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<https://orcid.org/0000-0003-0108-5029>EDUCATIONAL INFORMATION OVERLOAD IN THE
CONTEXT OF STUDENTS' COGNITIVE ABILITIES*

Introduction: The modern educational landscape is saturated with excessive amounts of information, which contributes to the phenomenon of educational information overload. An individual's susceptibility to this phenomenon may be influenced by various personal factors, including the level of cognitive abilities.

Research Aim: The aim of this study was to determine the relationship between students' cognitive abilities and their tendency to experience educational information overload in three dimensions: cognitive, affective, and decision-making.

Method: The study involved 637 participants from different educational stages (primary school, secondary school, and university). The Raven's Progressive Matrices Test was used to measure cognitive abilities and a proprietary Educational Information Overload Scale (SEPI) was applied to assess overload intensity in the three dimensions. Data were analyzed using the Chi-square test, Cramér's V coefficient, and Pearson's C correlation.

Results: Statistical analysis results indicate a significant relationship between cognitive ability levels and susceptibility to information overload ($p < 0.01$). People with higher cognitive abilities were less likely to experience high levels of emotional and decision-making overload, but this relationship was not revealed in the cognitive dimension. Cognitive abilities can act as a filter, enabling effective selection and processing of information.

Conclusions: Above-average cognitive abilities may serve as a protective buffer against the negative effects of information excess in educational environments. High intellectual efficiency can support effective functioning in conditions of "infomass," and there may also be a tendency to reduce the risk of educational information overload syndrome.

Keywords: information overload, cognitive abilities, education, student, learner

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INTRODUCTION

In the era of ubiquitous access to information, education faces a phenomenon that can significantly affect learning effectiveness, namely information overload. This term refers to a situation in which the amount of available data exceeds an individual's capacity for effective processing (Eppler & Mengis, 2004). Examining this phenomenon is particularly important in the context of individual differences, such as students' cognitive abilities, as these abilities determine the effectiveness of information processing and integration. The aim of this paper is to analyze how cognitive abilities influence students' susceptibility to information overload and to identify mechanisms that may counteract this phenomenon.

Educational information overload (Adekoya & Akune, 2023; Zieliński, 2021; 2024) occurs when students are required to absorb excessive amounts of information within a short period of time without adequate cognitive tools for selection and analysis (Bawden & Robinson, 2009). This phenomenon is especially pronounced in digital environments, where educational content is fragmented, incoherent, and often unfiltered. Research by Chen et al. (2011) demonstrated that students who rely on online resources experience information overload significantly more often than those learning in traditional instructional settings.

According to Cognitive Load Theory (CLT; see Lopez, 2024; Ouwehand et al., 2025), cognitive load can be divided into three types: load inherent to the task itself (intrinsic load), load resulting from the mode of information presentation (extraneous load), and beneficial load associated with the construction of knowledge structures (germane load; see Sweller et al., 2011). Information overload disrupts the balance among these types of load, leading to the depletion of working memory resources and, consequently, to a decline in learning quality. Cognitive abilities, defined as an individual's general capacities for information processing, logical reasoning, working memory, and processing speed, play a crucial role in resilience to information overload (Ackerman, 1996). Students with higher levels of fluid intelligence and greater working memory capacity are better able to select relevant information, organize learning material, and detect redundancy (Alloway & Alloway, 2010).

Studies conducted by Kalyuga (2009) indicate that students with higher levels of prior knowledge and stronger cognitive abilities are less susceptible to cognitive overload, even under conditions of high material complexity. In other words, cognitive abilities function as a buffer, increasing resistance to informational chaos. Research by Paas et al. (2003) further emphasizes that individual differences in cognitive styles (e.g., analytical versus holistic) and metacognitive awareness can influence the ability to manage information effectively. Students who are capable of planning, monitoring, and evaluating their own learning processes experience information overload less frequently, regardless of their general cognitive ability level.

While students with high cognitive abilities are generally capable of effectively managing large volumes of information, those with lower cognitive abilities are more vulnerable to the negative consequences of overload, such as disorientation, frustration, and even learned helplessness (Misra & Stokols, 2012). Moreover, in those digital environments that lack a clear informational structure, these students are more likely to rely on superficial cognitive strategies, such as copying and unreflective processing of content (Head & Eisenberg, 2010). At the same time, excess of information may also lead to cognitive stagnation among high-ability students if they are not adequately intellectually stimulated. When educational systems fail to provide tools for deeper analysis and synthesis, these students may experience the so-called passive overload – a state in which information is processed mechanically, without meaningful cognitive engagement (Bawden & Robinson, 2009). In light of these findings, adapting educational environments to students' diverse cognitive abilities becomes essential. Instructional materials should be designed in accordance with CLT principles, including reduction of extraneous information, use of multimodal presentation (e.g., combining text and visuals), sequential introduction of content, and adaptation of difficulty levels (Sweller et al., 2011). Teachers should also foster students' metacognitive and information competencies, such as the ability to select relevant content, formulate learning goals, monitor progress, and evaluate the credibility of sources (Zimmerman, 2002). Particularly in digital education, it is crucial to equip students with strategies for reducing informational “noise” and strengthening their capacity to function under conditions of cognitive overload. From a pedagogical practice perspective, preventive measures are equally important, including diagnosing students' cognitive abilities, individualizing instruction, and creating learning environments that support concentration and effective information selection.

Educational information overload is a phenomenon that significantly affects the learning process. Its impact is strongly moderated by students' individual cognitive abilities. Understanding these relationships enables more informed design of educational environments and adaptation of instructional strategies to students' actual information-processing capacities. Future research should further explore this issue, particularly through neurocognitive methods and analyses of the role of technology in education.

RESEARCH PROBLEM AND AIM

Information overload is a phenomenon that is widely prevalent in the contemporary world. Although this problem has been extensively discussed in the literature on management and business, it has been far less frequently analyzed in the context of transformations occurring within the educational process (Chlewiński et al., 1997; Frania, 2012; Ledzińska, 2002; Ludwig, 1972; Nowak-Dziemianowicz, 2014; Zieliński,

2021). For this reason, it appears justified to undertake an analysis of the correlations between this syndrome and select independent variables that may be associated with the behaviors and attitudes of children and adolescents in the school environment.

The aim of the present study was to examine the significance of the level of cognitive abilities of participants in situations in which educational information overload manifests itself. In the search for effective strategies to minimize the negative impact of information excess on learners, it proved crucial to formulate and address the main research problem, defined as follows: What is the relationship between the level of cognitive abilities and an individual's susceptibility to educational information overload?

MATERIALS AND METHODS

A total of 637 participants took part in the study. The sample included primary and secondary school students from Kraków, Tarnów, and the surrounding areas, as well as students enrolled at four higher education institutions in the Małopolska Voivodeship (two located in Kraków, one in Nowy Sącz, and one in Tarnów). The study was conducted in 2024. All participants were informed that participation was voluntary and that they could withdraw from the study at any stage of the diagnostic process. Minor participants took part in the study with informed consent of their parents or legal guardians.

Respondents were divided into three groups according to their educational stage and age (see Table 1 below). The data presented in Table 1 indicate that in each age group, participants of a specific age predominated: in primary schools, these were mainly 15-year-olds (12.1%); in secondary schools, 17-year-olds (16.0%); and among university students, individuals aged 23 years (29.4%).

Table 1
Age and educational stages of respondents

Age	Elementary school	High school	College	Total
	n (%)	n (%)	n (%)	n (%)
14	63 (9.9)	0 (0.0)	0 (0.0)	63 (9.9)
15	77 (12.1)	0 (0.0)	0 (0.0)	77 (12.1)
17	0 (0.0)	102 (16.0)	0 (0.0)	102 (16.0)
18	0 (0.0)	93 (14.6)	0 (0.0)	93 (14.6)
20	0 (0.0)	0 (0.0)	115 (18.0)	115 (18.0)
23	0 (0.0)	0 (0.0)	187 (29.4)	187 (29.4)
Total	140 (22.0)	195 (30.6)	302 (47.4)	637 (100.0)

Note. Author's own study.

The respondents were gender-diverse (see Table 2). The largest proportion of participants were female (55.6%), with the most numerous age group among them being female university students (26.1%). Students also constituted the largest group of respondents among male respondents (21.3%). The smallest groups were primary school girls (12.7%) and primary school boys (9.3%).

Table 2

Gender of respondents (F – female; M – male)

Gender	Elementary school	High school	College	Total
	n (%)	n (%)	n (%)	n (%)
F	81 (12.7)	0 (0.0)	0 (0.0)	81 (12.7)
M	59 (9.3)	0 (0.0)	0 (0.0)	59 (9.3)
F	0 (0.0)	107 (16.8)	0 (0.0)	107 (16.8)
M	0 (0.0)	88 (13.8)	0 (0.0)	88 (13.8)
F	0 (0.0)	0 (0.0)	166 (26.1)	166 (26.1)
M	0 (0.0)	0 (0.0)	136 (21.3)	136 (21.3)
Total	140 (22.0)	195 (30.6)	302 (47.4)	637 (100.0)

Note. Author's own study.

To measure the level of information overload among students, the study author developed a tool – the Educational Information Overload Scale (EIOS; see Zieliński, 2021). The scale was created based on the empirical experiences of Williamson and Eaker (2012). Content validity was ensured through the use of paired statements formulated in an opposite manner. The scale's reliability in the cognitive, emotional, and decision-making domains was assessed using Cronbach's alpha ($\alpha = 0.840$). This scale made it possible to determine the extent to which participants experience the effects of information excess in an educational context.

The scale, which does not measure a clinical construct, allowed only for interpretative assumptions and for classifying respondents into three levels of overload:

- low level,
- moderate level,
- high level.

The questionnaire consisted of 43 statements, with responses provided on a five-point Likert scale with verbal descriptions, facilitating participants' selection and analysis. The items were divided into four domains:

- cognitive (statements 1–11),
- emotional (statements 12–27),
- decision-making (statements 28–43), and
- reliability control (paired control statements 2 & 41, 12 & 42, 30 & 43).

This structure allowed for a more precise assessment of the participants' situation.

The second key research instrument was the Raven's Standard Progressive Matrices (SPM) (Jaworowska & Szustrowa, 1991) – a widely used nonverbal test designed to evaluate logical reasoning and perceptual abilities. Based on this test, participants can be classified according to their cognitive ability level as:

- intellectually gifted,
- well above average,
- average,
- below average, and
- individuals with intellectual deficits.

For the purposes of this study, only three groups of respondents were distinguished (to create more representative group sizes), categorized according to cognitive ability:

- above average,
- average,
- below average.

The test includes five series of tasks (A, B, C, D, E), each comprising 12 items arranged in ascending order of difficulty.

DATA ANALYSIS

To examine the relationship between the level of educational information overload and participants' cognitive ability, a chi-square (χ^2) test of independence was employed. This analysis allowed for the assessment of whether a statistically significant association exists between the dependent variable (information overload level: low, moderate, high) and the independent variable (cognitive ability level: above average, average, below average).

For each analyzed relationship, the following statistics were calculated:

- the χ^2 statistic (Chi-square value),
- degrees of freedom (df),
- the significance level (p), indicating the probability of a Type I error ($\alpha = 0.05$),
- Cramér's V , which measures strength of the association between categorical variables ($0 \leq V \leq 1$), and
- Pearson's contingency coefficient (C), as an additional measure of correlation strength for tables larger than 2×2 .

These procedures enabled the determination of whether, and to what extent, students' cognitive ability levels differentiate their susceptibility to educational information overload.

RESULTS

Table 3 below presents the relationship between students' and university students' cognitive ability levels and their tendency to experience educational information overload in the cognitive domain, considering three levels of overload: low, moderate, and high. Participants with below-average cognitive abilities ($n = 113$) were most frequently classified in the low (35.4%) and moderate (30.1%) overload groups; however, as many as 34.5% of these participants experienced high-level overload.

Table 3

Cognitive dimension of tendency to experience educational information overload among participants according to cognitive ability levels across different information overload groups (low, moderate, high)

Cognitive dimension Level of cognitive ability	Level of susceptibility to educational information overload			
	Low n (%)	Moderate n (%)	High n (%)	Total n (%)
Below average	40 (35.4)	34 (30.1)	39 (34.5)	113 (17.7)
Average	116 (33.4)	163 (47.0)	68 (19.6)	347 (54.5)
Above average	41 (23.2)	57 (32.2)	79 (44.6)	177 (27.8)
Total	197 (30.9)	254 (39.9)	186 (29.2)	637(100.0)
<i>Chi2</i>			41.60	
<i>p</i>			0.001	
<i>Cramer's V</i>			0.18	
<i>Pearson's C</i>			0.25	
<i>df</i>			4	

Note. Author's own study.

Participants with average cognitive abilities ($n = 347$) constituted the largest group in the study. They most frequently reported moderate levels of overload (47.0%), while 33.4% experienced low overload and 19.6% experienced high overload. Participants with above-average cognitive abilities ($n = 177$) exhibited a more varied distribution: 23.2% were classified in the low overload group, 32.2% in the moderate overload group, and 44.6% in the high overload group.

The chi-square test value ($\chi^2 = 41.6$, $df = 4$) indicates a statistically significant association between cognitive ability level and susceptibility to educational information overload in the cognitive dimension ($p = 0.001$; $\alpha < 0.05$). The strength of this association, measured by Cramér's $V = 0.18$, falls within the range of a weak effect size. Although the association is statistically significant, it is relatively weak. The Pearson contingency coefficient ($C = 0.25$) further confirms existence of a weak relationship.

While cognitive ability level shows a significant relationship with susceptibility to cognitive information overload, there is no clear linear trend (e.g., higher cognitive abilities do not necessarily correspond to lower overload). Interestingly, participants with above-average cognitive abilities were relatively often classified in the high overload group (44.6%), which may suggest that greater cognitive capacity does not always protect against information overload – possibly due to greater exposure to content or more intensive information processing.

Table 4

Affective dimension of tendency to experience educational information overload among participants according to cognitive ability levels across different information overload groups (low, moderate, high)

Affective dimension	Level of susceptibility to educational information overload			
	Low	Moderate	High	Total
Level of cognitive ability	n (%)	n (%)	n (%)	n (%)
Below average	33 (18.2)	86 (47.5)	62 (43.3)	181 (28.5)
Average	37 (13.3)	166 (59.7)	75 (27.0)	278 (43.6)
Above average	43 (24.2)	106 (59.5)	29 (16.3)	178 (27.9)
Total	113 (17.7)	358 (56.2)	166 (26.1)	637 (100.0)
<i>Chi2</i>			18.83	
<i>p</i>			0.001	
<i>Cramer's V</i>			0.12	
<i>Pearson's C</i>			0.17	
<i>df</i>			4	

Note. Author's own study.

Table 4 above presents the relationship between cognitive ability levels and the degree of susceptibility to educational information overload in the affective (emotional) dimension. Participants with below-average cognitive abilities ($n = 181$) were most frequently classified in the moderate affective overload group (47.5%), suggesting that these individuals particularly often experienced negative emotional states associated with information excess (e.g., frustration, anxiety, fatigue).

Participants with average cognitive abilities ($n = 278$) were also most commonly found in the moderate overload group (59.7%). High-level overload was experienced by 27.0%, and low-level overload by 13.3% of respondents. Participants with above-average cognitive abilities ($n = 178$) were relatively less frequently classified in the high overload group (16.3%). Among them, 24.2% fell into the low overload group, while 59.5% were in the moderate overload group.

The chi-square test ($\chi^2 = 18.8$; $df = 4$) revealed a statistically significant association between cognitive ability level and susceptibility to educational information

overload in the affective dimension ($p = 0.001$). The Cramér's V coefficient of 0.12 indicates a weak but significant relationship between the variables. The Pearson contingency coefficient ($C = 0.17$) further confirms the existence of a weak correlation.

These results suggest that individuals with below-average cognitive abilities are more vulnerable to emotional overload in educational contexts. This is indicated by the relatively high proportion of participants from this group classified in the high overload category (43.3%). In contrast, participants with above-average cognitive abilities exhibited significantly lower levels of affective overload – they were much less frequently classified in the high overload group compared to those with below-average abilities (16.3% vs. 43.3%).

It can therefore be inferred that higher cognitive abilities may serve as a protective factor in terms of emotional responses to information excess – likely due to better emotion regulation, content organization, and psychological resilience.

Table 5

Decision-making dimension of tendency to experience educational information overload among participants according to cognitive ability levels across different information overload groups (low, moderate, high)

Decision-making dimension	Level of susceptibility to educational information overload			
	Low	Moderate	High	Total
Level of cognitive ability	n (%)	n (%)	n (%)	n (%)
Below average	24 (21.2)	38 (33.6)	51 (45.2)	113 (17.7)
Average	108 (30.2)	139 (39.0)	110 (30.8)	357 (56.1)
Above average	65 (39.0)	68 (40.7)	34 (20.3)	167 (26.2)
Total	197 (30.9)	245 (38.5)	195 (30.6)	637 (100.0)
<i>Chi2</i>			21.30	
<i>p</i>			0.001	
<i>Cramer's V</i>			0.12	
<i>Pearson's C</i>			0.17	
<i>df</i>			4	

Note. Author's own study.

Table 5 above presents the relationship between cognitive ability levels and susceptibility to educational information overload in the decision-making dimension, which refers to difficulties in decision-making, action planning, and information selection under conditions of excessive educational content.

Participants with below-average cognitive abilities ($n = 113$) were most frequently classified in the high decision-making overload group (45.2%). This indicates that nearly half of these students experienced considerable difficulties in

decision-making due to information overload. Smaller proportions were observed in the moderate (33.6%) and low (21.2%) overload groups.

Participants with average cognitive abilities ($n = 357$) were most often found in the moderate overload group (39.0%), while 30.2% were in the low overload group and 30.8% in the high overload group. Participants with above-average cognitive abilities ($n = 167$) predominated in the low (39.0%) and moderate (40.7%) overload groups, with only 20.3% experiencing high decision-making overload – the lowest proportion across all cognitive ability groups.

The chi-square test ($\chi^2 = 21.30$; $df = 4$) indicates a statistically significant association between cognitive ability level and the degree of decision-making overload ($p < 0.001$). The Cramér's V coefficient of 0.1290 indicates a weak but significant relationship, similar to the cognitive and affective dimensions. The Pearson contingency coefficient ($C = 0.17$) also confirms the existence of a low-strength association.

These results suggest that individuals with lower cognitive abilities are more susceptible to decision-making overload, which may manifest itself in form of difficulties in making educational decisions, managing information, and planning learning activities. Conversely, individuals with higher cognitive abilities were more frequently classified in the low overload group (39.0%) and rarely experienced high levels of overload. This pattern may reflect better cognitive organization, higher information-processing competence, and more effective filtering of cognitive stimuli.

An analysis across the three dimensions (cognitive, affective, and decision-making) demonstrates a consistent relationship: higher cognitive ability levels are associated with lower susceptibility to educational information overload in the affective and decision-making dimensions. However, this trend was not observed in the cognitive dimension. Although the statistical strength of these associations is low (Cramér's $V \sim 0.12$ – 0.18), they are statistically significant and may have practical implications for the design and organization of educational environments.

DISCUSSION

Contemporary education operates in conditions of unprecedented access to information, which on one hand creates immense opportunities, but on the other poses significant challenges for pupils, students, and teachers. One of the most frequently cited problems is educational information overload, defined as a state in which an individual receives more information than they can process and effectively use in the learning process (Eppler & Mengis, 2004). In this discussion, based on the available research findings, the key aspects of this phenomenon, its cognitive and emotional consequences, and implications for designing effective educational environments are presented.

Research indicates that information overload in education most often occurs in digital contexts, where learners have access to a vast number of knowledge sources, both formal and informal. According to Chen et al. (2011), students who use digital learning environments frequently report difficulties in selecting relevant information and integrating dispersed content. This overload may lead to disorientation, reduced motivation, and decreased learning effectiveness. Meta-analytic findings by Sweller et al. (2011), based on cognitive load theory, confirm that an excessive number of cognitive stimuli – particularly in the absence of appropriate instructional support – leads to cognitive overload, which reduces the efficiency of encoding information into long-term memory.

Importantly, information overload is not merely a quantitative problem but also a qualitative one. As Bawden and Robinson (2009) note, the issue is not only the sheer amount of data, but also its contradictions, low quality, or lack of context. In educational settings, this can result in misconceptions, reliance on shallow processing of information, and difficulties in making cognitive decisions. In this context, students' information literacy competencies – the ability to search, evaluate, and critically analyze content – become crucial. Head and Eisenberg (2010) show that even among higher education students, the level of these competencies is often low, which further exacerbates the problem of overload.

This phenomenon also has emotional consequences. Information overload is associated with stress, anxiety, and academic burnout (Misra & Stokols, 2012). Over time, it may lead to avoidance of cognitive activity, procrastination, and reluctance to seek knowledge independently. These effects are particularly evident among high school students and first-year university students, who often have not yet developed effective self-regulated learning strategies (Zimmerman, 2002).

In light of these findings, mitigating educational information overload requires multi-level interventions. On one hand, it is necessary to design learning environments based on the principles of cognitive load theory – with clearly defined goals, a limited number of stimuli, hierarchical content structures, and opportunities for gradual knowledge deepening (Paas et al., 2003). On the other hand, it is crucial to develop students' metacognitive and information literacy skills through instruction in strategies for selection, synthesis, and reflection on content. Psychoeducational interventions that support resilience to information stress as well as attention and time management skills may also be beneficial. The author conducted a similar empirical exploration in 2020, analyzing the correlation between cognitive abilities and tendencies toward educational information overload among 588 students and pupils in the Podkarpackie Voivodeship (Zieliński, 2021). The patterns of association were found to be similar to those observed in the present Małopolska study.

In conclusion, information overload represents a significant challenge for contemporary education, requiring a comprehensive pedagogical and psychoeduca-

tional approach. Further empirical research is necessary – particularly in the context of modern educational technologies and changing cognitive habits of younger generations – addressing questions of self-regulatory competence, information selection strategies, digital literacy, and psychological resilience. It is also important to note that the present study included participants at various educational stages (primary school, secondary school, university). This educational diversity may influence the nature of overload experienced across different age groups, offering another avenue for future exploration.

CONCLUSIONS

It cannot be unequivocally stated that a high level of intellectual ability serves as a definitive protective factor against the negative consequences of excessive information inflow. It appears that proficiency in perceiving, analyzing, selecting, and utilizing information contributes to greater resilience to information overload, particularly in educational contexts.

The results of the present study do not unambiguously indicate that individuals with higher cognitive abilities experience fewer symptoms of educational information overload. Notably, participants with above-average cognitive abilities were sometimes observed to experience high levels of information overload. Ideally, these abilities would function as a kind of “cognitive filter” that enables effective differentiation between relevant and irrelevant information, thereby reducing exposure to unnecessary stimuli.

An analysis of individual overload dimensions (cognitive, affective, and decision-making) partially suggests that individuals with above-average cognitive abilities may be better at internal information processing and more effective in decision-making processes, although this advantage is less apparent in the cognitive dimension of overload. Occurrence of a statistically significant relationship between cognitive ability level and susceptibility to educational information overload across all three dimensions may indicate that certain individuals are more prone to developing educational information overload syndrome.

The values of Cramér’s V indicate a weak but statistically significant association between the variables, suggesting that while cognitive ability is not the sole determinant. However, it can be an important factor influencing the tendency to experience information overload. From a practical educational perspective, these findings suggest the necessity of differentiated support for students, particularly those with lower cognitive potential, through adaptation of instructional methods, pacing of content delivery, and instruction in effective information management strategies.

LIMITATIONS

Despite obtaining statistically significant results and observing trends regarding the relationship between cognitive ability level and susceptibility to educational information overload, several important limitations should be noted, which may affect the interpretation and generalization of the findings:

- 1) limited sample scope (regionality) – The study included only pupils and students from the Małopolska Voivodeship (in 2020, respondents were from the Podkarpackie Voivodeship), which may limit the ability to generalize the results to the national population. The social, educational, and cultural structure of the region could have influenced participants' perception of information overload and their cognitive ability levels;
- 2) non-random sampling – Respondents were purposively selected based on the independent variable (cognitive ability level), which increases internal validity but limits the ability to fully generalize the findings;
- 3) author-developed measurement instrument (SEPI) – The Scale of Educational Information Overload (SEPI) was specifically developed for this study, requiring further validation in a broader population and comparative contexts;
- 4) influence of confounding variables – The study did not control for such factors as digital literacy, learning styles, stress levels, social support, home environment, or organization of the instructional process, all of which could significantly affect both perceived information overload and cognitive effectiveness of students;
- 5) cognitive ability assessment limited to a single tool – The use of the Raven's Standard Progressive Matrices allows for a general evaluation of cognitive ability but does not capture such aspects as working memory, attention, cognitive flexibility, or emotional intelligence, which could also influence the level of information overload.

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EDUKACYJNE PRZECIĄŻENIE INFORMACYJNE W KONTEKŚCIE ZDOLNOŚCI POZNAWCZYCH UCZNIĄ

Wprowadzenie: Współczesna rzeczywistość edukacyjna obfituje w nadmiar informacji, co sprzyja występowaniu zjawiska edukacyjnego przeciążenia informacyjnego. Na poziom podatności jednostki na to zjawisko wpływać mogą różne czynniki indywidualne, w tym poziom zdolności poznawczych.

Cel badań: Celem niniejszego badania było określenie związku między poziomem zdolności poznawczych uczniów i studentów a ich skłonnością do doświadczania edukacyjnego przeciążenia informacyjnego w trzech wymiarach: poznawczym, afektywnym i decyzyjnym.

Metoda badań: W badaniu wzięło udział 637 osób z różnych etapów edukacyjnych (szkoła podstawowa, szkoła średnia, szkoła wyższa). Zastosowano Test Matryc Ravena do pomiaru zdolności poznawczych oraz autorską Skalę Edukacyjnego Przeciążenia Informacyjnego (SEPI), umożliwiającą ocenę nasilenia przeciążenia w trzech wymiarach. Dane analizowano przy użyciu testu Chi², współczynnika V Cramera oraz korelacji Pearsona C.

Wyniki: Wyniki analizy statystycznej wskazują na istotny związek pomiędzy poziomami zdolności poznawczych a skłonnością do przeciążenia informacyjnego ($p < 0,01$). Osoby o wyższych zdolnościach poznawczych rzadziej doświadczały wysokiego poziomu przeciążenia w wymiarze emocjonalnym i decyzyjnym, lecz ta zależność nie została ujawniona w wymiarze poznawczym. Zdolności poznawcze mogą pełnić funkcję filtra, umożliwiającą skuteczną selekcję i przetwarzanie informacji.

Wnioski: Ponadprzeciętne zdolności poznawcze mogą pełnić rolę bufora ochronnego przed negatywnym wpływem nadmiaru informacji w środowisku edukacyjnym. Wysoka sprawność intelektualna może wspierać efektywne funkcjonowanie w warunkach „infomasy”, a także może pojawiać się tendencję do ograniczania ryzyka wystąpienia syndromu edukacyjnego przeciążenia informacyjnego.

Słowa kluczowe: przeciążenie informacyjne, zdolności poznawcze, edukacja, uczeń, student