

Mersina Mujagić⁴⁸
Alma Pehlivanović⁴⁹

Izvorni naučni rad
Original scientific paper

METAPHORICAL FRAMING OF CHILDREN'S DIGITAL MEDIA ADDICTION IN MEDIA DISCOURSE

Summary

The paper investigates figurative construal of children's excessive use of electronic devices in articles that tackle the issues of children's media addiction, as well as concentration and attention span, which are considered to be affected by this excessive use of technology. In giving their opinion on the topic, authors of articles resort to the use conceptual metaphor – a cognitive device where more abstract concept (a target domain) is being understood through the use of another, more concrete concept (a source domain). Authentic language data reveal the use of metaphorical linguistic expressions such as 'digital overdose' and 'electronic cocaine', which send a disturbing message that children are 'overdosing'. This detailed analysis aims to investigate: (a) the types of metaphor (according to Steen's 2010 three-dimensional model of metaphor analysis) in articles on children's media addiction; (b) whether ADDICTION metaphors are dominant and deliberate; (c) their communicative function – the rhetorical function intended by the authors, as well as their rhetorical effects on recipients (notably, parents); (d) the implications of their combination with other metaphors within a sentence or a paragraph; (e) the possibility of resorting to alternative metaphor use.

Key words: *digital addiction, conceptual metaphor, deliberate metaphor, metaphor identification*

⁴⁸ mersina.mujagic@unbi.ba

⁴⁹ alma.pehlivanovic@unbi.ba

Introduction

We live in the age of technology, and almost every segment of modern life is affected by it in one way or another. Technology is a part of both private and public lives; one uses it to socialize, to travel, for safety, in education, and in many other spheres. However, excessive use of technology can be connected to mental health issues, among other things, especially among children and teenagers who are still developing and are more likely to be negatively impacted. The articles that are investigated in this paper discuss those negative effects through the use of figurative language, that is, conceptual metaphor. The authors of the articles rely on the conceptual metaphor BEHAVIOR IS A SUBSTANCE (Lakoff et al., 1991: 26). They use the more concrete concept, the source domain, of an addictive substance to describe the abstract concept, the target domain, of the compulsive behavior. The aim of this paper is to explore how children's excessive use of technology and electronic devices is metaphorically framed as addiction in media discourse.

In the section 'The Corpus and Research Methodology', the choice of methodological framework is presented and discussed in more detail. The 'Corpus Analysis' section analyzes metaphors across the three dimensions of indirectness, conventionality, and deliberateness and discusses their interrelatedness. Then, statistical overview of different types of metaphor identified in the corpus is offered. In other words, examples of indirect, direct, and implicit metaphor use are determined. For the sake of brevity of this paper, not all identified examples are described individually in the paper, but are included in the statistical overview as to provide accurate data on representation of certain expressions and forms in the corpus. This linguistic-level analysis serves as the basis to determine conventional and novel metaphors from ADDICTION domain at the conceptual level. The 'Discussion' section focuses on metaphor in communication, i.e. deliberate metaphors and the rhetorical potential of their use in articles on children's increased use of digital technology and internet. Subsequently, a framework of alternative metaphors to be used instead of the ADDICTION metaphor is offered. Following that, concluding remarks are given in the final section.

The Corpus and Research Methodology

The corpus includes 29431 words from articles about children's excessive use of digital media published between May 2016 and December 2022 at websites of different news agencies, education and health foundations, etc.⁵⁰

The methodological basis of this paper is Steen's three-dimensional model of metaphor analysis (Steen et al., 2010), which has become known as Deliberate Metaphor Theory (henceforth DMT). "In DMT, metaphor is not only seen as a matter of conceptual structures (metaphor in thought) expressed in linguistic forms (metaphor in language), but also as a matter of communication between language users (metaphor in communication)" (Reijnerse et al., 2018: 132). Thus, DMT distinguishes linguistic level, conceptual level, and communicative level of metaphor analysis.

⁵⁰ Sources are: *The Guardian*, *independent.co.uk*, *nypost.com*, *metro.co.uk*, *nytimes.com*, *time.com*, *wgxa.tv*, *ewindianexpress.com*, *reuters.com*, *www.abc.net.au*, *npr.org*, *www.nytimes.com*, *forbes.com*, *humanium.org*, *inspiro.org.au*, *sundaytimes.lk*, *noahwebstereducationalfoundation.org*, *balkaninsight.com*, *aljazeera.com*;

At the linguistic level, DMT investigates linguistic metaphors, i.e. metaphorical linguistic expressions, which are further classified into indirect, direct, and implicit metaphors. Indirect metaphors imply the indirect use of language when one speaks about one concept in terms of another, i.e. when one tries to conceptualize one phenomenon in terms of another. Indirect metaphors are established by comparing and contrasting the basic and contextual meanings of potentially metaphorical linguistic expressions whereby analysts rely on dictionaries for the sake of objectivity and reliability. The potentially metaphorical linguistic expression is looked up in dictionaries⁵¹ and their contextual and basic meanings are considered for sufficient similarity and/or distinctness (Steen et al., 2010: 37). For sake of example, we annotate the expression *junkie* from the headline “It’s ‘digital heroin’: How screens turn kids into psychotic *junkies*”, published at nypost.com on August 27, 2016. The basic meaning of *junkie* is “a person who is addicted to narcotics and especially to heroin” (*Merriam Webster*), while its contextual meaning is “a person who gets an unusual amount of pleasure from or has an unusual amount of interest in something” (*Merriam Webster*). Upon establishing that the expression is indeed metaphorical in the given context, analysts proceed with determining what type of metaphor it is at the linguistic level, which implies the application of MIPVU (Steen et al., 2010: 25-26). In the headline above, *junkies* is an example of indirect metaphor. Direct metaphors, on the other hand, refer to the use of overt lexical units, which nevertheless activate cross-domain mapping. The headline “*Giving your child a smartphone is like giving them a gram of cocaine*, says top addiction expert,” published at independent.co.uk on June 7, 2017, is an example of direct metaphor use, where *like* is a signal for direct metaphor. Direct metaphors are identified as “local referent and topic shift” or “the incongruous expressions integrated within the overall referential and/or topical framework through comparison” (Steen et al., 2010: 38). Steen (2007: 10-11) argues that direct use of language is also considered metaphorical because it involves subsequent conceptual analysis to determine the meaning in the background of cross-domain mapping. Detailed protocol for direct metaphor identification is offered by Steen et al. (2010: 38), as well as an explanation on lexical signals of cross-domain mappings, and the steps in finding implicit metaphor (*ibid.*, 39-40). A lexical unit which implicitly conveys a direct or indirect meaning that may be explained by some form of cross-domain mapping is an example of implicit metaphor, having “the underlying cohesive link (grammatical and/or semantic) in the discourse which points to recoverable metaphorical material” (Steen et al., 2010: 15), as in the case of *it* in “Naturally, to embark on such a *step* is not necessarily to succeed immediately in realising *it*” (Steen et al., 2010: 15) and *should* in “If we agree that in that case women should be *embraced* by the liberty principle then so *should* children” (Herrmann, 2013: 162).

At the conceptual level, Steen (2007, 2008, 2009, 2011) retains the traditional cognitive-linguistic classification of conceptual metaphors into conventional and novel metaphors (cf. Kövecses, 2010: 35) and further expands research by linking them to the linguistic and communicative levels of the three-dimensional model of metaphor analysis. This means that the distinction is made between conventional and novel conceptual metaphors, as well as conventional and novel linguistic metaphors, i.e. metaphorical linguistic expressions. Therefore, conventional metaphors are “deeply entrenched ways of thinking about or understanding an abstract domain, while conventional metaphorical linguistic expressions are well worn, clichéd ways of talking about abstract domains” (Kövecses, 2010: 34). On the other hand, novel metaphorical linguistic expressions are those that are not evidently clichéd through frequent use and whose contextual meanings are not listed in dictionaries. These are innovative and unconventional. Thus, the expression *heroin* in the

⁵¹ In this case, *Collins*, *Macmillan*, *Cambridge*, *Oxford*, and *Merriam Webster Online Dictionaries* were consulted.

aforementioned headline above, is an example of novel linguistic metaphor – its basic meaning is “a white odourless bitter-tasting crystalline powder related to morphine: a highly addictive narcotic.” (*Collins*), while the contextual meaning of ‘digital heroin’ does not appear in dictionaries.

At the communicative level, deliberate and nondeliberate metaphors are distinguished. At this level of analysis, the IdeM protocol outlined in Krennmayr (2011) is applied in order to determine the instances of deliberate metaphor use in the corpus. While nondeliberate metaphors “stay ‘on topic’”, and “the recipient does not have to attend to the source domain of the metaphorical utterance”, deliberate metaphor “provides an alien perspective on the topic of utterance”, i.e. “introduces a new perspective on the target domain” (Reijnierse et al., 2018: 133–134). Steen (2015: 68) points out that “the addressee has to move away their attention momentarily from the target domain of the utterance or even phrase to the source domain that is evoked by the metaphor-related expression.” Direct metaphors and novel metaphors are automatically deliberate. When it comes to lexical signaling, deliberate metaphors can be signaled either with lexical signals for direct metaphor such as *like*, *as*, *as if*, *resembling*, or textual features such as quotation marks.⁵² The direct metaphor in the aforementioned headline stating that ‘giving your child a smartphone is *like* giving them a gram of cocaine’ is an example of deliberate metaphor use. Furthermore, the headline “It’s ‘*digital heroin*’: How screens turn kids into psychotic *junkies*” contains the expression ‘*digital heroin*’ signaled with quotation marks and thus used deliberately.

Corpus Analysis

The linguistic level

The corpus contains 226 metaphorical linguistic expressions, out of which 82.3% were classified as indirect metaphors, 9% were classified as direct metaphors, and 8.7% are implicit metaphors. Other studies (Steen, 2009: 185; Steen et al. 2010; Mujagić & Berberović, 2019) have also shown that cross-domain mapping is most often manifested as indirect metaphors accounting for more than 95% of all metaphors in natural discourse. Nevertheless, their use is not to be neglected, as they reveal certain features of our cognitive system and help us understand metaphor in thought. The expression *addiction* in examples (1-5) below is an example of indirect metaphor use. Its basic meaning is “An addiction to something is a very strong desire or need for it” (*Collins*), while its contextual meaning is “An addiction is the condition of taking harmful drugs and being unable to stop taking them” (*Collins*). The statistical analysis reveals that *addiction* is by far the most used expression in the corpus and given the context of the articles, digital addiction is mostly likened to drug addiction specifically:

- (1) Sexting, online bullying, *video game addiction*, obsessive checking for messages, disruptions to lessons and sleep, anti-social behaviour are becoming more common in the digital age. (5 signs your child is spending too much time online, *inspiro.org*, May 13, 2019)
- (2) Addiction always causes some kind of deterioration. Just as the liver of an alcoholic or the lungs of a smoker will deteriorate, *digital addiction* causes emotional deterioration. “The irony is [that] the more we stimulate the brain, over time it starts to shut down and we start to lose emotional feeling,” says Huddleston. (Your Child’s Brain on Digital Cocaine: With Brad Huddleston, *noahwebstereducationalfoundation.org*, September 29, 2021)

⁵² Although it is worth pointing out that “metaphor is rarely signaled in any register” (Krennmayr, 2011: 157)

- (3) One in three kids are using tablets or smartphones before they can talk. Meanwhile, the handbook of “*Internet Addiction*” by Dr. Kimberly Young states that 18 percent of college-age internet users in the US suffer from *tech addiction*. (It’s ‘digital heroin’: How screens turn kids into psychotic junkies, *nypost.com*, August 27, 2016)
- (4) “There’s really a phenomenon of *screen addiction*,” she said. “Just having that social contact available instantaneously it’s very hard for young people to resist a notification.” (Digital device overdose? Kids’ health effects of too much tech, *wgxa.tv/news*, August 20, 2016)
- (5) You just have to Google smartphone *addiction* and you’d be convinced that *it is* a thing, even though *it is* not a psychiatrically recognised disorder. (Amy Orben: ‘To talk about smartphones affecting the brain is a slippery slope’, *The Guardian*, February 1, 2020)

The effect of indirect metaphors in the cognitive system is covert – unlike direct metaphors, where the use of signals for direct language use is overt. According to Steen (2009: 182), direct metaphor can be structured as *A is B* metaphor, *A is like B* metaphor, and extended metaphor. All three types of direct metaphor are identified in the corpus. In (7) below, direct metaphor with A IS B structure is identified (i.e. gadgets = a form of digital drug):

- (6) We now know that those *iPads, smartphones and Xboxes are a form of digital drug*. (It's 'digital heroin': How screens turn kids into psychotic junkies, *nypost*, August 27, 2016)

Direct metaphors with *A is like B* structure imply the use of lexical markers that signal direct use of metaphorical language. The signals that draw the addressee’s attention to the mappings between domains are, for instance, *like*, *as*, and *as if*, while – according to Steen et al. (2010: 41) – more general lexical items like *kind of*, *sort of*, *something of* are not taken into account as it is not always clear whether these indicate metaphoricity and other aspects of discourse. Examples (7-12) are direct metaphors with *A is like/as B* structure:

- (7) *Giving your child a smartphone is like giving them a gram of cocaine*, says top addiction expert, (*independent.co.uk*, June 7, 2017)
- (8) That’s right — your kid’s brain on Minecraft *looks like a brain on drugs*. (It’s ‘digital heroin’: How screens turn kids into psychotic junkies, *nypost.com*, August 27, 2016)
- (9) Turns out that “brain imaging shows that *digital addicts’ brains look like cocaine addicts’ brains*.” How tragic is that? (Your Child’s Brain on Digital Cocaine: With Brad Huddleston, *noahwebstereducationalfoundation.org*, September 29, 2021)
- (10) Children are *falling victim to an addiction* that doctors say is *as bad as cocaine* for their minds – technology. (Tech addiction is ‘digital heroin’ for kids – turning children into screen junkies, *metro.co.uk*, January 5, 2017)
- (11) Studies have now shown that *tech addiction has the same effect on children’s minds as cocaine*. (Tech addiction is ‘digital heroin’ for kids – turning children into screen junkies, *metro.co.uk*, January 5, 2017)
- (12) “I cherish the parent meetings, because they’re the ones with the problem...and the reality is the parents are just as *addicted as the children....*” (Your Child’s Brain on Digital Cocaine: With Brad Huddleston, *noahwebstereducationalfoundation.org*, September 29, 2021)

Apart from focusing on potential markers of simile, analogy, and comparative inflection plus *than*, Steen et al. (2010: 40) also focus on lexical markers (such as *compare*, *same*, and *similar*), and complex conception markers (*regard as*, *behave as if*, etc.) as metaphor signals. Thus, the following examples have been annotated as direct metaphors as well:

- (13) The US-based rehabilitation clinic Addiction Center describes how video games *trigger* the chemical dopamine *in the same way addictive drugs can*. The World Health Organization recently included gaming *addiction* as a disorder and estimated that 3-4 percent of video gamers *struggle* with *addiction*. (We must stop children getting addicted to online gaming, *aljazeera.com*, September 19, 2021)
- (14) You keep scrolling, she says, because sometimes you see something you like, and sometimes you don't. And that differentiation — *very similar to a slot machine in Vegas* — is key. (Digital Crack Cocaine: The Science Behind TikTok's Success, *forbes.com*, January 18, 2020)

The third type of direct metaphor is what Steen (2008, 2009) calls extended metaphor – which, as it turns out – outnumbers the other two types of direct metaphor in our corpus. This only indicates how elaborate and creative the use of ADDICTION metaphor has become in the segments of real discourse. Examples (15-18) present extended metaphorical comparisons, elaborated and creatively stretched within or between paragraphs:

- (15) “Imagine a *drug addiction* crisis that I guess you saw only in the movies. *It is the same – just without the white foam coming out of their mouth*,” he said. (Digital Overdose: Bosnian Parents Struggle With Children’s Gadget Addiction, *balkaninsight.com*, November 3, 2022)
- (16) Tech *addiction* is ‘digital *heroin*’ for kids – turning children into screen *junkies*, *metro.co.uk*, January 5, 2017
- (17) Once a kid has crossed the line into true *tech addiction*, treatment can be very difficult. Indeed, I have found it easier to treat heroin and crystal meth addicts than lost-in-the-matrix video gamers or *Facebook-dependent social media addicts*. That’s right — *your kid’s brain on Minecraft looks like a brain on drugs*. (It’s ‘digital heroin’: How screens turn kids into psychotic junkies, *nypost.com*, August 27, 2016)
- (18) And she says platforms like TikTok — including Instagram, Snapchat and Facebook — have adopted the same principles that have made gambling addictive. “In psychological terms [it’s] called random reinforcement,” Albright says. “*It means sometimes you win, sometimes you lose. And that’s how these platforms are designed ... they’re exactly like a slot machine*. Well, the one thing we know is *slot machines are addictive*. We know there’s a gambling addiction, right? But we don’t often talk about how *our devices and these platforms and these apps do have these same addictive qualities baked into them*.” (Digital Crack Cocaine: The Science Behind TikTok’s Success, *forbes.com*, January 18, 2020)

Given that direct metaphors are also found in the form of “local referent and topic shift, or the incongruous expressions integrated within the overall referential and/or topical framework through comparison” (Steen et al., 2010: 38), examples (19-20) are also labelled as direct metaphors, where one witnesses the digression or shift from talking about exposing kids to gadgets to offering them illegal substances:

- (19) For kids who are addicted, parents must be bold enough to actually take away the child’s object of *addiction*. Parents cannot just limit their *addicted* child’s exposure to screens. Why? Well, as Huddleston puts it: “*I’m going to give you two lines of cocaine instead of three*.” (Your Child’s Brain on Digital Cocaine: With Brad Huddleston, *noahwebstereducationalfoundation.org*, September 29, 2021)
- (20) “I always say to people, *when you’re giving your kid a tablet or a phone, you’re really giving them a bottle of wine or a gram of coke*,” she said. (Giving your child a smartphone is like giving them a gram of cocaine, says top addiction expert, *independent.co.uk*, June 7, 2017)

When it comes to implicit metaphors, the authors searched for pronouns (*they, them, themselves, it, its*, etc.) in the electronic version of the texts and determined whether these semantically refer to the metaphorically used words that have been identified in a sentence or paragraph. In other words, the first step was to determine whether a particular functional word (e.g. the pronoun *it*) is used as a cohesive device in a text, semantically referring to a full lexical word in that segment of discourse. The second step of the analysis is to determine whether this lexical word is metaphorical. If the answer is affirmative, *it* is labelled as an implicit metaphor. Implicit metaphors (in our case the pronoun *it* in example 5) are marked as metaphorical because of the semantic connection with linguistic expressions that were previously marked as metaphorical (*addiction*, in 5). Furthermore, modal verb *can* in (13) is an example of implicit metaphor, because it refers to the metaphorical linguistic expression *trigger*. Steen et al. (2010: 26) suggest marking the expression as metaphorical in cases “when ellipsis occurs where words may be seen as missing, as in some forms of co-ordination, and when a direct or indirect meaning is conveyed by those substitutions or ellipses that may potentially be explained by some form of cross-domain mapping from a more basic meaning, referent, or topic.”

After analyzing the three types of linguistic metaphor, it is apparent that the most frequent are indirect metaphors, which shape our perception of an issue in a covert but not harmless manner. Direct metaphors, on the other hand, are overt and more striking. Implicit metaphors are a result of textual cohesion and as it turns out, are quite rare (cf. Mujagić, 2022; Mujagić & Berberović, 2019). Metaphorical linguistic expressions, i.e. linguistic metaphors reveal the existence conceptual metaphors, thus we proceed with the next level— the conceptual level of metaphor analysis.

The conceptual level

As aforementioned, conventionality refers to determining whether a metaphor is novel or conventional. The criterion of conventionality refers to both linguistic metaphors and their corresponding conceptual structures (i.e. conceptual metaphors). Unless its contextual meaning is recorded in a dictionary, a linguistic metaphor is labelled as novel; if the contextual meaning is recorded in a dictionary, the metaphor is conventional. In case of *addiction* described above, its basic and contextual meanings are listed in dictionaries – thus, the metaphorical expression is conventional. On the other hand, the expression *cocaine* in (21 and 22) is an example of novel metaphor. Its basic meaning “a powerful drug that some people take illegally for pleasure and can become addicted to” (*Oxford*) is listed in dictionaries, but there is no entry on ‘digital/ electronic cocaine’ whatsoever. The same case is with the expressions *pharmakeia*⁵³ and *heroin*, whose basic meaning is “a powerful illegal drug made from morphine, that some people take for pleasure and can become addicted to” (*Oxford*). Therefore, these three metaphorical expressions are marked as novel.

- (21) Chinese researchers call screens ‘*digital heroin*’, whilst Dr Peter Whybrow, director of neuroscience at UCLA, calls them ‘*electronic cocaine*’. (Tech addiction is ‘digital heroin’ for kids – turning children into screen junkies, *metro.co.uk*, January 5, 2017)
- (22) This addictive effect is why Dr. Peter Whybrow, director of neuroscience at UCLA, calls screens “*electronic cocaine*” and Chinese researchers call them “*digital heroin*.” In fact, Dr. Andrew Doan, the head of addiction research for the Pentagon and the US Navy — who has been researching *video game addiction* — calls video games and screen technologies “*digital pharmakeia*” (Greek for

⁵³ *Pharmakeia* originates from Greek and refers to “the use of drugs” (cf. Partridge, 2006: 4123). The combining form *pharmac-* refers to drug or drugs (cf. *Collins, Merriam Webster*).

drug). (It's 'digital heroin': How screens turn kids into psychotic junkies, *nypost.com*, August 27, 2016)

The statistical analysis revealed that conventional metaphors outnumber novel metaphors, which is not surprising because authors resort to naturalized and deeply entrenched metaphors so that recipients do not have difficulties in processing them.

The communicative level

This level of metaphor analysis implies the analysis of metaphor in communication and distinguishes deliberate and nondeliberate metaphors. According to Steen (2008: 226), "clear cases of nondeliberate metaphor include unmarked metaphorically used words that do not occur in A is B constructions and are not accompanied by related metaphorical words from the same source domain and which have a conventional figurative sense, especially one which has become the most salient and frequent of all of their senses." Metaphorically deliberate language use refers to language items being selected for a particular communicative function – for achieving a particular rhetorical effect – by evoking a change of perspective from the standpoint of another conceptual domain. Clear cases of deliberate metaphor use include direct metaphors of different types (examples 6-20), novel metaphors (21-22), and marked metaphorical expressions (the use of quotation marks, as in 16, 21, and 22). Furthermore, creative use of figurative language – elaborated and creatively stretched within or between paragraphs – in which the sender asks recipients to change perspective and intentionally look at something in terms of something else, is also considered deliberate. Moreover, this "extension may increase the degree of deliberateness" (Steen, 2008: 225). We may have examples of figurative language use where a metaphorical expression is surrounded by metaphorical expressions from the same domain, or participates in a word play, or elicits rhetorical effects such as persuasion (as in 18-20). In such cases, these are considered deliberate (cf. IdeM protocol in Krennmayr, 2011: 154-155). These instances of deliberate metaphor use in the form of extended metaphor, creative metaphor, as well as the combination of linguistic metaphorical expressions from both the same and different domains is discussed further in 'Discussion' section.

This kind of three-dimensional metaphor analysis applied on the corpus has revealed how elaborate this conceptual framework about addiction is. Since the criteria of indirectness, conventionality, and deliberateness do not exclude one another, types of metaphors may obviously be combined in various ways across the three-level analysis model.⁵⁴ The interrelatedness of deliberateness and form of metaphor reveals itself in the fact that direct metaphors (the linguistic level) are considered deliberate at the communicative level. Furthermore, indirect metaphors (the linguistic level) can be signaled with quotation marks and thus be used deliberately. In (23), the metaphorical linguistic expression *fix* is indirect metaphor signaled with quotation marks, thus deliberate:

- (23) "[And as the wall grows] over time it becomes harder to feel... And we don't like to be cut off from those feel-good feelings, and so we do more and more of that activity... And the brain keeps *fighting us back* by building that *barrier* so we just have to do the activity longer, harder, and more intensely

⁵⁴ There is a variety of combinations of figurative language use, e.g. metaphors may be: 1. indirect, conventional, and nondeliberate; 2. indirect, novel, and deliberate; 3. direct, conventional, and deliberate; and 4. direct, novel, and deliberate. The interplay of the three levels of analysis is described in Krennmayr (2011) and Mujagić & Berberović (2019).

to saturate *the wall to spill over* so that we end up getting our ‘fix.’” (Your Child’s Brain on Digital Cocaine: With Brad Huddleston, *noahwebstereducationalfoundation.org*, September 29, 2021)

The interrelatedness of deliberateness and conventionality reveals itself in the fact that novel metaphors (the conceptual level) are automatically deliberate at the communicative level. It is important to point out that conventional metaphors may also be deliberate, as Steen (2008: 225) believes that “formally inconspicuous conventional metaphors of different construction types also may be used extremely deliberately.” This means that both conventional and novel metaphors may have the same specific purpose of changing the recipient’s perspective. This specific function may be carried out by exploiting (more or less) clichéd⁵⁵ or innovative concepts and linguistic expressions.⁵⁶ However, conventional metaphorical linguistic expressions may or may not be deliberate, while novel metaphorical linguistic expressions are always deliberate (Krennmayr, 2011: 160). As Steen (2008: 222-223) points out, “conventional metaphor is not identical with nondeliberate metaphor”, and can be used “very deliberately”, e.g. in cases when “signaled by word play and other added rhetorical devices.” If, for instance, a conventional metaphorical expression is surrounded by metaphorical expressions from the same domain in close proximity within one segment of discourse it is marked as deliberate as it obviously encourages the recipient to see one concept in terms of another. All this diversity and interrelatedness is not surprising given that deliberate metaphor may be applied for different purposes in different types of discourse. In section that follows, the rhetorical effects of deliberate metaphors in the analyzed segments of real discourse are discussed.

Discussion

The statistical analysis reveals that DIGITAL MEDIA USE IS ADDICTION metaphor dominates articles discussing children’s digital activity. Those that are going through *full blown addiction* need *extreme digital detox*, so the opening of the so-called digital de-addiction centers indicates the seriousness of situation, as we (our children included) are *drugging ourselves*:

- (24) Once a person crosses over the line *into full-blown addiction* — drug, digital or otherwise — they need to *detox* before any other kind of therapy can have any chance of being effective. With tech, that means a full *digital detox* — no computers, no smartphones, no tablets. The extreme *digital detox* even eliminates television. (It’s ‘digital heroin’: How screens turn kids into psychotic junkies, *nypost.com*, August 27, 2016)
- (25) According to ADGP Manoj Abraham, the plan is to start a *digital de-addiction* centre each in four police ranges by April. Numerous cases of children *addicted to* gaming causing financial losses to parents are being reported in recent years. (Social media overdose: Digital de-addiction centres for kids soon, *newindianexpress.com*, March 18, 2022)
- (26) To answer that question, I spoke to USC professor and author Dr. Julie Albright about the science behind modern social media and entertainment on my Tech First Draft podcast. And what she told me suggests that basically, we are *drugging ourselves*. (Digital Crack Cocaine: The Science Behind TikTok’s Success, *forbes.com*, January 18, 2020)

⁵⁵ Cf. Kövecses (2010: 35) for the description of conventionality in the form of a graded scale, where there are two opposite extremes on the scale of conventional–novel and different levels of conventionality.

⁵⁶ NB that Steen (2007, 2008, 2009, 2011) links the criterion of conventionality to both the linguistic and communicative levels of the three-dimensional model of metaphor analysis.

Therefore, it is no surprise that children – who are not mature enough to develop resilience against *electronic heroin/cocaine* – often *relapse* because *withdrawal* is difficult:

- (27) For most members of the twenty-first century, the primary reason for this emotional response (and the source of so-called boredom) is digital *withdrawal*. *Digital addiction* has molded young brains through hyperstimulation to the point that they're becoming emotionally numb. (Your Child's Brain on Digital Cocaine: With Brad Huddleston, noahwebstereducationalfoundation.org, September 29, 2021)
- (28) He has learned to use a desktop computer in a healthier way, and has gotten some sense of balance back in his life: He's playing on a baseball team and has several close friends in his middle school. But his mother is still vigilant and remains a positive and proactive force with his tech usage because, *as with any addiction, relapse can sneak up in moments of weakness*. (It's 'digital heroin': How screens turn kids into psychotic junkies, nypost.com, August 27, 2016)

Although science warns that increased digital activity causes the same brain damage like gambling, drinking, and drug addictions, it is disturbing for parents to read the statements (even in metaphorical terms) where their children are described as *junkies hooked* on something lethal and *overdosing* on something *toxic*:

- (29) Other Silicon Valley parents say there are ways to make some limited screen time slightly less *toxic*. (A Dark Consensus About Screens and Kids Begins to Emerge in Silicon Valley, nytimes.com, October 26, 2018)
- (30) Some digital health experts call screens "*electronic cocaine*." And our kids are *overdosing*. If you have children or work them, you've surely it. (How I Got My Students to Stop Staring at Screens, time.com, August 19, 2022)

The rhetorical function of ADDICTION metaphor is persuasion: authors resort to this deliberate metaphor to change the recipients' perspective on the issue, and to persuade readers to think about increased digital activity the way they see it – something as serious and destructive as drug addiction. The ADDICTION metaphor is successfully packed in an intertwined conceptual framework and extensively exploited in several ways: 1) as dominant in the number of metaphorical expressions, which are the manifestations of ADDICTION domain; 2) through the use of direct, thus deliberate metaphors; 3) through the use of extended metaphors, creatively stretching within a paragraph – and thus deliberate; 4) combining metaphorical linguistic expressions from the same domain, which also makes it deliberate.

Apart from this varied combination of different metaphorical linguistic expressions from ADDICTION domain, combinations with metaphorical expressions from the domains of WAR, GAMBLE, DANGEROUS WATERS, SPORTS, EPIDEMIC, FOOD, RELATIONSHIPS, and BODY have been identified. The statistical analysis revealed that expressions from ADDICTION domain are mostly combined with metaphorical linguistic expressions from WAR domain. In example (13), the metaphorical expression *addiction* is combined with *struggle* and *trigger* from WAR domain. The basic meaning of *trigger* is "to fire or set in motion by or as by pulling a trigger" (*Collins*), and the contextual meaning is "if something triggers an event or situation, it causes it to begin to happen or exist" (*Collins*). Furthermore, *can* is identified as an example of implicit metaphor as it is semantically related to indirect metaphor *trigger*. In example (13) expressions *fighting back* and *barriers* is combined with deliberately used '*fix*'. In examples below, metaphorical linguistic expressions *cocaine*, *drug*, and *addictive* from ADDICTION domain are combined with *invading* and *war*:

- (31) *Cocaine*. It strikes fear in most hearts. Unfortunately, *there is a ‘drug’ equally to be feared that is invading our homes, our workplaces and is with us almost everywhere we go. You might even be reading this now with its aid. That new drug is technology.* (Hooked on ‘digital cocaine’? *sundaytimes.lk*, December 09, 2018)
- (32) Chinese authorities have branded their latest campaign as *a war against “electronic drugs”* due to the concerns about the *addictive* nature of online gaming platforms. (We must stop children getting addicted to online gaming, *aljazeera.com*, September 19, 2021).

In example (23), for instance, WAR metaphor is combined with both ADDICTION metaphor and DANGEROUS WATERS metaphor. The use of DANGEROUS WATERS metaphor is associated with parents' coping with the issue of increased digital activity, as they try to *navigate uncharted water, stem the tech tide, or curb digital obsession*:

- (33) With our ever-increasing dependence on technology it's not easy. Following are a few guardrails that helped me in the classroom and will help families *stem the tech tide*. (How I Got My Students to Stop Staring at Screens, *time.com*, August 19, 2022)
- (34) Prof Russell Viner, President of Royal College of Paediatrics and Child Health, said that parents were *navigating uncharted water* when it came to technology.“One of the most critical things for parents to consider is whether screen time is having a detrimental impact on other activities like school, relationships or other interests.” (One in four children 'have problematic smartphone use', *The Guardian*, November 28, 2019)
- (35) As a new school year starts, parents are *struggling* to find ways to *curb* their kids' digital obsession. (Digital Overdose: Bosnian Parents Struggle With Children’s Gadget Addiction, *balkaninsight.com*, November 3, 2022)

ADDICTION metaphor is also combined with gambling (18), epidemic (36), and sports (37) metaphor. The paragraphs below contain varied types of metaphors – example (18), which is direct, extended, and thus deliberate; example (36), which is indirect, but signaled with quotation marks and thus deliberate; (37) is indirect, conventional,⁵⁷ and nondeliberate metaphor.

- (36) In Bosnia, like in much of the rest of the world, the COVID-19 pandemic brought in an era of online schooling and work, which in turn has spawned another problem— a *digital “epidemic”* among children. (Digital Overdose: Bosnian Parents Struggle With Children’s Gadget Addiction, *balkaninsight.com*, November 3, 2022)
- (37) In today’s digital world, screen saturation is an increasing concern for parents and teachers. The American Heart Association urges parents to limit screen time for children to a maximum of two hours per day. And yet, a large-scale study by Common Sense Media found that children 8- to 12-year-olds average close to five hours a day on screens and teens about seven and a half hours daily, not including use of screens at school. It’s a mind-boggling statistic. When COVID-19 swept the country and kids parked in front of their computers at home, these numbers soared. Screen time went on *steroids*. (How I Got My Students to Stop Staring at Screens, *time.com*, August 19, 2022)

This combination of various metaphorical linguistic expressions (and metaphors of different types) belonging to different conceptual metaphors strengthens authors' persuasive claims in a well-

⁵⁷ Both meanings listed in dictionaries, thus not novel. The basic meaning of *steroid* is “a chemical that is produced in the body or made as a drug. Steroids can act as hormones or be used for treating conditions such as swelling, or, illegally, by athletes to improve their performance” (*Macmillan*). The contextual meaning of *on steroids* is “greatly increased in size or power beyond what is normal or usual” (*Merriam-Webster*).

construed metaphorical framework. The exaggerated use of technology is a serious issue, as the authors of these articles try to point out:

- (38) The biggest problem with ‘*digital cocaine*’ as he calls it is that people are unwilling to admit that they even have a problem. “*Digital Addiction* is a very real addiction. We used to laugh it off and use the word addiction in a metaphorical sense but thanks to neuroscience we now know that it is a literal, chemical addiction analogous to two drugs – cocaine and heroin and in the case of pornography, when you see the brain scans, it’s as if the two have been mixed. So the brain scans for example, of a heroin addict and a porn addict when compared side by side – the porn addict is worse – it’s more difficult to treat a porn addict than a heroin addict,” explains Brad. (Hooked on ‘*digital cocaine*? *sundaytimes.lk*, December 09, 2018)

It is, indeed, a serious issue that children’s attention span is greatly affected due to excessive use of technology. According to examples below, children’s attention is *stolen* (FOCUS/ ATTENTION AS VALUABLE COMMODITY metaphor) as they are *wired* or *plugged in* most of the time (PERSON AS MACHINE metaphor).

- (39) A different study of office workers found they only focus on average for three minutes. This isn’t happening because we all individually became weak-willed. Your focus didn’t collapse. It was *stolen*. (Your attention didn’t collapse. It was stolen, *The Guardian*, January 2, 2022)
- (40) Worse, we see children who become bored, apathetic, uninteresting and uninterested when not *plugged in*. (It’s ‘*digital heroin*’: How screens turn kids into psychotic junkies, *nypost.com*, August 27, 2016)
- (41) I announced triumphantly to everyone – I am going to be there for three months, with no smartphone, and no computer that can get online. I’m done. I’m tired of being *wired*. (Your attention didn’t collapse. It was stolen, *The Guardian*, January 2, 2022)

Nevertheless, the choice of negatively connoted metaphorical linguistic expressions can and should be avoided. One could opt for metaphors that can serve as alternatives to the existing, dominant framework in which digital media use is likened to drug and gambling addictions – and where dealing with these addictions is discussed in terms of war (*battle*, *fight*, *victim*, *havoc*, etc.). In that case, one would have a sanitized discourse (cf. Santa Ana, 2002: 362) – in which, for instance, *glued to* would be used instead of *addicted to*, *increased digital activity* instead of *digital addiction*, etc.

- (42) “When I see someone *glued to* their phone, all I feel is compassion,” he says, adding that he hopes that by spreading his message on digital *addiction*, he will be able to help as many people as he can. (Hooked on ‘*digital cocaine*? *sundaytimes.lk*, December 09, 2018)

Alternative metaphors which can be used to talk about increased digital activity without creating and/or reinforcing negative associations in parents are FOOD (*baked* in 18, *smorgasbord* in 44, *calories* in 45), RELATIONSHIP (*break up* in 43), and BODY (*backbone* in 46, *spine* in 47) metaphors:

- (43) He said that our attention is being deeply altered by huge invasive forces in wider society. Saying the solution was to just adjust your own habits – to pledge to *break up* with your phone, say – was just “pushing it back on to the individual” he said, when “it’s really the environmental changes that will really make the difference”. (Your attention didn’t collapse. It was stolen, *The Guardian*, January 2, 2022)

- (44) But is this daily *digital smorgasbord* actually impacting our ability to focus — or that of our children? (Are we really in an attention crisis, or are digital technologies getting a bad rap? *abc.net.au*, August 18, 2019)
- (45) Fourth, one effective way to get kids thinking about screen time is to have them track their screen time minutes for a week. Do it again the following week and challenge them to see if they can lower the total. *Screen minutes are like calories*. It's always a surprise when you start adding them up. (How I Got My Students to Stop Staring at Screens, *time.com*, August 19, 2022)
- (46) Technology's evolution has resulted in the post-digital age, in which "digital technology will be a vast, quiet element forming the *seamless backbone of life*. The internet will be a background utility, noticeable only in its absence." (Your Child's Brain on Digital Cocaine: With Brad Huddleston, *noahwebstereducationalfoundation.org*, September 29, 2021)
- (47) *Technology is the spine of their everyday life*. And interestingly enough, "their brains, literally through neuroplasticity, are wired very, very differently from ours—from our generation." says Huddleston. (Your Child's Brain on Digital Cocaine: With Brad Huddleston, *noahwebstereducationalfoundation.org*, September 29, 2021)

The set of these alternative metaphors is creative and elaborate enough to be exploited in multiple ways to fit our rhetorical goals.⁵⁸ Most importantly, these would contradict the established conceptual framework containing negatively connoted dominant metaphors. In our case, ADDICTION and WAR metaphors dominate⁵⁹ the corpus, thus constantly repeating negative associations, so the use of alternative metaphors is highly recommended.

Conclusion

Although other conceptual metaphors co-exist in the discourse on children's digital media use, the deliberate metaphor DIGITAL MEDIA USE IS ADDICTION is far more dominant and creates the so-called stimulating context within a text for a metaphor to thrive and become a powerful tool for achieving rhetorical goals (notably persuasion). The ADDICTION metaphor is successfully packed in an intertwined conceptual framework and extensively exploited in several ways: as novel metaphor; as direct metaphor, often extended and creatively stretched within a paragraph; as dominant in the number of metaphorical expressions – which are then deliberate due to persistent repetition throughout texts. The statistical analysis reveals that 84.5% of metaphors are conventional, which indicates that authors resort to well-known and frequently used expressions so that recipients do not have difficulties in processing them. Although most of the expressions from ADDICTION domain are conventional, this does not make them any less deliberate.

⁵⁸ Examples (43), (44), and (47) are conventional; example (45) is novel; example (44) is indirect metaphor, whereas examples (45) and (47) are direct, thus deliberate.

⁵⁹ Corpus studies of metaphor (Santa Ana, 1999, 2002; Catalano, 2016; Catalano et al., 2016; Gatti & Catalano, 2014) resulted in the classification of source domains into dominant, secondary, and occasional – depending on frequency of their appearance in discourse. Dominant metaphors are the most frequent and prevail in the discourse, and their strength lies precisely in the repetition of certain implicit associations (cf. Santa Ana, 2002: 68-76). On the other hand, secondary metaphors appear much less often and with less diversity of linguistic expressions (*ibid.*). Occasional metaphors appear only once or a few times, and it is evident that they "do not seem to be associated with other more commonly used semantic source domains" (*ibid.*, 71). Secondary metaphors are DIGITAL MEDIA USE AS DANGEROUS WATERS and DIGITAL MEDIA USE AS FOOD. Occasional metaphors are DIGITAL MEDIA USE AS RELATIONSHIP, DIGITAL MEDIA USE AS BODY, DIGITAL MEDIA USE AS GAMBLING, DIGITAL MEDIA USE AS SPORTS, DIGITAL MEDIA USE AS EPIDEMIC, CHILDREN'S DEVELOPMENT AS SOIL CULTIVATION, FOCUS/ATTENTION AS VALUABLE COMMODITY, FOCUS/ATTENTION AS PATIENT, and PEOPLE AS MACHINES. This ratio about what dominates within a certain metaphorical framework reveals the worldview advocated in a certain discourse.

Furthermore, those metaphors that are identified as novel are from ADDICTION domain only. As far as the use of deliberate metaphor in this type of discourse is concerned, the findings in our paper show that deliberate metaphor comes in distinct linguistic forms at the linguistic level and conceptual structures at the conceptual level. 71% of metaphors are used deliberately, with the communicative function of changing the recipients' perspective on the issue. Given that alternative metaphors – which would oppose the established negatively connotated metaphors – were identified in the corpus, their more frequent use is strongly recommended.

Appendix

Table 1: An overview of conceptual domains and metaphorical linguistic expressions in the corpus

<u>Target domain</u>	<u>Source domain</u>	Metaphorical linguistic expressions	total
DIGITAL	ADDICTION	<i>addiction</i> (51), <i>de-addiction</i> (8), <i>addicted</i> (15), <i>cocaine</i> (27), <i>coke</i> (1), <i>addictive</i> (5), <i>addicts</i> (3), <i>detox</i> (9), <i>relapse</i> (1), <i>toxic</i> (1), <i>hooked</i> (6), <i>heroin</i> (4), <i>junkies</i> (2), 'fix' (1), <i>pharmakeia</i> (1), <i>drugging</i> (1), <i>drugs</i> (1), <i>overdose</i> (3), <i>overdosing</i> (1), <i>withdrawal</i> (3)	144
MEDIA USE		<i>fight back</i> (2), <i>pushing</i> (1), <i>push out</i> (1), <i>caught up</i> (1), <i>battle</i> (2), <i>struggling</i> (2), <i>havoc</i> (1), <i>pushing back</i> (1), <i>invasion</i> (1), <i>take on</i> (2), <i>forces</i> (1), <i>invade</i> (1), <i>exploded</i> (1), <i>war</i> (1), <i>struggle</i> (2), <i>blowing up</i> (1); <i>barrier</i> (3), <i>wall</i> (2), <i>penetrating</i> (2), <i>invading</i> (1), <i>taking over</i> (1), <i>taken over</i> (1), <i>victim</i> (1), <i>trigger</i> (1)	33
WAR		<i>dived in</i> (1), <i>resurfaced</i> (1), <i>spill over</i> (1), <i>stem</i> (1), <i>tide</i> (1), <i>unchartered water</i> (1), <i>curb</i> (1)	7
DANGEROUS		<i>a slot machine in Vegas</i> (1), <i>a slot machine</i> (2)	3
WATERS		<i>steroids</i> (1)	1
GAMBLING		<i>epidemic</i> (2)	2
SPORTS		<i>smorgasbord</i> (1), <i>consumption</i> (1), <i>peeling</i> (1), <i>calories</i> (1), <i>baked</i> (1)	5
EPIDEMIC		<i>break up</i> (1)	1
FOOD		<i>spine of their everyday life</i> (1), <i>seamless backbone of life</i> (1)	2
RELATIONSHIP		<i>soil</i> (1), <i>cultivated</i> (2)	3
BODY		<i>stealing</i> (1), <i>stolen</i> (1)	2
CHILDREN'S	SOIL		
DEVELOPMENT	CULTIVATION		
FOCUS/	VALUABLE		
ATTENTION	COMMODITY		
PATIENT	PATIENT	<i>heal</i> (1)	1
PERSON	MACHINE	<i>plugged in</i> (2), <i>wired</i> (1)	3
			207

Table 2: An overview of metaphor types according to the three-dimensional model

Linguistic level	Examples from the corpus	total
Indirect metaphors	<i>addiction</i> (47), <i>cocaine</i> (23), <i>addicted</i> (14), <i>heroin</i> (4), <i>junkies</i> (1), <i>addictive</i> (4), <i>de-addiction</i> (8), <i>detox</i> (9), <i>relapse</i> (1), <i>toxic</i> (1), <i>hooked</i> (1), <i>fix</i> (1), <i>pharmakeia</i> (1), <i>drugging</i> (1), <i>overdose</i> (3), <i>overdosing</i> (3), <i>withdrawal</i> (3), <i>battle</i> (1), <i>fight back</i> (2), <i>pushing</i> (1), <i>push out</i> (1), <i>caught up</i> (1), <i>struggling</i> (2), <i>havoc</i> (1), <i>pushing back</i> (1), <i>invasion</i> (1),	181

	<i>take on</i> (2), <i>forces</i> (1), <i>invade</i> (1), <i>exploded</i> (1), <i>war</i> (1), <i>struggle</i> (2), <i>blowing up</i> (1), <i>barrier</i> (3), <i>wall</i> (2), <i>penetrating</i> (2), <i>invading</i> (1), <i>taking over</i> (1), <i>taken over</i> (1), <i>trigger</i> (1), <i>dived in</i> (1), <i>resurfaced</i> (1), <i>spill over</i> (1), <i>stem</i> (1), <i>tide</i> (1), <i>unchartered water</i> (1), <i>curb</i> (1), <i>steroids</i> (1), <i>epidemic</i> (2), <i>smorgasbord</i> (1), <i>consumption</i> (1), <i>peeling</i> (1), <i>baked</i> (1), <i>break up</i> (1), <i>backbone</i> (1), <i>soil</i> (1), <i>cultivated</i> (2), <i>stealing</i> (1), <i>stolen</i> (1), <i>heal</i> (1), <i>plugged in</i> (2), <i>wired</i> (1)	
Direct metaphors	A IS B structure (1x): We now know that those <i>iPads</i> , <i>smartphones</i> and <i>Xboxes</i> are a form of digital drug.	20
	A IS LIKE/AS B (11x): Turns out that “brain imaging shows that digital addicts’ brains look like cocaine addicts’ brains; <i>Giving your child a smartphone is like giving them a gram of cocaine</i> (2x); Children are falling victim to an addiction that doctors say is as bad as cocaine for their minds – technology; Studies have now shown that <i>tech addiction has the same effect on children’s minds as cocaine</i> ; Susan removed John’s tablet, but <i>recovery was an uphill battle with many bumps and setbacks along the way</i> ; Technology is the spine of their everyday life; your kid’s brain on Minecraft looks like a brain on drugs; Addiction Center describes how video games trigger the chemical dopamine in the same way addictive drugs can; And that differentiation — very similar to a slot machine in Vegas — is key; ...and the reality is the parents are just as addicted as the children;	
	Extended metaphor (8x): Imagine a <i>drug addiction</i> crisis that I guess you saw only in the movies. <i>It is the same – just without the white foam coming out of their mouth</i> ; <i>Tech addiction is ‘digital heroin’ for kids – turning children into screen junkies</i> ; lost-in-the-matrix video gamers or Facebook-dependent social media addicts; <i>your kid’s brain on Minecraft looks like a brain on drugs</i> ; when you’re giving your kid a tablet or a phone, you’re really giving them a bottle of wine or a gram of coke; <i>I’m going to give you two lines of cocaine instead of three</i> ; <i>Screen minutes are like calories</i> . <i>It’s always a surprise when you start adding them up</i> ; <i>the same principles that have made gambling addictive</i> . “In psychological terms [it’s] called random reinforcement”... And that’s how these platforms are designed... <i>they’re exactly like a slot machine</i> . Well, the one thing we know is <i>slot machines are addictive</i> .	
Implicit metaphors	<i>it</i> (=addiction) (8), <i>was</i> (exploded), <i>can</i> (trigger), <i>it</i> (detox) (6), <i>its</i> (drug), <i>it</i> (digital cocaine), <i>do</i> (addiction taking over)	19
Conceptual level Conventional metaphors	<i>addiction</i> (51), <i>de-addiction</i> (8), <i>addicted</i> (15), <i>coke</i> (1), <i>addictive</i> (5), <i>addicts</i> (3), <i>detox</i> (9), <i>relapse</i> (1), <i>toxic</i> (1), <i>hooked</i> (6), <i>junkies</i> (2), ‘fix’ (1), <i>drugging</i> (1), <i>drugs</i> (1), <i>overdose</i> (3), <i>overdosing</i> (1), <i>withdrawal</i> (3), <i>fight back</i> (2), <i>pushing</i> (1), <i>push out</i> (1), <i>caught up</i> (1), <i>battle</i> (2), <i>struggling</i> (2), <i>havoc</i> (1), <i>pushing back</i> (1), <i>invasion</i> (1), <i>take on</i> (2), <i>forces</i> (1), <i>invade</i> (1), <i>exploded</i> (1), <i>war</i> (1), <i>struggle</i> (2), <i>blowing up</i> (1), <i>barrier</i> (3), <i>wall</i> (2), <i>penetrating</i> (2), <i>invading</i> (1), <i>taking over</i> (1), <i>taken over</i> (1), <i>victim</i> (1), <i>trigger</i> (1), <i>dived in</i> (1), <i>resurfaced</i> (1), <i>spill over</i> (1), <i>stem</i> (1), <i>tide</i> (1), <i>unchartered water</i> (1), <i>curb</i> (1), <i>a slot machine in Vegas</i> (1), <i>a slot machine</i> (2), <i>steroids</i> (1), <i>epidemic</i> (2), <i>smorgasbord</i> (1), <i>consumption</i> (1), <i>peeling</i> (1), <i>calories</i> (1), <i>baked</i> (1), <i>break up</i> (1), <i>spine</i> (1), <i>backbone</i> (1), <i>soil</i> (1), <i>cultivated</i> (2), <i>stealing</i> (1), <i>heal</i> (1), <i>plugged in</i> (2), <i>stolen</i> (1), <i>wired</i> (1)	175

Novel metaphors	“electronic cocaine” (27), “digital heroin” (4), “digital pharmakeia” (1)	32
Communicative level		
Deliberate metaphors	1) all direct metaphors listed above; 2) all novel metaphors listed above; 3) metaphorical expressions signaled with quotation marks: “electronic drugs”, “fix”; 4) all expressions from ADDICTION domain (these are made deliberate through constant repetition);	147
Nondeliberate metaphors		60

Bibliography

- Catalano, T. (2016). *Talking about global migration: implications for language teaching*. New York: Multilingual Matters.
- Catalano, T., & Fox, J., & Vandeyar, S. (2016). Being “in a limbo”: perceptions of immigration, identity and adaptation of immigrant students in South Africa and the United States. *Journal of Language Identity & Education* 15(3), 137-150.
- Gatti, L., & Catalano, T. (2014). The business of learning to teach: a critical metaphor analysis of one teacher’s journey. *Faculty Publications: Department of Teaching, Learning and Teacher Education*, 183. <http://digitalcommons.unl.edu/teachlearnfacpub/183>
- Herrmann, B. (2013). *Metaphor in academic discourse. Linguistic forms, conceptual structures, communicative functions and cognitive representations*. Utrecht: LOT.
- Kövecses, Z. (2010). *Metaphor: A Practical Introduction*. New York: Oxford University Press.
- Krennmayr, T. (2011). *Metaphor in Newspaper*. Utrecht: LOT Dissertation Series.
- Lakoff, G., & Espenson, J., & Schwartz, A. (1991). *Master Metaphor List. Second Draft Copy*. Berkeley: University of California.
- Mujagić, M., & Berberović, S. (2019). The IMMIGRANTS ARE ANIMALS metaphor as a deliberate metaphor in British and Bosnian-Herzegovinian media. *ExELL*, 7(1), 22-51.
- Mujagić, M. (2022). *Metaforički jezički izrazi u britanskoj i bosanskohercegovačkoj medijskom diskursu o izbjegličkoj krizi*. Bihać: Pedagoški fakultet.
- Partridge, E. (2006). *Origins. A Short Etymological Dictionary of Modern English*. London/New York: Routledge.
- Reijnierse, G., & Burgers, C., & Krennmayr, T., & Steen, G. (2018). DMIP: A Method for Identifying Potentially Deliberate Metaphor in Language Use. *Corpus Pragmatics*, 2: 129-147.
- Santa Ana, O. (1999). ‘Like an animal I was treated’: Anti-immigrant metaphor in US public discourse. *Discourse and Society*, 10(2), 191-224.
- Santa Ana, O. (2002). *Brown Tide Rising*. Austin: University of Texas Press.
- Steen, G., & Dorst, A., & Herrmann, B., & Kaal, A., & Krennmayr, T., & Pasma, T. (2010). *A Method for Linguistic Metaphor Identification*. Amsterdam: John Benjamin Publishing Company.
- Steen, G. (2007). Finding Metaphor in Discourse: Pragglejaz and Beyond. *Cultura, lenguaje y representación*, 5, 9-26.
- Steen, G. (2008). The paradox of metaphor: Why We Need a Three-Dimensional Model of Metaphor. *Metaphor and Symbol*, 23, 213-241.
- Steen, G. (2009). Deliberate metaphor affords conscious metaphorical cognition. *Cognitive Semiotics*, 5(1-2), 179-197.
- Steen, G. (2011). From three dimensions to five steps: The value of deliberate metaphor. *Metaphorik.de* 21. 83-110.

Steen, G. (2015). Developing, testing and interpreting Deliberate Metaphor Theory. *Journal of Pragmatics*, 90, 67-72.

Dictionaries:

Cambridge Dictionary Online: <https://dictionary.cambridge.org/>

Collins Cobuild Online Dictionary: <http://www.collinsdictionary.com/dictionary/english>

Longman Dictionary of Contemporary English Online: <http://www.ldoceonline.com/>

MacMillan Online Dictionary: <http://www.macmillandictionary.com/>

Oxford Dictionary Online: <https://en.oxforddictionaries.com/>

METAFORIČKO OKVIRANJE DJEĆJE OVISNOSTI O DIGITALNIM MEDIJIMA U MEDIJSKOM DISKURSU

Sažetak

Rad istražuje pojavu 'prekomjerne upotrebe tehnologije od strane djece' analizirajući tekstove o ovisnosti djece o digitalnim medijima, kao i tekstove na temu koncentracije i pažnje za koje se smatra da su pogodenii ovom prekomjernom upotrebom tehnologije. Dajući svoje mišljenje o temi, autori članaka pribjegavaju korištenju konceptualne metafore – kognitivnog mehanizma gdje se apstraktniji koncept (ciljna domena) poima pomoću drugog, konkretnijeg pojma (izvorne domene). Autentični jezički podaci otkrivaju upotrebu metaforičkih jezičkih izraza kao što su 'digitalno predoziranje' i 'elektronički kokain', koji šalju uznemirujući poruku da se djeca 'predoziraju'. Ova detaljna analiza ima za cilj istražiti: (a) vrste metafora (prema trodimenzionalnom modelu analize metafora; cf. Steen et. al., 2010.) u člancima o ovisnosti djece o medijima; (b) da li je metafora OVISNOSTI dominantna i namjerna; (c) koja je njena komunikativna funkcija s aspekta autora, ali i njen retorički efekat na recipijente (osobito roditelje); (d) implikacije njene kombinacije s drugim metaforama unutar rečenice ili odlomka; (e) mogućnost upotrebe alternativnih metafora.

Ključne riječi: digitalna ovisnost, konceptualna metafora, namjerna metafora, identifikacija metafore