

# TALENTED AND INEPT STUDENTS AND SMART LEARNING

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***Abstract:** The greatest deficits of soft skills are characteristic of talented and inept students. The purpose of this paper is to analyse content of educational sites devoted to use smart technologies in education. It was hypothesized that authors do not use words such as: able, clever, talented, or inept. The search of the content was conducted and the data was analysed statistically and assessed critically with the use of teachers' professional judgment. The result showed that when owners and authors of online educational websites promote new teaching technologies and devices they do not refer to gifted or inept students.*

**Keywords:** smart learning, educational sites, WebQuest, talented student, inept student.

## INTRODUCTION

Talented and inept students cause teachers similar problems. Both categories of students often have problems with communicating with the environment due to excessive use of the Internet. Both require individual approach, that is, teacher's additional time. Number of publications are devoted to ways working with such students.

But these publications not always take into account possibility of individual approach to utilising potential of new teaching technologies (or: SET, it means Smart Educational Technologies) and new methods of work in digital environment, e.g. e-portfolios, WebQuests, online courses. While, these technologies and methods are especially useful in teaching such students, because they allow for: archiving and recognizing their achievements, documenting their skills' development, searching for additional teaching materials, reviewing their knowledge, doing and repeating exercises, and individualizing work with them.

That is why producers could take into consideration needs of talented and inept students, same gaining additional market, while developing digital devices and

software. Similarly, in didactic publications dedicated to working with talented and inept students, authors could include didactic proposals related to the use of the digital environment.

Does it happen? Do software producers and didactics recognize the needs of teachers and talented and inept students in digital environment? This study attempts to find answers to these questions.

## 1. SET: PERSONALIZATION AND COLLABORATION

In the following text Smart Educational Technologies (SET) are defined as electronic devices (such as smartphones, tablets and notebooks), their software, policies and procedures directed at achieving educational aims of school based and external education and life-long learning.

The use of SET is recommended not only for average but above all for *talented* (Olszewski-Kubilius & Lee 2004; Wallace 2006; Thomson 2010; Housand & Housand 2012) and *inept* (Flynn 2014) students. Both groups show the biggest deficiencies in soft skills. The able ones do not integrate with their peers who are unable to keep up with their interests and passions. The unskilled ones are often ridiculed so they try to impress their peers in ways which are not always socially acceptable. Both groups, therefore, need educational materials tailored to their needs, individualized and personalized working methods, along with communication technologies and tools which would enable communication and collaboration. This is due to two reasons:

1. Need for socialization
2. Connectivist nature of modern learning.

The digital learning environment creates many opportunities for student collaboration, individualization and personalization of learning. It is needed for both: *talented* and *inept* students. According to George Siemens [c]onnectivism is a theory of describing how things happen in a digital age (Siemens 2006: 30) and teaching with technology respects diverse talents and ways of learning (Siemens 2009: 15). Thanks to the Information and Communication Technologies, it is possible to use teaching methods and tools such as:

1. Online course.
2. MOOCs.
3. *WebQuest*.
4. *E-portfolio* and *virtual notebook* which can be kept with the use of the tools provided on sites such as: “Blogger”, “Evernote”, “Google Keep”, “Google Sites”, “One Note”, “Padlet”, “Zoho”.

Education is not only about developing hard, i.e. measurable, skills but also soft, interpersonal skills i.e. psychophysical features and social skills allowing a person to plan their work and to collaborate with others.

The teacher chooses methods of work with their students. However, it can be said that teachers are less willing than students to use digital technologies. Because of that teaching does not meet the students' needs. Meanwhile, didactic work using digital technologies can be individualized more than teaching in which a traditional approach is used; it is able to satisfy unique needs of both *talented* and *inept* students. SET-based teaching materials could, therefore, appeal to the needs of *talented* and *inept* students

## 2. AIM, HYPOTHESIS AND METHODS

The aim of this study was to examine if and how the SET technologies are being recommended in educational materials for working with *talented* and *inept* students.

It was hypothesized that *promotion of the SET does not specify if the use of proposed materials are intended for working with talented or inept students.*

In order to check validity of this hypothesis, a qualitative thematic analysis was carried out, because this research tool for identifying, analysing, and reporting patterns (themes) provides a rich and detailed account of the data (Braun & Clarke 2006: 6). For this purpose texts from 10 websites and documents promoting SET as well as of 5 publications on working with *gifted* and *inept* students were collected.

The Google Web Search engine had been set up in advanced resource search mode in the appropriate language and country. Then the following words were introduced: *smart educational technology* (or respectively: *smart pedagogisk teknologi* in Norwegian, *intelligente Bildungstechnologie* in German, *smart pædagogisk teknologi* in Danish). The text that appeared in the highest position was selected for the analysis. Such criteria for content selection caused that analysed were heterogenous texts, not always about SET, but being real-life examples of way of introducing new technologies or SET to education in different countries. They often illustrated national cooperation of educational, governmental and commercial entities.

The texts were saved in Word or PDF format and stored in the corresponding working folders. Then the analysis of the vocabulary and collocations of those websites, books and documents was performed in order to find sentences containing the words: *able*, *accomplished*, *capable*, *clever*, *gifted*, *proficient*, *talented*, *inept* and their collocations and counterparts in other languages (e.g. in Polish *utalentowany*, *zdolny*, *slaby*) and to analyse contexts in which they were used. On the other hand, in didactic materials on working with *talented* and *inept*

students words *digital*, *e-portfolio*, *Internet*, *multimedia*, *WebQuest*, *virtual notebook* were searched for and the way of using them was analysed. Quantitative research was therefore complemented with qualitative analysis.

In order to triangulate the results, the professional judgement was utilised. The professionals included teachers who participated in the training course held on 29 May 2018 in Nowy Sącz and on 13 June 2018 in Bochnia as part of the implementation of the *Malopolska Educational Cloud* project. In Nowy Sącz:

1. Group I: Barbara Brzozowska-Batko (II LO in Nowy Sącz, Mathematics online, barbara.brzozowskabatko@gmail.com), Elżbieta Lankof-Klewar (I LO in Nowy Sącz, Mathematics online, elankof@wp.pl), Bogdan Potoniec (II LO in Nowy Sącz, Mathematics online, bogdan.potoniec@gmail.com), Katarzyna Jermakowicz (I LO in Nowy Sącz, jermakowiczka@gmail.com).
2. Group II: Iwona Kita (II LO in Nowy Sącz, English language, irkita@o2.pl), Ewelina Krupa (II LO in Nowy Sącz, French language, ewelinakrupa1234@gmail.com), Katarzyna Socha (II LO in Nowy Sącz, Biology k.socha@gmail.com), Kamila Kamińska (I LO in Nowy Sącz, Biology, kamila.bozek@gmail.com), Krystyna Łatka (I LO in Nowy Sącz, Mathematics, krysialatka@gmail.com).

In Bochnia worked English language teachers from the Stanisław Staszic No. 1 School Complex in Bochnia supervised by:

1. Group I Barbara Satoła-Śliwa (bsatola@interia.pl).
2. Group II Edyta Kurtyka (edytakurtyka82@gmail.com).
3. Group III Konrad Kozłowski (kentra747@hotmail.com).
4. Group IV by Joanna Biezychudek (biezychudek@poczta.onet.pl).

The coupling of document analysis with professional judgement allowed for combining two different ways of data presentation.

Finally, there were drawn conclusions on distributing the SET-based teaching methods in working with *talented* and *inept* students.

### 3. RESEARCH MATERIAL

Publications on SET as well as presenting methods of working with *talented* and *inept* students were the subject of the analysis.

Research material included:

1. Texts from 5 websites dedicated to educational tools and technologies (Table 1).

2. Content of 5 documents on SET published on websites based in countries with education rated as the highest by the *Human Development Report 2016* (United Nations Development Program 2016: 230) i.e. Norway, Australia, Switzerland, Germany, Denmark (Table 2). Search for these documents was conducted by typing into the search engine the phrases: *smart pedagogisk teknologi, smart educational technologies, intelligente Bildungstechnologien, intelligente uddannelsesteknologier*.
3. Content of 5 documents published on Polish websites dedicated to working with *gifted* and *inept* students (Table 3). These were found after the search terms *praca z uczniem zdolnym* (*working with a gifted student*), *praca z uczniem słabym* (*working with inept student*) had been entered into the search engine. The publications were prepared by authors of various categories, e.g. teachers, educators and educational institutions.

Every text was saved in Word or PDF format as a separate document and tagged with the author and website name (Table 1, Table 2, Table 3).

**Table 1.****The SET associated websites analysed (accessed on 7 July 2018).**

Website	Address
“WebQuest.Org”	<a href="http://webquest.org">http://webquest.org</a>
“Wszystko o metodzie WebQuest”	<a href="http://webquest-metoda.blogspot.com">http://webquest-metoda.blogspot.com</a>
“Blogger”	<a href="https://www.blogger.com">https://www.blogger.com</a>
“Padlet”	<a href="https://pl.padlet.com">https://pl.padlet.com</a>
“Evernote”	<a href="https://evernote.com">https://evernote.com</a>

*Source: Own work*

**Table 2.****The SET associated documents analysed (accessed on 7 July 2018).**

Country	Author, title	Address
Norway	Inspiria Science Center <i>Smart og enkel teknologi for læring</i>	<a href="http://www.inspiria.no/?itemid=3001">http://www.inspiria.no/?itemid=3001</a>
Australia	State Government of Victoria <i>What is smart technology for the smart classroom?</i>	<a href="http://www.education.vic.gov.au/Documents/about/news/archive/7ensmarttech.pdf">http://www.education.vic.gov.au/Documents/about/news/archive/7ensmarttech.pdf</a>
Switzerland	Venturelab <i>Neues EdTech Vertical: Kickstart Accelerator heisst Startups im Bereich Bildungstechnologie willkommen</i>	<a href="https://www.venturelab.ch/Neues-EdTech-Vertical-Kickstart-Accelerator-heisst-Startups-im-Bereich-Bildungstechnologie-willkommen">https://www.venturelab.ch/Neues-EdTech-Vertical-Kickstart-Accelerator-heisst-Startups-im-Bereich-Bildungstechnologie-willkommen</a>
Germany	Nationaler IT-Gipfel <i>Smarte Bildungsräume. Positionspapier der</i>	<a href="https://deutschland-intelligent-vernetzt.org/app/uploads/2016/11/FG2_Smarte_Bildungsraeume_web_20161">https://deutschland-intelligent-vernetzt.org/app/uploads/2016/11/FG2_Smarte_Bildungsraeume_web_20161</a>

	<i>Expertengruppen Intelligente Bildungsnetze und Smart Cities / Smart Regions</i>	1.pdf
Denmark	Morten Greve <i>10 teknologier, der ændrer vores verden de næste 10 år</i>	<a href="https://www.dr.dk/nyheder/viden/tech/10-teknologier-der-aendrer-vores-verden-de-naeste-10-aar">https://www.dr.dk/nyheder/viden/tech/10-teknologier-der-aendrer-vores-verden-de-naeste-10-aar</a>

*Source: Own work*

**Table 3.**

**Polish publications analysed (accessed on 7 July 2018).**

<b>Author, title</b>	<b>Address</b>
Czekaj-Kotynia, K. (Ed.). <i>Nowoczesne metody dydaktyczne w procesie kształcenia</i>	<a href="http://kompetencje.org/materialy/zst/nowoczesne-metody-dydaktyczne.pdf">http://kompetencje.org/materialy/zst/nowoczesne-metody-dydaktyczne.pdf</a>
Sobańska-Jędrych, J., Karpeta, B., Torenc, M. <i>Rozwijanie zdolności językowych na lekcji języka obcego</i>	<a href="https://www.ore.edu.pl/2014/12/poradniki-2/">https://www.ore.edu.pl/2014/12/poradniki-2/</a>
Gawlica, I., Czekan S., Gawlica, M. <i>Procedura pracy z uczniem zdolnym</i>	<a href="http://www.sp17zabrze.szkolnastrona.pl/container/Procedura%20pracy%20z%20uczniem%20zdolnym.pdf">http://www.sp17zabrze.szkolnastrona.pl/container/Procedura%20pracy%20z%20uczniem%20zdolnym.pdf</a>
Limont, W., Cieślukowska, J., Jastrzębska, D. (Eds.). <i>Zdolni w szkole, czyli o zagrożeniach i możliwościach rozwojowych uczniów zdolnych. Poradnik dla nauczycieli i wychowawców</i>	<a href="https://www.ore.edu.pl/2014/12/poradniki-2">https://www.ore.edu.pl/2014/12/poradniki-2</a>
Ośrodek Rozwoju Edukacji <i>Wybrane metody i formy pracy z uczniem zdolnym</i>	<a href="https://www.ore.edu.pl/2014/12/metody-i-formy-pracy-z-uczniem-zdolnym">https://www.ore.edu.pl/2014/12/metody-i-formy-pracy-z-uczniem-zdolnym</a>

*Source: Own work*

#### 4. LIMITATIONS

Searching documents for words suggesting how to use SET with a *talented* or an *inept* student is only partially objective because:

1. Some materials have been disregarded due to technical problems such as presence of Flash presentations in their content (e.g. Merrick 2016).
2. Some authors associated the presented SET tools with personalization of teaching which may be applicable also to working with *talented* or *inept* students.
3. Some presented tools were applied to specific didactic situations, but it was not specified whether they were applicable to teaching *talented* or *inept* students.

4. The teacher is able to adapt didactic tools to the needs of *talented* and *inept* students, so mentions of those in presentations on didactic methods and SET tools were treated as irrelevant.

## 5. RESULTS OF ANALYSIS

### 5.1. Usage of the words: *able, accomplished, capable, clever, gifted, proficient, talented, inept.*

#### 5.1.1. Sites presenting the SET methods and tools

##### 5.1.1.1. The “WebQuest.org” site

Majority of search terms were found on the „WebQuest.org“ website. Since 2005 teachers from various countries have placed onto this website thousands of examples of use of this method. The search terms were found by means of the website search engine. Next, the context of their use was examined. *Accomplished* and *gifted* turned out to be the most popular words. However, only the latter appeared consistently in didactic contexts. It was used in the module titles suitable for students at different stages of their education, ranging from Grade 3 to school-leaving students and professionals: *A WebQuest for Teaching Gifted Students, Gifted Boys, Gifted Girls, Instructional Strategies for Gifted Learners, Instructional Strategies for Gifted Learners* and so on. It can be concluded that teachers, the authors of the proposed activities, believed that such actions had a potential of forming *gifted* students. However, they did not address *inept* students.

Other sought words often appeared in contexts that do not relate to students' characteristics, e.g.: *Mission Accomplished!, Most Accomplished President, California Missions: Mission Accomplished?, Author Study: An In-depth Look into the Lives of Accomplished Authors, capable of achieving, China's talented Dynasties: Tang and Song Achievements, talented athletes, talented artists*. The word *weak* was connected with body activities, for example: *Seven Days Without Exercise Makes One Weak*. The term *poor* appeared consistently in economic and social contexts, for example: *What is Poverty and Who are the Poor?, Being Poor in Tudor England, How will we bury poor Uncle Albert?, Pudgy Peggy's Poor Plan, Exploring The Link Between Nutrition and Poor Academic Performance, How Peer Pressure Could Lead To Poor Decision Making Than Can Affect The Rest Of Your Life*. There is no mention of *inept* students.

Teachers using their professional judgement (Group II, Nowy Sącz), having analysed the content of this site, concluded: *it has some didactic potential; it can assist in creating tasks for talented and inept students (posiada walory dydaktyczne, może służyć pomocą przy tworzeniu zadań dla uczniów zdolnych / słabych)*. It shows that contemporary Polish teachers did not find on the „WebQuest.org“ website ready-made proposals for working with *talented* or *inept*

students. However, didactic materials published on the site may inspire teachers to create their own *WebQuests*.

#### **5.1.1.2. The “Everything about the WebQuest Method” (“Wszystko o Metodzie WebQuest”) website**

The Polish website was designed by 3<sup>rd</sup> year students of Polish Philology as part of Information Technology course coordinated by Sabina Furgoł. Similarly to the website discussed above, it presents the methods and some examples of tutorials.

The term *gifted* occurs once only – in the subject of tutorials *Metoda webquest w pracy z uczniami zdolnymi* (*The webquest method in working with gifted students*). However, the hyperlink to this resource is inactive. Other search words were not found.

Having analysed the content of the site using their professional judgement, the teachers (Group I, Nowy Sącz) concluded: *The extensive material published on the website provides general information about working with a student, however it does not specifically address a gifted or an inept student* (*Udostępniony obszerny materiał zawiera informacje ogólne o pracy z uczniem, bez zwrócenia uwagi na ucznia zdolnego i słabego*).

#### **5.1.1.3. The “Blogger” website**

The website is not so much educational but commercial in its nature. That can explain lack of search terms applicable to *talented* and *inept* students. However, the following sentence was noticed: *blogspot.com will serve you the country service that corresponds to your location. and all existing blogspot ccTLD domains will redirect to blogspot.com. This will help simplify URLs for international audiences* („Blogger“). This suggests that the intended users of this website run by Google are international corporations, not students.

#### **5.1.1.4. The “Padlet” website**

The site, like the previous one, is commercial in nature. No search didactic terms were found on this website. It was developed by website designers who perceive students not in terms of their individual characteristics but in terms of mere commercial users and numbers of times the website was accessed: *New students join? Give them automatic access to lessons and plans and other stuff you have created. Give administrators and teachers rights to see student work* („Padlet“). The website giving the teacher an option of creating *e-portfolio*, as if it was not a tool suitable also for modern day students, suggests that the website designers are lacking knowledge of contemporary educational realities: *Create beautiful reports and portfolios for students - by year, class, or subject* („Padlet“).

The design of the tool does not hinder its use by *talented* and *inept* students. However, it limits its popularity in educational contexts.



### 5.1.1.5. “Evernote”

The search terms did not appear in educational contexts, although the application is offered for sale, also for students. Students were offered to share, review and present notes, scan and search documents etc. The application, however, is primarily business orientated. This is suggested by phrases such as: *As a project manager, Sandro was thus able to address the most challenging aspects presented by large-scale projects* and *Thanks to Evernote Business, we were finally able to bring company knowledge to the people, your team is capable of dreaming up* („Evernote“). The *Evernote Business* version of the product is the most functional but also its price is the highest.

### 5.1.1.6. Conclusion

The use of search words was correlated with the size of resources, type of ownership, predicted users and professions of the authors of the website. Therefore the analysed texts revealed cultural and educational context in which search words or their synonyms and collocations were used. Only the first two of the presented websites, developed by the teachers and the educators, present SET in the context of personalized education. On the other hand, the way programmers present tools as useful for SET brings them down to a lucrative business offer. They perceive school as a place of one-way knowledge transfer because this is how they remembered it from their school years. Therefore, they are unable to satisfy the needs of the modern educational market with products they offer.

Language of the sellers offering similar products and coming from similar cultural background occurred to be alike. It communicates corporations’ striving for global technologicalisation of education without sufficient supporting it by offering didactic guidelines.

Table 4 summarizes didactic terms appearing in the contents of the researched websites presenting the SET methods and tools.

**Table 4.**

**Didactic terms on websites presenting the SET methods and tools**

Website	<i>able / zdolny</i>	<i>accomplished</i>	<i>capable</i>	<i>clever</i>	<i>gifted</i>	<i>talented / utalentowany</i>	<i>proficient</i>	<i>inept / slaby</i>
“WebQuest.Org”	0	20	6	1	20	6	0	0
“Wszystko o metodzie WebQuest”	1	-	-	-	-	0	-	0
“Blogger”	0	0	0	0	0	0	0	0
“Padlet”	0	0	0	0	0	0	0	0
“Evernote”	0	0	0	0	0	0	0	0

*Source: Own work*

## **5.1.2. Materials published on the websites based in the countries with education rated as the highest in UN ratings**

### **5.1.2.1. Norway**

The article concerns a breakfast seminar organized 15 April 2015 by the INSPIRIA Science Center, NHO and Abelia in the Østfold district for 150 teachers and school principals. Analysed coverage refers to the *intelligent and easy learning technology* that utilizes games, simulations and enables personalization of teaching. This technology was presented to representatives of the education and the business sector during the scientific and didactic seminar which shows integration of these two sectors in Norway. The search terms that were used in the text occurred not in didactic contexts but in reference to the technological advancement e.g.: *smart og enkel teknologi (smart and simple technology)*, *smarttelefoner (smart phones)*. But in countries with high competences of teachers (such as Norway, Australia) mentioning *talented, inept or needing a lot of attention and motivation* students in texts about new technologies in school is unnecessary.

### **5.1.2.2. Australia**

The analysed publication was prepared in 2010 by the Victoria State Government. It addresses educational applications of: *Ultranet, digital and flip cameras, interactive whiteboards and dozens of software programs and online resources (...) blogs, wikis (...) web apps such as Google Docs (...) online learning portfolio (...) online learning activities* (Victoria State Government 2010).

The search terms were not found in the text of the publication. However, the accuracy of the presented SET applications should be appreciated, especially since the article was created in 2010, when the SET development only just started with the wide spread of social media. By that time, the Internet was utilised for educational purposes in the Australian schools and students from 1575 schools worked together and commented on their work using digital devices. Teachers posted tasks and published grades on the platform, and parents monitored progress of their children.

### **5.1.2.3. Switzerland**

The text refers to the Swiss *Kickstart Accelerator* program developed at the Ecole Polytechnique Fédérale de Lausanne dedicated to the use of start-ups in education. It was implemented in 2017 with the support of EdTech as part of the *Das firmenübergreifende Startup-Förderprogramm* program. As an incentive, the top 10 companies received scholarships, awards and established cooperation with EdTech, investors, experts, mentors and business partners.

Search terms did not appear in didactic contexts in the text but phrases like *Fähigkeit der Region (the capacity of the Region)*, *die besten Startup-Talente (the best startup talents)* (Venturelab 2017) were encountered. This does not necessarily mean that the program does not apply to *talented* and *inept* students. The lack of

wording referring to those two categories of students could be due to the size of the document – it consists of approximately 7500 characters only.

It is worth noting that the implementation of the presented program became possible thanks to the co-operation between academic, industrial and governmental entities. The program correlates with the high quality of education and innovation in a country where educational technology is booming.

#### 5.1.2.4. Germany

The *Smarte Bildungsraume (intelligent educational spaces)* document developed by the Nationale IT-Gipfel refers to the Interacting Smart Cities/Regions and Smart Education Networks in selected regions of Germany, to digitalization of education and qualification, including Cisco Networking Academy, Open Pop University and to MOOCS. The authors concluded that social well-being is balanced where digitalization is utilised and where, secondary to that, educational opportunities are maximised.

The authors mentioned the acquisition of skills (*Fähigkeiten erwerben*) (p. 4) through the use of IT, as well as the acquisition of competences needed for finding employment (*Kompetenzen für Beschäftigungsfähigkeit*) (p. 13) thanks to Cisco Networking Academy. It was also reported that German universities, having developed very *talented (Hochbegabten)* students, are offering distance education courses for extraordinarily *talented* and also for *inept* students (*überdurchschnittlich begabte und unterforderte Schülerinnen und Schüler*) (p. 11). The former ones often do not complete their university courses due to problems with commuting to the university or with unsuitable MOOC program.

It can be said that the authors of the document correctly linked the use of the SET with the education of *gifted* and *inept* students seeing in new technologies a chance of development for both. Paying attention to *inept* students is rooted in the German pedagogical tradition focused on helping. On the other hand, promoting development of the *talented* students is conditioned by the needs of the highly advanced German economy. This kind of document could have been created only in case of cooperation of the business and academic bodies. The academic entities were represented, among others, by Prof. Dr habil. Christoph Igel (Deutsches Forschungszentrum für Künstliche Intelligenz GmbH), Prof. Dr Bernd Krämer (FernUniversität in Hagen), Prof. Dr Daniela Niklas (Otto-Friedrich Universität Bamberg), Prof. Dr Sigfried Stiehl (Universität Hamburg).

#### 5.1.2.5. Denmark

The analysed text was posted on the website of the Danish Internet TV DR. It was, therefore, written by a journalist, not by a pedagogue. It applies to the latest technologies including the Artificial Intelligence, biometric sensors, Internet of Things, quantum computers, cyborgs, brain-computer interfaces, robots and drones, self-propelled cars, Virtual Reality, Augmented Reality, and Mixed Reality. However, these technologies were not linked to education or, more

importantly, to the categories of *talented* or *inept* students. Nonetheless, they are being utilised in education and will certainly be so in the future.

### 5.1.2.6. Conclusions

**Table 5.**

**Didactic terms from the websites based in the countries with education rated as the highest by the United Nations**

Country, author, title	<i>able</i>	<i>accomplished</i>	<i>capable</i>	<i>clever</i>	<i>gifted</i>	<i>proficient</i>	<i>talented</i>	<i>inept</i>
<b>Norway:</b> Inspiria Science Center <i>Smart og enkel teknologi for læring</i> <sup>1</sup>	0	0	0	0	0	0	0	0
<b>Australia:</b> Victoria State Government of <i>What is smart technology for the smart classroom?</i>	0	0	0	0	0	0	0	0
<b>Switzerland:</b> Venturelab <i>Neues EdTech Vertical: Kickstart Accele-rator heisst Startups im Bereich Bildungstechnologie willkommen</i> <sup>2</sup>	0	0	0	0	0	0	0	0
<b>Germany:</b> Nationaler IT-Gipfel <i>Smarte Bildungsräume. Positionspapier der Expertengruppen Intelligente Bildungsnetze und Smart Cities / Smart Regions</i>	2	0	0	4	0	0	0	2
<b>Denmark:</b> Morten Greve <i>10 teknologier, der ændrer vores verden de næste 10 år</i> <sup>3</sup>	0	0	0	0	0	0	0	0

*Source: Own work*

The analysed texts were in majority of the cases promotional. That explains why positive connotations and terms associated with the education of *gifted* students were used in them, while *inept* students were rarely referred to.

The search terms characterizing students were associated mainly with the technological aspects of teaching and not with educational process or methods of teaching, and the more not with working with *a gifted* or *an inept* student.

<sup>1</sup> In Norway respectively: *stand, oppnådd, dyktig, smart, begavet, talentfull, fattig, udugelig.*

<sup>2</sup> In central Switzerland and Germany respectively: *fähig, vollendet, klug, begabt, talentiert, arm, ungeschickt.*

<sup>3</sup> In Denmark respectively: *stand, gennemført, klog, begavet, talentfuld, fattig, svag.*

Table 5. lists analysed texts from the websites based in the countries with education rated as the highest by the United Nations taking into account the occurrence of didactic search terms related to working with a *talented* or an *inept* student.

### 5.1.3. Publications about *talented* and *inept* students and the SET

#### 5.1.3.1. *Modern didactic methods?*

The collective monograph *Nowoczesne metody dydaktyczne w procesie kształcenia (Modern didactic methods in the education process)* (2013) was developed as part of the implementation of a project co-financed by the European Union under the European Social Fund (*Priority IX - Development of education and competences in regions, Measure 9.2. Improvement of the attractiveness and quality of vocational education*). The education process was positioned in the realities of the digital advancement. This is evidenced by the fact that the word *Internet* was used 46 times in the text and the reference to the digital education system was made 9 times (mainly to the e-journals). However, there was no mention of *inept*, *talented* or *gifted* students. Only in one instance there was a mention of the development of *skills needed for group work, presentation of one's work and self-assessment of own activities (zdolności związanych z kooperacją w grupie, prezentacją wyników swojej pracy, samooceną podejmowanych działań)* (p. 56). It can be said that the authors noticed a correlation between advanced technology, digital methods, didactic tools (e.g. blog, WebQuest, e-experience, computer didactic programs) and the individualization of education. Tailoring education to the needs of a given student was possible thanks to practical application of these technologies – the cited project referred to vocational training. However, the subject has not been expanded further.

Having analysed the monograph, using their professional judgement, the teachers (Group I, Nowy Sącz) stated: *The extensive material published does not contain any information on how to work with a gifted or an inept student (Udostępniony obszerny materiał nie zawiera żadnych informacji na temat pracy z uczniem zdolnym i słabym)*. This suggests that they had expected that the publication about modern didactic methods would offer some guidelines regarding working with a *gifted* and an *inept* student, but they found none.

#### 5.1.3.2. *Developing language skills?*

The digital brochure *Rozwijanie zdolności językowych na lekcji języka obcego (Developing language skills during foreign language lessons)* (2013) was prepared as part of the project *Opracowanie i wdrożenie kompleksowego systemu pracy z uczniem zdolnym (Development and implementation of a comprehensive work system with a gifted student)*. The topic caused that the term *gifted* was frequently used in the book. Nonetheless, ways of working with an *inept* student were not addressed.

The authors placed teaching in the realities of the Internet. Most often, however, they placed the Internet content on a par with the library resources or the

encyclopaedia (pp. 35, 43, 48, 55, 57, 60, 66) even though they suggested using the Internet for completing a project by the students (pp. 36, 49). They proposed publishing students' work on a website (pp. 44, 62), posting opinions on an online forum (p. 50), and designing a website (p. 61). The Internet is, therefore, seen in terms of Web 1.0, i.e. as a unidirectional communication. The use of social media, working together with the students, e.g. using the *WebQuest* method, running an *e-portfolio*, *virtual notebook*, or posting teaching materials and interactive exercises by the teacher was not postulated. The word *interactive* was not found in the text.

It can be said that the authors have linked the digital learning environment and the education of the *gifted* students with the Internet in a way that is obsolete. Nevertheless, the brochure is still available on the website of the Education Development Centre and, therefore, the outdated ways of teaching are being promoted.

The teachers (Group I, Bochnia), having analysed the contents of the booklet using their professional judgement, stated, among others: *No references to publishing on the Internet (Brak odniesień co do publikowania w Sieci)*. It seems that the author's referring three times to posting materials on the Internet by the students was not enough for teachers. The teachers' search for methodical guidance on publishing opinions by students, the list of the foreseeable hardships and benefits of doing so, information on copyright laws, as well as didactic examples of such publications on the Internet, hyperlinks to such materials etc. Meanwhile, the hyperlinks mentioned in the booklet were often outdated, which is discouraging for the readers.

### 5.1.3.3. Working with a *gifted* student?

Irena Gawlica, Sylwia Czekan and Magdalena Gawlica in their six-page long publication titled *Procedura pracy z uczniem zdolnym (The procedure on working with a gifted student)* codified the procedure which was adopted for the implementation in the No. 17 Primary School in Zabrze in 2008. No words referring to the digital teaching environment were found in the text.

It can be said that the publication is, therefore, outdated. It would discredit the modern school if it did not contain the date it was created because it moves the teaching ten years back. The publication was created before the development of social and mobile media, both of which play an important role in the modern day education.

These days it is impossible to ignore the digital environment in the teaching of *talented* students. However, probably overloading the teachers with administrative and reporting duties was the reason why the document has not been updated. Most likely, the teachers of the above mentioned school are referring to the digital era in education (and not only with relation to working with a *gifted* student).

Having analysed the contents of this document using their professional judgement, the teachers (Group II, Bochnia) stated, among others: *the material does not*

contain any guidelines on publishing on the Internet by gifted students (*materiał nie zawiera wskazówek co do publikacji w Sieci przez uczniów zdolnych*). In 2018, students publish freely on social media. According to the teachers participating in the project on developing skills of taking advantage of the digital era, not developing those skills in the most *talented* students is unacceptable.

#### 5.1.3.4. Gifted ones at school?

Published in 2012 by Ośrodek Rozwoju Edukacji (Center for Education Development) the collective monograph entitled *Zdolni w szkole, czyli o zagrożeniach i możliwościach rozwojowych uczniów zdolnych. Poradnik dla nauczycieli i wychowawców* (*Gifted ones at school, or about developmental dangers and opportunities of the talented students. Guide for teachers and educators*) was edited by Wiesława Limont, Joanna Cieślukowska and Dominika Jastrzębska. The authors referred to the use of the Internet resources as well as the publication of materials and bulletins in the Web by the school and the university students (pp. 73-74, 152), establishing an Internet radio (p. 67), conducting astronomical observations on the Internet (p. 67), creating websites and programming (pp. 169, 171-172).

Interestingly, the authors did not propose that the teachers should contribute to the didactic resources and possibilities of the Internet. They only mentioned the need of supplementing the school website (p. 79). The authors perceive the Internet as a tool of reproduction on a par with photography, film and television (p. 132). They consider communicating over the Internet (pp. 169, 171) to be a dangerous antithesis of direct interpersonal relations (p. 111). The authors mentioned not a single teaching method which would be specific to the digital environment.

Educating *talented* students in the manner proposed in the book would not be adequate to the needs of modern students. The non-updated publication promotes outdated teaching methods and discredits the Centre for Education Development as an educational institution.

The teachers interested in taking advantage of the digital era in teaching (Group III, Bochnia), having analysed the content of this monograph, utilising their professional judgement, voiced a very harsh opinion:

*Unfortunately, there are no hyperlinks to the paragraphs we are interested in. References and bibliography are presented all too professionally; mainly academic papers are referenced which are not very helpful in providing information on how to work with a gifted student but present just dry data (nonetheless, consistent, with the title of the publication: “dangers and opportunities” and not “ways of working”). Publication dates of referenced materials up to the publication time. In the entire work, several projects were described. Projects are the only method of teaching presented in the publication (apart from some information on how to create a bulletin). Not a single word on the use of modern teaching methods. Waste of time.*

*(niestety brak hiperlinków pozwalających przeskoczyć do interesujących nas fragmentów. Odniesienia i bibliografia wykonana aż nazbyt profesjonalnie, są to*





<i>Nowoczesne metody dydaktyczne w procesie kształcenia (Modern didactic methods in the educational process)</i> , Ed. Katarzyna Czekaj-Kotynia	1	0	8	0	46	11	29	0
Joanna Sobańska-Jędrych, Beata Karpeta, Marta Torenc <i>Rozwijanie zdolności językowych na lekcji języka obcego (Developing language skills during a foreign language lesson)</i>	0	1	0	0	13	2	0	0
Gawlica Irena, Sylwia Czekan, Magdalena Gawlica <i>Procedura pracy z uczniem zdolnym (Procedure of working with a gifted student)</i>	0	0	0	0	0	0	0	0
<i>Zdolni w szkole, czyli o zagrożeniach i możliwościach rozwojowych uczniów zdolnych. Poradnik dla nauczycieli i wychowawców (Gifted learners at school, or about developmental dangers and abilities of talented students. A guide for teachers and educators)</i> , Ed. Wiesława Limont, Joanna Cieślikowska, Dominika Jastrzębska	9	1	7	0	35	6	0	8
Ośrodek Rozwoju Edukacji <i>Wybrane metody i formy pracy z uczniem zdolnym (Selected methods and types of working with a gifted student)</i>	0	0	0	0	1	0	0	0
Total	10	2	15	0	95	19	29	8

Source: Own work

## CONCLUSIONS AND RECOMMENDATIONS

The analysis of suggestions on working with a *gifted* or *inept* student, presented in the SET related educational documents, confirmed that they often serve the mere presentation of tools and do not provide teachers with didactic guidelines on how to work with a *gifted* student or an *inept* student. This is due to the technologisation of contemporary teaching.

The hypothesis that *promotion of SET is not linked to the use of SET in working with a talented or inept student* proved to be partially true in relation to the researched material. Some teachers, the authors of suggestions and didactic proposals posted on the Internet, are able to link the presentation of SET to the methods of working with *talented* and *inept* students in the digital environment. On the other hand, when the employees of companies involved in the production of digital tools are the authors of the texts, they focus on promoting their products and services primarily to businessmen, although the products they offer could be useful also school and university students. For comparison, educational institutions often

publish obsolete materials. Often suggested methods on working with *talented* and *inept* students presented in such publications disregard the advancement of the modern digital environment represented by Web 2.0 or Web 3.0.

It can be stated that the authors of the educational websites and the Internet documents, while discussing SET, use a similar language regardless of their academic discipline, the problem they address, their age, gender, country of origin or cultural background. This common language, which is developing worldwide, enables the transfer of technological advancement. However, the need for transfer of experience and didactic research results which would integrate the educational and research community still remains. It is recommended that publications about SET take into account specific needs of *gifted* and *inept* students.

One can say, according to Ludwig Wittgenstein, *the limits of my language mean the limits of my world* (Wittgenstein 2010: 74). Not using the words *able*, *accomplished*, *capable*, *clever*, *gifted*, *proficient*, *talented*, *inept* in publications about SET and the words *digital*, *e-portfolio*, *WebQuest*, *virtual* in publications about *talented* and *inept* students is most likely to limit the utilisation of the digital learning environment for didactic purposes. There is need for educational materials linking SET with working with a *talented* and an *inept* student that is the need for publications prepared by didactics and teachers and not by programmers, web designers or representatives of the world of business.

Further studies on vocabulary used on educational websites can be conducted as part of the Distance Learning research. SET ought to be effectively used for equalizing educational opportunities, individualizing education and economic development. Countries which achieved economic successes in recent decades (e.g. China, South Korea, Singapore, Thailand) had implemented national educational policies, including working with *gifted* children (Markelow 2009).

Studies have shown that about 38% of students with learning difficulties are *able* (Bereźnicki 2015: 256). Potential of *talented* students should not be wasted. It is especially valuable in developing countries threatened by *brain drain* that is by emigration of school and university students and professionals educated at the expense of society, *talented* and having high educational and professional expectations. If they had the opportunity, they could solve many problems of their communities and countries.

Therefore, the binding of SET technology to the education of gifted students (and the ones who need a lot of attention and motivation) is needed especially in developing countries.

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