian Journal of Gifted Education" 20 (2011) no. 2, p. 5–9; S. M. Reis, T. W. Neu, J. M. McGuire, *Case Studies of High-Ability Students with Learning Disabilities Who Have Achieved*, "Exceptional Children" 63 (1997) no. 4, p. 463–480, http://dx.doi.org/10.1177/001440299706300403.

Three categories of twice exceptional students are recognized among professionals.<sup>15</sup> In the first category we will find students who are identified as gifted but also have subtle learning disabilities, which are not identified. Students in this category have a good vocabulary, good rhetorical skills, good knowledge on the areas of interest, above average capability of abstract and logical thinking but at the same time this category of students tends to perform on or slightly below grade level.<sup>16</sup> They most frequently exhibit difficulties in the areas of reading, writing and calculating, which teachers do notice, but think it's a consequence of sloppiness and laziness, which influences the ability to oversee the giftedness and see explicit learning disabilities.<sup>17</sup>

Second category of students consists of students who are identified for their learning disabilities, but their giftedness is not identified. Due to learning difficulties and disabilities, their academic results tend to be lower then their achievement level is, and firstly they are noticed for what they are not capable of doing and for what they cannot do, and not for what they are gifted for.<sup>18</sup> Those students are often standing out with knowledge on their areas of interests.<sup>19</sup>

The last category where most of twice-exceptional students fall, is a group where we have a so called masking effect.<sup>20</sup> Masking effect prevents students from being identified as students who are gifted or as students with learning disability. Due to their high intellectual potential they can successfully compensate their learning difficulties, while their academic performance stays at a grade level, although they are performing bellow their level of ability.<sup>21</sup> Since their potential is not recognized, due to the masking effect, they are never identified as gifted

<sup>&</sup>lt;sup>15</sup> S. Baum, *Gifted but learning disabled: A puzzling paradox*, op. cit., p. 11–14; L. E. Brody, C. J. Mills, *Gifted children with learning disabilities: A review of the issues*, op. cit., p. 282–296; D. B. McCoach, T. J. Kehle, A. M. Bray, D. Siegle, *Best practices in the identification of gifted students with learning disabilities*, op. cit., p. 403–411.

<sup>&</sup>lt;sup>16</sup> S. Baum, Gifted but learning disabled: A puzzling paradox, op. cit.

<sup>&</sup>lt;sup>17</sup> L. E. Brody, C. J. Mills, *Gifted children with learning disabilities: A review of the issues*, op. cit., p. 282–296.

<sup>&</sup>lt;sup>18</sup> A. Bisland, Using learning-strategies instruction with students who are gifted and learning disabled, "Gifted Child Today" 27 (2004) no. 3, p. 52–58; L. Magajna, Kognitivni in metakognitivni vidiki funkcioniranja nadarjenih učencev s specifičnimi motnjami učenja, [in:] Izzivi in pasti otroštva in adolescence: sodobni pristopi k varovanju duševnega zdravja otrok in mladostnikov, ed. I. Andolšek, M. Hudoklin, Ljubljana 2010, p. 7–21.

<sup>&</sup>lt;sup>19</sup> S. Baum, *Gifted but learning disabled: A puzzling paradox*, op. cit.

<sup>&</sup>lt;sup>20</sup> L. E. Brody, C. J. Mills, *Gifted children with learning disabilities: A review of the issues*, op. cit., p. 282–296.

<sup>&</sup>lt;sup>21</sup> W. E. King, *Addressing the social and emotional needs of twice exceptional students,* "Teaching Exceptional Children" 38 (2005) no. 1, p. 16–20.

or as learning disabled, which enables them to be the biggest category of twice exceptional students.

Different professionals are proposing different approaches to identification of these specific groups of students with exceptionalities.

Brody and Mills oppose to identifying variable abilities as mutually exclusive abilities, either being giftedness or a learning disability.<sup>22</sup> They recommend three main points professionals should consider when dealing with students with exceptionalities. An evidence of an outstanding talent or ability should be exhibited by students, next is a evidence of aptitude – achievement discrepancy – and the last is an evidence of a processing deficit. A lot of other professionals advocate the use of those three criteria in identifying twice exceptional students.<sup>23</sup>

Discrepancy model is still in use today in identifying gifted with learning disabilities, although it had received much criticism by professionals, since the students are identified only when their learning disabilities cannot be compensated anymore.<sup>24</sup>

McCoach, Kehle, Bray and Siegle proposed "best practice" guidelines, which will enable more twice exceptional students to be identified. They recommend the use of IQ tests, achievement test, curriculum-based assessment and portfolio reviews.<sup>25</sup>

Nielsen advocated the use of a comprehensive psych educational battery of tests. She also recommended examination of discrepancies on different measures, and flexibility in identification criteria.<sup>26</sup>

Silverman described different types of gifted and learning disabled students. She proposed the use of modifications of standard assessment protocols for gifted when students could also have learning disabilities.<sup>27</sup> Like Brody & Mills and

<sup>&</sup>lt;sup>22</sup> L. E. Brody, C. J. Mills, *Gifted children with learning disabilities: A review of the issues*, op. cit., p. 282–296.

<sup>&</sup>lt;sup>23</sup> M. Bracamonte, *Twice exceptional students: Who are they and what do they need?*, op. cit.; L. E. Brody, C. J. Mills, *Gifted children with learning disabilities: A review of the issues*, op. cit., p. 282–296; L. A. Krochak, G. T. Ryan, *The challenge of identifying gifted/learning disabled students*, op. cit., p. 44–53; L. Magajna, *Kognitivni in metakognitivni vidiki funkcioniranja nadarjenih učencev s specifičnimi motnjami učenja*, op. cit., p. 7–21.

<sup>&</sup>lt;sup>24</sup> L. E. B. J. Lovett, L. J. Lewandowski, *Gifted students with learning disabilities: Who are they*?, "Journal of Learning Disabilities" 39 (2006) no. 6, p. 515–527, http://dx.doi.org/10.1177/0 0222194060390060401.

<sup>&</sup>lt;sup>25</sup> D. B. McCoach, T. J. Kehle, A. M. Bray, D. Siegle, *Best practices in the identification of gifted students with learning disabilities*, op. cit., p. 403–411.

<sup>&</sup>lt;sup>26</sup> M. Nielsen, *Gifted students with learning disabilities: Recommendations for identification and programming*, "Exceptionality" 10 (2002) no. 2, p. 93–111, http://dx.doi.org/10.1207/ S15327035EX1002\_4.

<sup>&</sup>lt;sup>27</sup> L. K. Silverman, *The two-edged sword of compensation: How the gifted cope with learning disabilities*, "Gifted Education International" 25 (2009) no. 2, p. 115–130.

Nielsen, Silverman endorsed the same practices in identifying twice exceptional students, such as scatter analysis, profile analysis, broad definition of intelligence in giftedness assessment and discrepancy based conceptualizations.

Prevalence of identified twice-exceptional students is really small, due to the lack of consensus in defining learning disabilities and giftedness. Estimations vary, in UK there is supposed to be twice exceptional between 1% and 2,5% of school population<sup>28</sup> while in USA the estimations are higher, varying between 2% and 5% of school population.<sup>29</sup>

Silverman found out in her research, that one third of gifted in her research had learning difficulties. The prevalence of learning disabled students among gifted and gifted students among learning disabled vary from professional to professional, from country to country.

## 2. Characteristics of twice exceptional students

Gifted students with learning disabilities posses unique characteristics, and at least on one area of knowledge or academic performance they are able to excel.<sup>30</sup> Learning difficulties and disabilities can characterize them in a way that teachers are not able to see their giftedness, or their giftedness helps them compensate learning difficulties, which makes them perform on grade level.

Reis, Neu and McGuire found out in their research on characteristics of twice exceptional students, that professionals were able to identify more negative characteristics and more deficits than they could find strengths, talents or positive characteristics.<sup>31</sup>

Coleman came to a conclusion in his research, that twice exceptional students feel pressured to perform above average because they are gifted, although they are not always capable of performing above average due to their learning difficulties.<sup>32</sup>

<sup>&</sup>lt;sup>28</sup> A. Al-Hroub, D. Whitebread, *Focus on practice: Teacher nomination of 'mathematically gifted children with specific learning difficulties' at three state schools in Jordan*, "British Journal of Special Education" (2008) no. 38, p. 152–164.

<sup>&</sup>lt;sup>29</sup> J. R. Whitmore, *Giftedness, conflict, and underachievement*, Boston, MA 1980.

<sup>&</sup>lt;sup>30</sup> L. Magajna, Kognitivni in metakognitivni vidiki funkcioniranja nadarjenih učencev s specifičnimi motnjami učenja, op. cit., p. 7–21.

<sup>&</sup>lt;sup>31</sup> S. M. Reis, T. W. Neu, J. M. McGuire, *Case studies of high-ability students with learning disabilities who have achieved*, op. cit., p. 463–480.

<sup>&</sup>lt;sup>32</sup> M. R. Coleman, *Surviving or Thriving? 21 Gifted Boys with Learning Disabilities Share Their School Stories*, "Gifted Child Today" 24 (2001) no. 3, p. 56–63, http://dx.doi.org/10.4219/gct-2001-538.

Those students feel different, although they do not know nor understand why or how do they differ from their peers. Reading and writing skills can cause great difficulties to them compared to their peers, and fear of failure or failure itself, and feeling incompetent makes them doubt about themselves even more.<sup>33</sup>

Often students at a small failure in one of the areas of education, extend the feeling of incompetence in all areas of their life, making them a socially vulnerable group that has difficulty in establishing lasting contacts with peers and maintaining these contacts, while in addition they are often banished from their peers, specially when teaching is not focusing on their points of strength.<sup>34</sup> When their talents are not recognized and mostly their deficits are observed, these students may experience emotional and behavioral problems. Faced with failure in school, rejection and prejudice by teachers and peers with whom they cannot establish contact, successes achieved on specific areas of interest may become irrelevant. These students may develop a negative self-image and low self-esteem, they do not feel accepted and able, in the same time their motivation for academic work is declining. In order to avoid further failures and feeling shame, gifted with learning difficulties compensate their learning difficulties and disabilities with learned helplessness.<sup>35</sup>

As twice exceptional students are often not understood in school, and because their needs are not met, quite some unidenfitified twice exceptional students have negative experience of their school time, but if they learn how to compensate deficits, they can be successful in at least one area of personal interest, which usually takes place outside the school.<sup>36</sup>

Nielsen has prepared a list of the distinctive characteristics of different groups of gifted students. For the purpose of the research it was summarized and compiled in a list of characteristics of gifted students with learning disabilities, while we have also expanded the list of characteristic as described by Magajna.<sup>37</sup>

<sup>&</sup>lt;sup>33</sup> S. M. Reis, T. W. Neu, J. M. McGuire, *Case studies of high-ability students with learning disabilities who have achieved*, op. cit., p. 463–480.

<sup>&</sup>lt;sup>34</sup> L. K. Silverman, Invisible gifts, invisible handicaps, "Roeper Review" 12 (1989) no. 1, p. 37-42.

<sup>&</sup>lt;sup>35</sup> S. M. Reis, T. W. Neu, J. M. McGuire, *Talents in two places: Case studies of high-ability students with learning disabilities who have achieved* (Research monograph, 95114), Storrs, CT 1995.

<sup>&</sup>lt;sup>36</sup> S. M. Reis, T. W. Neu, J. M. McGuire, *Case studies of high-ability students with learning disabilities who have achieved*, op. cit., p. 463–480.

<sup>&</sup>lt;sup>37</sup> E. Nielsen, *Distinguishing characteristics of gifted students with factors* (1999), http://gifted-talented.pbworks.com/f/Distinguishing+Characteristics+of+Under-Represented+Gifted+.doc (1.07.2014); L. Magajna, *Kognitivni in metakognitivni vidiki funkcioniranja nadarjenih učencev s specifičnimi motnjami učenja*, op. cit., p. 7–21.

Abilities and skills	Distinguishing characteristics	
Basic skills	Often struggles to learn basic skills due to cognitive processing difficulties; needs to learn compensatory strategies in order to acquire basic skills and information. With compensation strategies they manage to achieve on grade level.	
Verbal skills	High verbal ability but extreme difficulty in written language area; may use language in inappropriate ways and at inappropriate times.	
Reading ability	Frequently has reading problems due to cognitive processing deficits. Often student has problems with writing.	
Observation skills	Strong observation skills but often has deficits in memory skills. Advanced analytical skills and good ability of visualization.	
Problem solving	Excels in solving "real-world" problems; outstanding critical thinking and deci- sion-making skills; often independently develops compensatory skills. Use of holistic strategies.	
Persistence	Frequently has attention deficit problems but may concentrate for long periods in ar- eas of interest; motivated for success.	
Curiosity	Strong questioning attitude; may appear disrespectful when questioning information, facts, etc. presented by teacher	
Creativity	Unusual imagination; frequently generates original and at times rather "bizarre" ideas; abstract imagination.	
Risk taking	Often unwilling to take risks with regard to academics; takes risks in non-school ar- eas without consideration of consequences.	
Humor	Humor may be used to divert attention from school failure; may use humor to make fun of peers or to avoid trouble or school work.	
Maturity	Seems to be emotionally immature, responds to problems with anger or crying, very impulsive.	
Independence	In the area of disabilities the student needs teacher's support, independent on areas of interest.	
Emotionality	onality Sensitive regarding disability area(s); highly critical of self and others including teachers; can express concern about the feelings of others even while engaging in anti-social behavior. Very righteous, perfectionist and tends to exhibit learned help-lessness.	
Social skills	Requires frequent teacher support and feedback in deficit areas; highly independent in other areas; often appears to be extremely stubborn and inflexible. Often feels lonely and is able to maintain relationships with adults, while often rejected by peers.	
Leadership	Often leader among the more non-traditional students; demonstrates strong behavior; the disability may interfere with ability to exercise leadership skills; dominating student debates in the classroom.	
Broad interests	Wide range of interests but is handicapped in pursuing them due to process/learning problems.	
Focused interests	Very focused interests, i.e., a passion about a certain topic to the exclusion of others – often not related to school subjects.	

Table 1. Distinguishing characteristics of gifted students with learning disabilities

Adapted from E. Nielsen, *Distinguishing characteristics of gifted students with factors* (1999); L. Magajna, *Prepoznavanje in razumevanje nadarjenih učencev s specifičnimi motnjami učenja*, [in:] *Učenci s specifičnimi učnimi težavami: skriti primanjkljaji – skriti zakladi*, ed. G. Reid, M. Kavkler, et al., Ljubljana 2007.

## 3. Teachers of twice exceptional students

Teachers are not adequately trained to identify gifted students (but psychologists are) nor teachers are trained to recognize learning disabilities and difficulties (but special educators are).<sup>38</sup> The primary task of teachers is teaching, not diagnosing, but it is nevertheless a responsibility that belongs to the description of their challenging tasks, if they want all of their students to reach the fulness of their potentials.

From the report on research conducted in Slovenia, studying the implementation of giftedness identification and assessment teachers clearly expressed that they are having difficulties in identifying gifted students from specific groups, which include students with learning difficulties.<sup>39</sup> They also expressed the need for additional education on the field of twice exceptionality to more effectively identify gifted students with learning disabilities.

Insufficient knowledge of teachers and stereotypical beliefs that gifted students are successful in all areas of learning, while students with learning disabilities cannot be talented, limits more students with learning disabilities being identified also as gifted.<sup>40</sup>

It is important for teachers to receive proper training in the field of gifted education and education of students with learning difficulties, to gain the knowledge about distinctive characteristics of gifted students with learning difficulties.<sup>41</sup>

Wormald based on the survey results highlighted the lack of teachers' education and knowledge of giftedness and learning disabilities. She also pointed out the lack of understanding of how unrecognized learning difficulties and giftedness impact students. Foley Nicpon and colleagues also had similar findings.<sup>42</sup>

<sup>41</sup> M. Bianco, *The effects of disability labels on special education and general education teachers' referrals for gifted programs*, op. cit., p. 285–293; M. Foley Nicpon, A. Allmon, B. Sieck, D. R. Stinson, *Empirical investigation of twice–exceptionality: Where have we been and where are we going?*, op. cit., p. 3–17; S. Minner, *Teacher evaluation of case descriptions of LD gifted children*, op. cit., p. 37–39.

<sup>42</sup> C. Wormald, What knowledge exists in NSW schools of students with learning difficulties who are also academically gifted?, op. cit., p. 5–9; M. Foley Nicpon, A. Allmon, B. Sieck, D. R. Stinson,

<sup>&</sup>lt;sup>38</sup> M. Ozbič, D. Kogovšek, Nadarjeni z učnimi težavami: ali jih prepoznamo, op. cit., p. 213–233.

<sup>&</sup>lt;sup>39</sup> T. Bezić, T. Deutsch, *Poročilo o raziskavi: Analiza uresničevanja Koncepta – Odkrivanje in delo z nadarjenimi učenci v devetletni OŠ, ob koncu šol. leta 2009/2010* (2011), http://www.zrss. si/pdf/241111145902\_bezic\_2011\_porocilo\_o\_raziskavi\_-analiza\_uresnicevanja\_koncepta\_na-d\_o%C5%A1\_9\_10splet.pdf (20.01.2014).

<sup>&</sup>lt;sup>40</sup> S. Cline, K. Hedgeman, *Gifted children with disabilities*, "Gifted Child Today" 24 (2001) no. 3, p. 16–24; S. Minner, *Teacher evaluation of case descriptions of LD gifted children*, op. cit., p. 37–39; C. Wormald, *What knowledge exists in NSW schools of students with learning difficulties who are also academically gifted*?, op. cit., p. 5–9.

If teachers are trained about the characteristics that are common to gifted and learning disabled students and if they have experience in teaching twice exceptional students, they are more capable to recognize these students.<sup>43</sup>

Qualitative methodology was used to assess how individual teachers describe gifted students with learning disabilities. We were particularly interested in which features of twice-exceptional students were most frequently described. In addition, we were also interested in whether teachers focus more on strengths and areas of giftedness or their deficits when describing twice exceptional students.

## 4. Method

For the purposes of the research, we used a qualitative methodology, in which the basic empirical material are interviews, processed and analyzed.<sup>44</sup>

#### 4.1. Measurement Instrument

We used a semi-structured non-standardized interview, which includes the following topics: experience with identifying gifted students with learning disabilities, the characteristics of these students and the teaching experience of teachers with twice exceptional students.

#### 4.2. The range of persons involved

The study involved three teachers of third and fourth year of elementary school (from third year we interviewed two teachers, and one teacher of the fourth year) from three different elementary schools in the Ljubljana region, capital of Slovenia. The primary criterion in the selection of interviewees was practical relevancy, we were looking for teachers who have experience with teaching gifted students with learning disabilities, even if they do not have yet formally identified learning disability or giftedness.

None of the pupils has been identified as gifted yet, only proposed for identification due to their talents and gifts. Two students expressed artistic talent, one

*Empirical investigation of twice–exceptionality: Where have we been and where are we going?*, op. cit., p. 3–17.

<sup>&</sup>lt;sup>43</sup> M. Foley Nicpon, G. S. Assouline, N. Colangelo, *Twice-exceptional learners: Who needs to know what?*, op. cit., p. 169–180.

<sup>&</sup>lt;sup>44</sup> B. Mesec, Uvod v kvalitativno raziskovanje v socialnem delu, Ljubljana 1998.

of the students computing talent. Special educators were helping two of the students three hours per week.

#### 4.3. The process of obtaining information

When looking for teachers who would be willing to do an interview, we have had some problems initially because they were not willing to participate due to the lack of time. So we turned for help to the special educators in different schools in the Ljubljana region with a request to find teachers with adequate experience with twice exceptional students, who would be willing to participate in the study. Three teachers accepted.

#### 4.4. Processing and analyzing of data

Data was processed using the process of selective coding, attributing concepts to the statements in the interviews and the analysis of individual codes. Analysis of the data was executed in the following steps: processing the interviews, the determination of units of coding, attributing concepts, selection and definition of the relevant concepts and categories.<sup>45</sup> When coding we used the abilities and skills as defined by Nielsen.<sup>46</sup>

#### 5. Results

The main purpose of this study was to determine how teachers describe gifted students with learning disabilities, which characteristics are the most commonly recognized as characteristic of this group of students and whether teachers focus more on their strengths or deficits.

#### 5.1. Interview 1

The child who is artistically talented and has had problems with verbal expression in the previous school year, according to the teacher, changed in this school year. The student became much more serious, mature, more eager to succeed, which means he put a lot of effort in schoolwork. The teacher on the question of what is the reason for this change, said she does not know, but several times during the interview she stressed out, how important it seems to eliminate deficits.

<sup>45</sup> Ibidem.

<sup>&</sup>lt;sup>46</sup> E. Nielsen, Distinguishing characteristics of gifted students with factors (1999), op. cit.

"Like last year, you could see, that he is talented, but his work was not standing out compared to others, but this year they are, like this year, yes." (U1/172)

"It really is visible and also with all the subjects at school he wants to express himself through a picture." (U1/132)

The changes are not only seen within his schoolwork on overcoming learning difficulties, but also in the field of talent. His artistic works have become much more sophisticated, thoughtful, and student puts more efforts in creating and completing his works, while also trying to express himself through art in every subject at school.

Excelling in school can be associated with services for learning disabled that he is receiving by his special educator, and with the support of parents and his own motivation for success.

The teacher does not mention literally that her student was unpopular among classmates in the last years, but repeatedly talks about how the student is popular in this class and how he can choose friends and develop lasting relationships with them.

"Now in this class he is very popular." (U1/52)

"Even with classmates he developed a good friendly relationship." (U1/136) Support and participation of parents was explicitly mentioned. Mother was in regular contact with the teacher, tried to help her son in overcoming learning difficulties, as well as in developing his talent. The father is also present, especially by helping his son develop his artistic talent.

When the teacher describes other parents, she repeatedly points out that they do not have time for their children and that they are often left to themselves, while for this students she argues how caring and dedicated his mother is, and how involved and present she is.

"The mother is very caring, and this is really good." (U1/170)

"Mothers are working in the afternoon or early in the morning they work and return to work until late at night. Fathers are working throughout all days, so children are mainly left on their own." (U1/99)

#### 5.2. Interview 2

Another artistically talented student has a learning disability, problems with attention, while not formally diagnosed yet. The teacher mentioned that the student may need a formal assessment and identification in the field of learning disability in the next school year, because she will have even more difficulties in learning, because of more demanding learning materials. Several times she also mentioned that it is difficult for her as a teacher, because she could not attend to every student in need, particularly she points out that this student needs more attention. "This is quite exhausting for me, when she has one of her days. Because I have to focus on her completely, to help her, and then I have no time or energy left for other students, who also need my assistance, or how can I put it." (U2/24, 25)

Parents, according to the teacher, do not participate enough, are not involved in their daughters schoolwork. Mother does come to school, but does not show willingness to help her daughter, in order for her to be more successful. According to the teacher, student needs more support as she is receiving at the present moment. She believes that it would be easier for the girl, if she had received more help and attention at home. Although it is clearly expressed that this student would need assistance from a special educator and although the teachers mention more than once, that she cannot devote herself to this girl as much as she would need, this student has still not been formally identified as having Attention Deficit Hyperactivity Disorder or Attention Deficit Disorder. Here a question arises, how it would be if the student would receive special services, not only in the form of individual and group assistance from her teacher, but also from a special educator outside the class.

This student quickly gives up or not even starts the given assignment, is she assumes that she will not be able to do them successfully. If not successful, she can begin to cry, to what classmates respond by ridiculing her. Already this student has poor relationships with her classmates, often she is excluded from their company, sometimes because she wants to dominate and trying to establish her own rules.

"When she imagines how something is supposed to be, she expects everyone to follow her and do as she pleases, if not she starts arguing with her classmates which finally leads to her exclusion from the group of peers." (U2/76)

Of all interviewed teachers, this teacher mostly emphasized the student's poor self-esteem, lack of parental support, which contributes this student to underachieve.

"I feel, you know, that she is so capable, not only getting good marks at school, but so much more." (U2/107)

#### 5.3. Interview 3

In the last interview the teacher described student with dyslexia, but at the same time gifted for computing and having advanced knowledge and a rich vocabulary in the field of computer science, in which he outperforms all classmates.

"Sometimes he starts explaining to me, what he has done at home on his computer, honestly, I really do not understand him, he talks to me in codes." (U3/27)

The student has support at school and at home, while this school year giftedness was also discovered, and is being successfully encouraged and developed by his parents and school. Student has been formally diagnosed as having dyslexia and was suggested by his teacher for the assessment of giftedness.

"If he had not have dyslexia, he would probably be one of the most successful students in the class." (U3/8)

"This is, his talent for computers was discovered this year in fact." (U3/57)

With the expert help of special educator, teachers and parents, he became a successful student who is confident, popular and motivated. Student feels good in the classroom because he is successful in school.

"Since he discovered his talent, his passion for computers and proved himself on this area, he gained a lot of self-confidence." (U3/67)

"And mother told me, that he is taking a computing class outside school." (U3/59)

#### 5.4. Characteristics of gifted students with learning disabilities

For the purpose of research, we used the classification of characteristics as proposed by Nielsen (1999). The reason for choosing this classification is the variety of categories used by Nielsen that covers all areas of characteristics as noted by other authors.

Abilities and skills	Characteristics of twice exceptional students			
	Teacher 1	Teacher 2	Teacher 3	
Basic skills	Problems at math	Problems at math, thinking in images		
Verbal skills	Problems with recalling words, problems in expres- sing and understanding what he heard		Changing word order in sen- tences, better at expressing verbally then writing, rich vocabulary from the focused interest	
Reading ability	Jumpy and slow reading		Dyslexic, problems with identifying the order of let- ters in words and therefore understanding words writ- ten, mistakes at spelling, not so good at understanding grammatical rules	
Observation skills		Good logical thinking skills, can be very focused on inte- resting subjects	Good logical thinking	
Problem solving	The fastest in his class in calculating		Full of ideas	

Table 2. Classified characteristics as described by teachers

Abilities and	Characteristics of twice exceptional students			
skills	Teacher 1	Teacher 2	Teacher 3	
Persistence	Fidgety, not finishing assi- gnments, focused on intere- sting subjects, puts a lot of effort in what he is doing	Not finishing assignment, calms down by drawing, problems with attention, short attention span	Focused, puts a lot of effort, persistent	
Curiosity	Interested by schoolwork			
Creativity	He wants to express himself with a drawing	Rich imagination, expres- sing herself in images		
Risk taking	Self initiative	Perfectionist, avoiding acti- vities where she may fail	Self initiative, not afraid of not succeeding	
Humor				
Maturity	Immature, serious, mature	Gives up quickly, jumping from one activity to another, gives up easily, to problems responding by crying	Persistent	
Independence	Instructions have to be repe- ated, independent	Instructions have to be repeated, needs a lot of en- couragement and appraisal, sometimes not interested in activities	Needs help with reading	
Emotionality	Stage fright, self-confident about his talents, proud, aims for success	Self-confident about her talents, low self-esteem, looses patience quickly, sen- sitive, perfectionist	Good self-esteem, self con- fident	
Social skills	He can choose his own friends, good relationships with peers and classmates	Does not get along good with boys, excluded from the class community, on her "bad" days she keeps for herself	He can choose his own friends, good relationships with peers and classmates	
Leadership		She wants to be a leader and give instructions	Self initiative, good leader- ship skills	
Broad interests	Math, success in school		Technical subjects	
Focused inte- rests	Drawing	Drawing	Computers and program- ming	

Distribution of categories in the table is taken from E. Nielsen, *Distinguishing characteristics of gifted students* with factors (1999).

### 5.5. Strengths and deficits of gifted students with learning disabilities

Teachers listed 30 characteristics that can be categorized as strengths, and 39 features belonging to deficits. Interviewed teachers know much better deficits of their students, than their strengths. Individual strengths and deficits are noted in the two tables below.

Teacher 1	Teacher 2	Teacher 3
Artistically talented	Artistically talented	Full of energy
Focused on his work	Creative	Popular
Independent	Expressing herself in images	Full of ideas
Fastest in calculating	Thinking in images	Successful in focused areas
Art work stands out	Good logical thinking	Rich vocabulary from interest areas
Expressing by drawing in every subject	Successful in focused areas	Willing to help others
Popular	Not always having attention pro- blems	Shares his knowledge, leadership skills
Self-confident	Rich imagination	Persistent
Successful in school	Wishes to lead the community	Good logical thinking
Interested in school work		
Self-initiative		
Serious		

#### Table 3. Strengths

#### Table 4. Deficits, weakness

Teacher 2	Teacher 3
Drawing to calm down	Dyslexic
Problems keeping attention	Problems concentrating at tests
Shot attention span	Problems reading
Does not obey rules	Untidy notebooks
Does not keep still	Difficulties in identifying the sequence of letters
Problems at math	Mistakes at spelling
Does not follow lecture	Poor understanding of grammar rules
Not finishing activities	Difficult to understand complex instructions
Does not finish assignments without encouragement	
Avoids assignments	
Gives up quickly	
Daydreaming	
Not participating in activities	
Disturbing behavior in classroom	
Makes careless mistakes	
Goes off task easily	
	Drawing to calm down Problems keeping attention Shot attention span Does not obey rules Does not keep still Problems at math Does not follow lecture Not finishing activities Does not finish assignments without encouragement Avoids assignments Gives up quickly Daydreaming Not participating in activities Disturbing behavior in classroom Makes careless mistakes

## Discussion

From the data obtained we can conclude that the students who are formally diagnosed as learning disabled are according to the teachers statements a lot more confident and successful in comparison to the other students. Student who does not receive professional assistance in the field of learning difficulties, has much more negative experiences in school.

Many gifted students with learning disabilities who are not identified learning difficulties or talents can have negative experiences in school.<sup>47</sup>

Identification of deficits does not mean that teachers are more focused on the students' strengths than deficits, but it is clear from the interviews that teachers have a better knowledge of students' deficits, as long as they are diagnosed.

Experts argue that gifted students with learning disabilities need to focus primarily on developing their talents, not only to eliminate deficits<sup>48</sup>, but our study proved that students receive most attention in the field of their learning difficulties. As advocated by interviewed teachers, they think it is more important to eliminate deficits, rather than develop talents. Greater attention to overcoming deficits, rather than developing talent is supported by the fact that students who receive professional assistance in the field of learning difficulties are more successful in school, have better self-esteem and better relationships with their peers than the student who does not receive professional help.

All teachers encourage their students to develop their talents, and allow them to demonstrate their knowledge in the classroom, as well as participate in school competitions.

Teachers described students positively, although it is often stated in the literature that teachers can think of twice exceptional students as lazy or unmotivated.<sup>49</sup>

In describing the characteristics, teachers showed more understanding of these characteristics in the field of emotional and social maturity, autonomy, emotional and social skills areas, as is evident from Table 2. Teachers otherwise describe

<sup>&</sup>lt;sup>47</sup> S. M. Reis, T. W. Neu, J. M. McGuire, *Case studies of high-ability students with learning disabilities who have achieved*, op. cit., p. 463–480.

<sup>&</sup>lt;sup>48</sup> S. Baum, S. V. Owen, *To be gifted and learning disabled: Strategies for helping bright students with LD, ADHD and more, Mansfield Center, CT 2004; D. B. McCoach, T. J. Kehle, A. M. Bray, D. Siegle, Best practices in the identification of gifted students with learning disabilities, op. cit., p. 403–411.* 

<sup>&</sup>lt;sup>49</sup> M. Reis, T. W. Neu, J. M. McGuire, *Case studies of high-ability students with learning disabilities who have achieved*, op. cit., p. 463–480.

social and emotional disabilities like the most problematic in working with gifted students with learning disabilities.<sup>50</sup>

Interestingly, none of the teachers mentioned that their students have a good sense of humor. Even if the humor is often described as a characteristic of gifted students, maybe this is still not understood among teachers as a characteristic of gifted students.

Described features of students in more than half of the cases fall within the scope of deficits, from which we can conclude that for interviewed teachers it is easier to identify deficiencies and adapt educational work to students with learning difficulties, than to recognize and encourage the development of giftedness. Other studies also noted that teachers have difficulties in identifying talents in students, especially if they have present learning difficulties.<sup>51</sup>

Cline and Hedgemans' study found that teachers do not understand well what features are characteristics of gifted students and that in addition teachers have lower expectations for pupils with learning difficulties.<sup>52</sup>

One of the important issues that could be raised from interviews, it is also how well gifted students with learning disabilities are aware of their strengths and deficits. It is of great importance that students know their strengths and deficits.<sup>53</sup> And teachers can help those students to recognize their strengths and weaknesses.

To this date, there have not been studies that investigated whether teachers in describing the gifted students with learning disabilities focus more on strengths or deficits. That is why it would make sense to carry out a similar study with a larger number of participants.

And finally results obtained and the results of other studies indicate a need for further training of teachers on the characteristics of gifted students with learning difficulties and appropriate educational strategies which would focus primarily on strengths and developing giftedness in this group of students.<sup>54</sup>

<sup>&</sup>lt;sup>50</sup> M. Foley Nicpon, G. S. Assouline, N. Colangelo, *Twice-exceptional learners: Who needs to know what?*, op. cit., p. 169–180.

<sup>&</sup>lt;sup>51</sup> C. Wormald, *Teachers' knowledge of gifted learning disabled students in NSW*, op. cit.

<sup>&</sup>lt;sup>52</sup>M. Bianco, *The effects of disability labels on special education and general education teachers' referrals for gifted programs*, op. cit., p. 285–293.

<sup>&</sup>lt;sup>53</sup> S. Baum, Gifted but learning disabled: A puzzling paradox, op. cit., p. 11–14.

<sup>&</sup>lt;sup>54</sup> T. Bezić, D. Žagar, *Poročilo o sprotnem spremljanju uvajanja Koncepta: odkrivanje in delo z nadarjenimi učenci v devetletni OŠ (šol. leto 2001/2002)* (2002), http://www.zrss.si/docx/07111123115\_bezic\_porocilo\_nad\_oš\_2003.docx (20.06.2014).

## Abstract Examining teachers' perceptions about specific characteristics of twice exceptional students

The teachers meet a gifted child with a learning disability, a twice-exceptional student, during his or her career. In Slovenia there has not yet been carried out a research, which would examine teachers' perceptions about this group of twice-exceptional students. In this qualitative research we interviewed teachers who have experience in teaching twice- exceptional students. We were interested in which characteristics of twice exceptional students were most commonly described by teachers. Also we were interested in examining if the teachers descriptions focus more on student's strengths or weaknesses. Participating teachers are able to recognize mostly emotional and social characteristics of twice exceptional students.

Keywords: teachers, learning disabilities, twice exceptional, characteristics

## Abstrakt O postrzeganiu przez nauczycieli cech wybitnych intelektualnie uczniów z niepełnosprawnością

Podczas swojej pracy zawodowej nauczyciele spotykają rozwinięte intelektualnie dzieci, u których występuje jakaś forma niepełnosprawności. W Słowenii nie przeprowadzono jeszcze badań, które wykazałyby, jakie jest postrzeganie przez nauczycieli tych grup uczniów. W jakościowym badaniu przeprowadzono wywiad z nauczycielami, którzy mieli doświadczenie w pracy z takimi uczniami. Punktem zainteresowania były te cechy uczniów, które nauczyciele uważają za najczęściej się powtarzające. W badaniu skoncentrowano się także na odpowiedzi na pytanie, czy opis dokonany przez nauczycieli skupia się na mocnych stronach uczniów czy słabych. Nauczyciele poddani badaniu potrafili rozpoznać większość emocjonalnych i społecznych cech uczniów.

Słowa kluczowe: edukacja, nauczyciel, niepełnosprawność, wybitny uczeń

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