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Kihívások a modern oktatásban és nyelvtanításban

Az Eötvös József Főiskola tudományos folyóirata

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TARTALOM

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Szabó Áron szobrászművész alkotása az Eötvös József Főiskola udvarán.

ELŐSZÓ

Hagyományainkhoz híven a *Danubius Noster* jelen száma a magyar és a nemzetközi tudományosság eredményei előtt tiszteleg azzal, hogy a legújabb oktatáskutatásokban és a tantermi gyakorlatban gyökerező tanulmányok gazdag válogatását mutatja be.

A 2024/4-es szám elsősorban két nagy tudományos esemény, a *11. Nemzetközi Tantárgy-pedagógiai Konferencia* és a Magyar Tudományos Akadémia *Magyar Tudomány Ünnepe* című rendezvényeiről gyűjti össze a korábbi előadók tudományos igénnyel azóta megírt, lektorált tanulmányait. Mindkét esemény a modern oktatás és nyelvoktatás változó helyzetére reflektált. Ez a tematikus lapszám az e konferenciákon elhangzott szempontok széles spektrumát gyűjti egybe, többdimenziós képet nyújtva az aktuális oktatási kihívásokról és innovációkról. A kötetben szereplő tanulmányok a témák széles skáláját ölelik fel, elméleti meglátásokat és empirikus kutatásokat egyaránt figyelembe véve. Nyitásként Tea Horvatić *The Use of Artificial Intelligence in English Language Instruction – Possibilities and Challenges* (*A mesterséges intelligencia használata az angol nyelvoktatásban – lehetőségek és kihívások*) című írása a mesterséges intelligencia hatását vizsgálja a tanítási gyakorlatra és a tanulók eredményére.

A kötetben több tanulmány is tárgyalja a kétnyelvűség és a többnyelvű oktatás hatását. Többek között a magyar mint első nyelv elsajátításának szisztematikus támogatásával *A vertikális átmenet esete a horvát oktatási rendszerben* (*The Case of Vertical Transition in the Croatian Education System*) és *The Impact of Hungarian on the Grammatical Competence of Students in Croatian-Hungarian Bilingual Schools (A magyar nyelv hatása a horvát-magyar kétnyelvű iskolák tanulóinak nyelvtani kompetenciájára)* című tanulmányok értékes betekintést nyújtanak a nyelvközi hatásokba és a nyelvpolitikába. *A szókincsfejlesztési lehetőségek és a diákok által érzékelt hasznosság értékelése TED Talks használatával egy elsőéves nyelvi készségfejlesztő kurzuson* (*AssessingVocabulary Development Possibilities and Students' Perceived Usefulness Using TED Talks in a First-Year Language Skills Development Course*) című Simon Krisztián írás bemutatja, hogy az autentikus anyagok hogyan támogathatják a nyelvi készségeket a felsőoktatásban. Rene Banja Čipanj ésnMorana Plavac szerzőpáros *Frazémák a játék funkciójában – a fordítás és a kétnyelvüség tükrében* (*Phrases in the Function of Play – in the Light of Translation and Bilingualism*) című tanulmányában a szóösszetételek beszélt és írott kommunikációban betöltött szerepét vizsgálja, valamint a fordíthatóság kérdését gyermekirodalmi alkotásokban.

A tanulói autonómia és az inkluzív oktatás is hangsúlyt kap e lapszámban. *A fiatal tanulók és az önállóság támogatása a nyelvtanulásban* (*Young Learners and Autonomy Support in Language Learning)* című írás a tanulók nyelvtanulási útjukon való megerősítésére reflektál. *A digitális oktatási tartalmak jelentősége a fogyatékossággal élő tanulókkal való munkában* (*The Significance of Digital Educational Contents in Working with Students with Disabilities from the Teacher's Perspective*) pedig a tanár szemszögéből emeli ki az adaptív technológiák és források fontosságát az inkluzív osztálytermekben. A kezdő pedagógusok kihívásaival foglalkozik a *Kezdő nyelvtanárok tapasztalatai és kihívásai a*

tanítás első éveiben (*Novice Language Teachers' Experiences and Challenges in Their First Years of Teaching*), míg Vladimir Legac szövege (*Differences in Fear of English Grammar Between Roma and Non-Roma Children in Primary Schools in Međimurje*) a međimurje-i általános iskolákban tanuló roma és nem roma gyerekek angol nyelvtantól való félelmének különbségei az osztálytermi tapasztalatok eltérő kulturális és érzelmi dimenzióira világítanak rá.

A kora gyermekkori és matematikai neveléssel kapcsolatos tanulmányok tovább gazdagítják a lapszámot: *A matematikatanulás motivációs dimenziói az alsó tagozatos általános iskolában* (*The Motivational Dimensions of Mathematics Learning in Lower Primary School*) illetve a *Médiaműveltség óvodásoknak* (*Media Literacy for Preschoolers: Engaging Workshops and Parental Involvement*) pedig azt elemzi, hogy a motiváció hogyan alakítja a tanulmányi előrehaladást. Eközben a *A konkrét és vizuális ábrázolásokat használó szerepjátékok lehetőségei a függvény fogalmának tanításában* (*The Potential of Roleplays Using Concrete and Visual Representations in Teaching the Notion of Function*) az absztrakt matematikai fogalmak tanításában alkalmazott innovatív stratégiákat vizsgálja. Zalay Szabolcs az Egyetemes pedagógiai index (UPI) fogalmának és módszertanának bemutatásában egy újszerű elméleti keretet javasol a pedagógiai gyakorlatok értékelésére (*The Universal Pedagogical Index – UPI – Introduction of Concept and Methodology*). Végezetül a *Kihívások a kortárs oktatásban* (*Challenges in modern education*) című Damijela Ljubac Mec és Vesna Zlatarević, szerzők horvát nyelvű cikke a modern osztálytermek rendszerszintű és pedagógiai problémáinak általános áttekintését adja.

A kötet célja, hogy ne csak a tudományos diskurzushoz, hanem a pedagógusok szakmai fejlődéséhez is hozzájáruljon. A nézőpontok sokfélesége és a benne szereplő tanulmányok tudományos alapossága tükrözi közös elkötelezettségünket a minőségi oktatás fejlesztése iránt egy gyorsan változó világban. Reméljük, hogy ez a szám további párbeszédre, kutatásra és pedagógiai reflexióra ösztönzi majd olvasóinkat.

Szőcs Krisztina

FOREWORD

In line with our tradition, this issue of *Danubius Noster* honours the achievements of Hungarian and international scholarship by presenting a rich selection of studies rooted in the latest educational research and classroom practice.

The 2024/4 issue gathers contributions primarily from two major academic events: the 11th International Subject-Pedagogy Conference and the Hungarian Academy of Sciences' Celebration of Hungarian Science. Both events reflected on the evolving landscape of modern education and language teaching. This thematic volume brings together peer-reviewed scientific work presented at previous events offering broad spectrum of perspectives from these conferences, offering a multidimensional look at current educational challenges and innovations.

The included studies cover a diverse range of topics, reflecting on both theoretical insights and empirical research. The article *The Use of Artificial Intelligence in English Language Instruction – Possibilities and Challenges* by Tea Horvatić, which explores the impact of AI on teaching practices and learner outcomes.

Several studies in this volume examine the influence of bilingualism and multilingual education. *Systematic Support for the Acquisition of Hungarian as a First Language: The Case of Vertical Transition in the Croatian Education System* and *The Impact of Hungarian on the Grammatical Competence of Students in Croatian-Hungarian Bilingual Schools* offer valuable insights into cross-linguistic influences and language policy. *Assessing Vocabulary Development Possibilities and Students' Perceived Usefulness Using TED Talks in a First-Year Language Skills Development Course* by Krisztián Simon demonstrates how authentic materials can support language skills in tertiary education. In their study titled *Phrases in the Function of Play – in the Light of Translation and Bilingualism*, authors Rene Banja Čipanj and Morana Plavac examine the role of compound expressions in spoken and written communication, as well as the issue of translatability in children's literature.

Learner autonomy and inclusive education are also emphasized in this issue. *Young Learners and Autonomy Support in Language Learning* reflects on empowering young students in their language learning journeys. *The Significance of Digital Educational Contents in Working with Students with Disabilities from the Teacher's Perspective* highlights the importance of adaptive technologies and resources in inclusive classrooms. The challenges of novice educators are addressed in *Novice Language Teachers' Experiences and Challenges in Their First Years of Teaching*, while *Differences in Fear of English Grammar Between Roma and Non-Roma Children in Primary Schools in Međimurje* sheds light on cultural and emotional dimensions of classroom experiences.

Studies in early childhood and mathematics education enrich the volume further: *Media Literacy for Preschoolers: Engaging Workshops and Parental Involvement* examines how media literacy can begin in early years, and *The Motivational Dimensions of Mathematics Learning in Lower Primary School* analyzes how motivation shapes academic progress. Meanwhile, *The Potential of*

Roleplays Using Concrete and Visual Representations in Teaching the Notion of Function explores innovative strategies in teaching abstract mathematical concepts. Finally, *Introduction of the Concept and Methodology of the Universal Pedagogical Index (UPI)* by Szabolcs Zalay proposes a novel theoretical framework for evaluating pedagogical practices. Finally, the Croatian-language article *Challenges in Contemporary Education* by authors Ljubac Mec, Damijela and Zlatarević, Vesna provides a general overview of the systemic and pedagogical issues in modern classrooms.

This volume aims to contribute not only to academic discourse but also to the professional development of educators. The diversity of perspectives and the scientific rigor of the included studies reflect our shared commitment to advancing quality education in a rapidly changing world. We hope this issue will inspire further dialogue, research, and pedagogical reflection among our readers.

Krisztina Szőcs

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Horvatić, Tea

UPORABA UMJETNE INTELIGENCIJE U NASTAVI ENGLESKOG JEZIKA – MOGUĆNOSTI I IZAZOVI

Uvod

U 21. stoljeću u nastavi stranoga pa tako i engleskoga jezika bavimo se komunikacijskim pristupom, modernim metodama rada i aktivno upotrebljavamo tehnologiju u nastavi, kako za poučavanje, tako i za učenje. Sve neizostavnija jest i upotreba umjetne inteligencije (u nastavku – UI) (engl. *artificial intelligence – AI*) od strane učenika, studenata i nastavnika, stoga je cilj ovoga rada bio istražiti na koje načine se ona rabi u nastavi engleskoga jezika, koji alati su najpopularniji među ispitanicima te koje su mogućnosti i eventualni izazovi u uporabi iste.

Sam pojam umjetne inteligencije nastao je 1956. godine kada ga je John McCarthy[1] prvi puta upotrijebio kao organizator Dartmouth konferencije koja se danas smatra mjestom rođenja UI. Ipak, model umjetnih neurona predstavljen je 1943. godine,[2] a 1950. Alan Turing[3] je objavio članak u kojem je predstavljen Turingov test kojemu je cilj bio dokazati može li stroj pokazivati inteligentno ponašanje jednako ili bez razlike na čovječje. Od tada su krenula mnogobrojna otkrića i uspjesi u kreiranju programa prirodnog procesiranja jezika poput ELIZA programa[4] na MIT koji je simulirao razgovore koristeći spajanje uzoraka i metodu zamjene. Sveučilište Stanford 1974. razvilo je MYCIN sustav[5] koji je bio jedan od prvih za dijagnostiku bolesti, a tijekom 1980.-ih sve se više ulaže u treniranje umjetnih neuronskih mreža tako da 1997. IBM-ovo računalo Deep Blue pobjeđuje svjetskog šampiona u šahu Garryja Kasparova,[6] dok njihovo računalo Watson 2011. pobjeđuje dvojicu prijašnjih prvaka u igri Jeopardy![7] Nesumnjivo, inteligencija ovih strojeva raste i postiže rezultate na nadljudskim razinama.

Generativna umjetna inteligencija (GenUI) je tehnologija UI koja automatski generira sadržaj kao odgovor na upite napisane u konverzacijskim sučeljima na prirodnom jeziku, proizvodeći novi sadržaj u različitim formatima: tekstovi napisani prirodnim jezikom, slike (npr. fotografije, digitalne slike i

[1] MCCARTHY, John et al.: *A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence*. Dartmouth College, 1955.
[2] MCCULLOCH, Warren-PITTS, Walter: *A Logical Calculus of the Ideas Immanent in Nervous Activity,* Bulletin of Mathematical Biophysics, 1943/5. 115–133.
[3] TURING, Alan: *Computing Machinery and Intelligence*, Mind, 1950/59. (236). 433–460.
[4] WEIZENBAUM, Joseph: *ELIZA – a computer program for the study of natural language communication between man and machine*. Communications of the ACM, 1966/9. 36–45.
[5] SHORTLIFFE, Edward Hance: *Computer-Based Medical Consultations: MYCIN*. Elsevier, Amsterdam, 1976. 44–47.
[6] CAMPBELL, Murray-HOANE JR., A. Joseph-HSU, Feng-hsiung: *Deep Blue*. Artificial Intelligence, 2002/1-2. 57–83.
[7] FERRUCCI, David et al.: *Building Watson: An overview of the DeepQA project*. AI Magazine, 2010/3. 59–79.

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animacije), videozapisi, glazba i softverski kod.[8] GenUI se obučava pomoću podataka prikupljenih s web stranica, razgovora na društvenim mrežama i drugih online medija, a svoj sadržaj generira statističkom analizom distribucije riječi, piksela ili drugih elemenata u podacima koji su obrađeni te identificiranjem i ponavljanjem uobičajenih obrazaca.[9]

Od 30. studenog 2022. godine sve prisutniji u obrazovanju jest ChatGPT, veliki jezični model koji može generirati tekstove poput ljudi na temelju zadanih naredbi, odgovarati na pitanja i obavljati različite zadatke prirodnog procesiranja jezika.[10] U samo godinu dana raste broj kompanija UI diljem svijeta i sve smo bliže dobu opće umjetne inteligencije gdje će agenti UI moći rješavati kompliciranije zadatke autonomno pomoću različitih alata UI.[11] To znači da ćemo moći dogovarati sastanke, odgovarati na poruke e-pošte i analizirati podatke uz pomoć (ro)bota koji će sve te zadatke odrađivati kao da je čovjek koji koristi računalo.

Pogledamo li razvoj tehnologije općenito, od industrijske revolucije do izuma prve električne žarulje prošlo je 120 godina, od toga otkrića do slijetanja na Mjesec prošlo je 90 godina, od prvih koraka na Mjesecu do otkrića interneta prošle su 22 godine, a napredak u svijetu računala još je brži. Prvo računalo zauzimalo je cijele prostorije i težilo nekoliko tona, a danas većina ljudi u modernom svijetu ima računala s pristupom internetu i alatima UI u svom džepu u obliku mobilnih uređaja.

Novi trendovi jednako su prisutni u obrazovanju pa tako raste i broj alata UI koji su od velike pomoći nastavnicima i učenicima. U nastavi i za izradu projekata, sve više nastavnika i učenika koristi *Canva,*[12] alat za izradu slika i prezentacija, koji ima ugrađen UI alat *DALL-E* koji generira slike prema zadanoj tekstualnoj naredbi. Što je tekst detaljnije opisan, to je slika koju generira bliža onoj ideji koju nastavnik ili učenik želi prikazati. Drugi primjer su generirani audiozapisi na temelju unesenog teksta u alatu *Canva* ili pak *Natural Readers*[13] – gdje korisnik može odabrati muški ili ženski glas, ton glasa, čak i akcent kojim će tekst biti pročitan naglas. Treći primjer su *Magic School*[14] alati koji pomažu nastavnicima u različitim zadacima, od pisanja e-pošte, kreiranja nastavnih listića, kvizova, testova sve do generiranja rubrika za ocjenjivanje, a sve to na bilo kojem jeziku.

Obzirom na rapidno napredovanje u tehnologiji, nužno je istražiti stavove nastavnika, studenata i učenika o uporabi UI u nastavi stranoga jezika, a kako sve više ljudi rabi tu tehnologiju, neminovno je i poznavanje kako je koristiti učinkovito, poštujući etička načela i smjernice koje postoje. Jednako tako, važno je prepoznati

[8] MIAO, Fengchun-HOLMES, Wayne: *Guidance for Generative AI in Education and Research*. UNESCO, 2023. 8.
[9] Isto, str. 8.
[10] SABZALIEVA, Emma–VALENTINI, Arianna: *ChatGPT and artificial intelligence in higher education: quick start guide*. UNESCO Publishing. 2023. 5.
[11] GROSSMAN, Gary: *ChatGPT's second birthday: What will gen AI (and the world) look like in another 2 years?*, = Venture, 2024. https://venturebeat.com/ai/chatgpts-second-birthday-what-will-gen-ai-and-the-world-look-like-in-another-2-years/ [11.12.2024.]
[12] https://www.canva.com/education/
[13] https://www.naturalreaders.com/online/
[14] https://www.magicschool.ai/

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trenutne izazove u uporabi UI u nastavi stranoga jezika kako bi se otklonile teškoće i kako bi se ostvario potencijal koju ova tehnologija ima za kvalitetniju, individualiziraniju i autentičniju nastavu.

Pregled literature

Kako učenici grade svoje znanje kroz iskustva i interakcije, a alati UI mogu pružiti interaktivna i impresivna iskustva koja olakšavaju usvajanje jezika, takvo učenje može se smjestiti u konstruktivizam, ali i sociokulturnu teoriju obzirom da UI može simulirati sugovornike i pružati povratne informacije u stvarnom vremenu. Ipak, područje umjetne inteligencije u nastavi stranih jezika najviše pripada u učenje jezika uz pomoć računala (engl. *Computer Assisted Language Learning – CALL*) koje je Levy[15] definirao kao „potragu za i nauku o računalnim aplikacijama u poučavanju i učenju stranih jezika". CALL se fokusira na uporabu tehnologije za poboljšavanje tradicionalnih metoda poučavanja jezika i obuhvaća različite alate od programa za pisanje, online rječnika do multimedijskih resursa, a područje je napredovalo od biheviorističkih pristupa[16] iz 1950-ih do 1970-ih do komunikacijskih[17] do 1980-ih i integrativnih povezanih s multimedijskim računalima i internetom. Na taj pristup nadograđen je ICALL[18] (engl. *Intelligent Computer-Assisted Language Learning*) kojeg se opisuje kao „pojam koji pokriva različita područja proširenog ili poboljšanog CALL, a uključuju umjetnu inteligenciju, računalnu lingvistiku, tehnike prirodnog procesiranja jezika (engl. *Natural Language Processing*) i tehnike procesiranja govora u CALL resursima".[19] Dok CALL pristup rabi računala kao alate, ICALL rabi UI za kreiranje inteligentnih okruženja za učenje nudeći pri tome personaliziranije i prilagođenije učenje od tradicionalnog CALL pristupa.

Dokumenata koji govore o umjetnoj inteligenciji općenito sve je više diljem svijeta. Tu spadaju smjernice, načini primjene, izvješća na razini Europske unije, pojedinih organizacija i institucija, država i slično. U Hrvatskoj je tako objavljena *Nacionalna strategija za razvoj umjetne inteligencije*[20] koja postavlja okvir za razumijevanje hrvatskog pristupa UI i njezinih potencijalnih primjena u različitim sektorima, uključujući obrazovanje. Konkretniji dokumenti zanimljivi nastavnicima koji su nedavno objavljeni, su *Kurikulum za izvannastavnu*

[15] LEVY, Michael: *CALL: context and conceptualisation*, Oxford: Oxford University Press. 1997.
[16] WARSCHAUER, Mark: *Computer-assisted language learning: an introduction*. U FOTOS, Sandra (ur.) *Multimedia language teaching*, Logos International, Tokyo, 1996. http://www.ict4lt.org/en/warschauer.htm [26.02.2025.]
[17] UNDERWOOD, John: *Linguistics, computers and the language teacher: a communicative approach*, Newbury House, Rowley, MA. 1984. 52.
[18] PATTY, Jusak: *The Use of AI in Language Learning: What You Need to Know*, Jurnal Review Pendidikan dan Pengajaran, 2024/7. 1. 643.
[19] WARD, Monica: *ICALL's relevance to CALL*. U BORTHWICK, Kate-BRADLEY, Linda-THOUËSNY, Sylview (ur.), *CALL in a climate of change: adapting to turbulent global conditions – short papers from EUROCALL 2017*. Research-publishing.net, Southampton, 2017.
[20] HRVATSKA, REPUBLIKA: S*trategija digitalne Hrvatske za razdoblje do 2032. godine*, Središnji državni ured za razvoj digitalnog društva, prosinac 2022.

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aktivnost za osnovne[21] i *Kurikulum fakultativnog predmeta za srednje škole*[22] namijenjen nastavnicima informatike, te priručnik *Umjetna inteligencija u obrazovanju,*[23] namijenjen svim stručnjacima u sustavu obrazovanja. Ti dokumenti su „usmjereni na razvoj kritičkog mišljenja učenika o utjecaju UI i tehnologija u nastajanju, razvoj digitalnih kompetencija te osposobljavanje za praktičan i kreativan rad s tehnologijama u nastajanju"[24] te „nude informacije i savjete o korištenju umjetne inteligencije u stvaranju dinamičnog i prilagodljivog okruženja za učenje na odgovoran način i prijedloge rješenja za rizike i probleme koji umjetna inteligencija donosi."[25]

Na razini Europske unije donesen je *Akcijski plan za digitalno obrazovanje 2021.–2027.*[26] koji prikazuje viziju EU za digitalno obrazovanje, uključujući upotrebu UI u obrazovanju. Daje širi kontekst za razumijevanje pristupa EU tehnologiji u obrazovanju, a glavni ciljevi i prioriteti su povećanje digitalnih vještina ključnih za život i rad u digitalnom svijetu, te personalizirano učenje. Plan predviđa da do 2025. godine 70% osoba u dobi od 16 do 74 godine ima barem osnovne digitalne vještine. Što se tiče personalizacije učenja, UI će omogućiti prilagodbu obrazovnih sadržaja potrebama svakog učenika, čime se potiče individualizacija i fleksibilnost u učenju. To sve će se postići uz osiguravanje prioriteta poput potrebne digitalne infrastrukture (pristupa internetu) i opreme (uređaji) za učenike i nastavno osoblje. Osim toga plan ističe da nastavnici moraju biti osposobljeni za korištenje digitalnih alata i tehnologija, uključujući umjetnu inteligenciju, kako bi mogli učinkovito integrirati ove resurse u nastavu. Ipak, u dokumentu su vidljivi i neki izazovi poput digitalnog jaza, odn. velikih razlika u pristupu tehnologiji između urbanih i ruralnih područja te među različitim socioekonomskim skupinama, te je potrebno razviti alate koji su dostupni svim učenicima, uključujući one s teškoćama, što je ključno za osiguranje uključivosti. Moguća rješenja u kojoj bi UI imala veliku ulogu jesu transformacija obrazovnog procesa kroz analizu podataka o učenju, npr. podaci o napretku učenika kako bi se prilagodili sadržaji i metode poučavanja, te kao podrška nastavnicima – u planiranju nastave, praćenju napretka učenika te pružanju povratnih informacija.

OECD (engl. *Organisation for Economic Co-operation and Development*) je objavila nekoliko izvješća o upotrebi UI u digitalnom obrazovanju,[27] uključujući

[21] BLAŽIĆ, Arjana et al.: *Kurikulum izvannastavne aktivnosti za osnovne škole Umjetna inteligencija: od koncepta do primjene,* Hrvatska akademska i istraživačka mreža – CARNET, 2024. https://www.carnet.hr/ [13.02.2025.] (U nastavku BLAŽIĆ, 2024.)

[22] BLAŽIĆ, Arjana et al.: *Kurikulum fakultativnog predmeta za srednje škole Umjetna inteligencija: od koncepta do primjene*, Hrvatska akademska i istraživačka mreža – CARNET, 2024. https://www.carnet.hr/ [13.02.2025.] (U nastavku BLAŽIĆ*, 2024.)

[23] KRALJ, Lidija et al.: *Umjetna inteligencija u obrazovanju, edukativni priručnik o primjeni umjetne inteligencije u učenju i poučavanju za učitelje, nastavnike i stručne suradnike u školama*, Suradnici u učenju, 2024.

[24] BLAŽIĆ, 2024.

[25] BLAŽIĆ*, 2024.

[26] URED za publikacije Europske unije: *Akcijski plan za digitalno obrazovanje (2021.–2027.)*, Glavna uprava za obrazovanje, mlade, sport i kulturu, Bruxelles, 30.9.2020. https://eur-lex.europa.eu/legal-content/HR/ALL/?uri=legissum:4617905 [13.02.2025.]

[27] OECD: *OECD Digital Education Outlook 2023: Towards an Effective Digital Education Ecosystem*, OECD Publishing, Paris, 2023. [18.02.2025.]

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njezine potencijalne koristi i izazove. U izvješću se također spominju prilike poput personalizacije učenja jer UI može prilagoditi obrazovne sadržaje potrebama pojedinih učenika, omogućavajući individualizirano učenje koje može poboljšati ishode obrazovanja za sve učenike, posebno one s posebnim odgojno-obrazovnim potrebama. Uz to, UI može pomoći u otkrivanju učenika koji su u riziku od napuštanja škole te omogućiti pravovremenu podršku. Izazovi su da bi UI alati mogli pogoršati postojeće nejednakosti u obrazovanju, posebno ako su dostupni samo određenim skupinama učenika, kao i etička pitanja jer UI sustavi mogu sadržavati inherentne pristranosti koje mogu utjecati na odluke i preporuke, što zahtijeva pažljivo upravljanje i nadzor. Dodatno, nastavnici trebaju kontinuiranu obuku kako bi učinkovito koristili AI alate, a postoji potreba za razvojem specifičnih kompetencija vezanih uz tehnologiju.[28]

UNESCO pak redovito objavljuje dokumente i izvješća o upotrebi tehnologije u obrazovanju, uključujući UI te njenu uporabu u učenju stranoga jezika. Od 2021. godine postoje *Upute za donositelje politika*, od 2022. objavljeni su *Kurikuli za UI u osnovnom školstvu* koje su prihvatile neke vlade, 2023. objavljene su *Upute za generativnu UI u obrazovanju i istraživanju*, a 2024. okviri za UI kompetencije za učenike i nastavnike. Organizirano je i nekoliko međunarodnih foruma o UI i obrazovanju gdje su stručnjaci, donositelji politika i dionici u obrazovanju raspravljali o najnovijim trendovima, izazovima i mogućnostima. Izvješća s takvih događanja također daju uvide u napredak UI u području obrazovanja. Dok u nekim zemljama takvi dokumenti tek nastaju, u Kini se primjerice provodi i evaluacija vještine govorenja na prijemnim ispitima u srednjim školama i fakultetima uz pomoć UI.[29]

Pregledom literature znanstvenih i stručnih članaka u otvorenom pristupu, nastaju i zanimljivi rezultati u uporabi UI u nastavi stranoga jezika. Prvo, opisuju se alati usmjereni učeniku koji nude uvježbavanje gradiva uz davanje povratne informacije učeniku i personalizaciju učenja[30] kao što su npr. *Babbel,*[31] *Duolingo,*[32] *Quizlet*[33] ili *Liulishuo*[34]. Drugo, postoje alati usmjereni nastavniku koji omogućuju smanjenje opsega rada, automatiziraju neke procese poput vrednovanja ili izrade rubrika, te olakšavaju administrativne zadatke nastavnika poput npr. *GradeScanner*[35] i *Magic School.*[36] Tu spadaju i analitički alati koje omogućuje UI, a bave se obradom velike količine podataka (engl. *big data*) kojima se može predvidjeti koji tečajevi su potrebni učenicima, kada je vjerojatnije da učenici predaju zadatke ili kada bi mogli prestati pohađati online tečaj, a

[28] OECD: *The Potential Impact of AI on Equity and Inclusion in Education*, OECD Aritificial Intelligence Papers 2024/23, OECD Publishing, August 2024.
[29] WU, Lin-LI, Keying-YU,Meiqi-LIN,Yunxi: *Application of Artificial Intelligence in Teaching English as a Foreign Language: Progress, Challenges, and Trends*, English Language Teaching and Linguistics Studies, 2024/4. 217. (U nastavku: WU, 2024.)
[30] Isto, str. 216.
[31] https://uk.babbel.com/
[32] https://www.duolingo.com/
[33] https://quizlet.com/gb
[34] https://www.liulishuo.com/en/aboutus.html
[35] https://www.gradescanner.net/
[36] https://www.magicschool.ai/

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nastavnici mogu shvatiti situacije učenja svojih učenika te koristiti personalizirane strategije poučavanja kako bi poboljšali svoju učinkovitost.[37] Treći su alati usmjereni sustavu koji provode procesiranje podataka za administratore institucija skupljajući podatke o npr. prosjeku učenika, predviđanje uspjeha na temelju prikupljenih podataka. Nadalje, slijede alati za strojno prevođenje npr. *DeepL,*[38] *Google Translate*[39] i njihovi ekvivalenti kao i alati za pisanje, provjeru pravopisa i gramatike poput *Grammarly*.[40] Istraživanja o strojnom prevođenju pokazala su da pospješuje usvajanje značenja riječi, razumijevanje kompleksnih rečeničnih struktura, stvaranje rečenica, točnost u pravopisu i izgovoru što ga čini vrijedim resursom za učenike u različitim aktivnostima učenja jezika.[41]

Korak dalje upotrebe UI u stranim jezicima su chatbotovi, virtualni/inteligentni asistenti, te (humanoidni) roboti koji služe davanju povratne informacije u stvarnom vremenu, ali i kao partneri u učenju obzirom da simuliraju scenarije iz stvarnoga života.[42] Chatbotovi su softverski programi koji omogućuju prirodne jezične konverzacije s korisnicima[43] simuliraju ljudske razgovore putem teksta ili glasa, interaktivni su jer pružaju informacije na bilo kakav unos ili izvode zadatke. Alat korišten u ovom istraživanju jest *SchoolAI*[44] koji omogućuje izradu vlastitog chatbota prema opisanim kriterijima.

Nastavnici danas sve više koriste personalizirano poučavanje stranog jezika zahvaljujući alatima poput *Quizlet*[25] ili *CallAnnie,*[45] uz koje i učenici mogu primati brzu povratnu informaciju o svome učenju i napretku. Još jedan korak bliže budućnosti su aktivna i interaktivna iskustva uz virtualnu stvarnost (engl. *virtual reality – VR*) i proširenu stvarnost (engl. *augmented reality – AR*) te mješovitu stvarnost (engl. *mixed reality*). Razlika je u tome što se AR „odnosi na 3D tehnologiju koja predstavlja digitalne informacije u pravome svijetu“ te omogućuje korisnicima da „bolje vide pravi svijet s virtualnim objektima kroz grafičko računanje i tehnologije za prepoznavanje objekata“, a „VR je 3D virtualni svijet kroz kojega se korisnicima pružaju vizualne simulacije i osjećaj kao da su uronjeni u okolinu bez granica vremena i prostora.“[46]

Istraživanja o alatima UI su mnogobrojna. U Sloveniji, Fošner je provela istraživanje o uporabi alata umjetne inteligencije, stavovima i percepcijama studenata gdje su rezultati pokazali da student prepoznaju učinkovitost alata UI, no izražavaju zabrinutost oko njihovih utjecaja na kvalitetu učenja i akademsku čestitost. U konačnici, predlaže da visokoškolske ustanove osvješćuju i podučavaju kako koristiti UI alate učinkovito. Slična iskustva iz drugih studija pokazala su da

[37] WU, 2024. str. 218.
[38] https://www.deepl.com/en/translator
[39] https://translate.google.com/
[40] https://www.grammarly.com/
[41] PATTY, Jusak: *The use of AI in language learning: What you need to know*. Jurnal Review Pendidikan dan Pengajaran, 2024/7. 1. 645. (U nastavku: PATTY, 2024.)
[42] WU, 2024. 218.
[43] ADAMOPOULOU, Eleni–MOUSSIADES, Lefteris: *An Overview of Chatbot Technology*. Artificial Intelligence Applications and Innovations. 2020/584. 373.
[44] https://schoolai.com/
[45] https://callannie.ai/
[46] HUANG, Xinyi-ZOU, Di-CHENG, Gary-XIE, Haoran: *A Systematic Review of AR and VR Enhanced Language Learning*. Sustainability 2021/13. 4639. 1.

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chatbotovi pomažu u razvoju različitih aspekata jezičnih domena poput gramatike, vokabulara i vještina govorenja kod učenika stranog jezika te da njeguju njihovu motivaciju, angažman i pozitivne stavove prema učenju engleskoga kao stranoga jezika.[47] Što se tiče stavova učenika i studenata prema uporabi chatbotova, prevladavaju pozitivni stavovi,[48] a mogu biti pogodni posebice za početnike zbog čestih osnovnih fraza i i riječi, kao i za anksioznije učenike koji rado izbjegavaju razgovore licem u lice.[49] Pregledi više studija pokazuju da trenutno u chatbot komunikaciji nedostaje debate i rješavanja problema i nije uzeta u obzir važnost ugrađivanja funkcija kulture, humora i empatije[50] što ograničava komunikaciju. Ipak, uporaba UI u sustavima za učenje na daljinu pokazala se da pogoduje razvoju svih četiri jezičnih vještina i jača motivaciju i angažman za učenje stranog jezika.[51]

U Turskoj, istraživanje studije slučaja na 13 studenata visokoškolske ustanove pokazalo je da je uporaba Chat GPT-a u nastavi engleskog jezika imala pozitivan učinak na pisanje, a manje na govorenje te na razvoj gramatičkih i vještina vokabulara, motivirajući studente u online nastavi i promovirajući interaktivno učenje stranog jezika.[52] Ipak, to istraživanje ukazuje i na potrebu za uravnoteženim pristupom u integraciji tehnologija UI te sve veću ulogu nastavnika u osiguravanju da se ti alati koriste razborito, kao nadopunu, a ne zamjenu za odgojno-obrazovnu ulogu nastavnika.

Etička pitanja uporabe umjetne inteligencije pregledom literature Corrêa[53] i suradnici nastojali su istražiti ima li međunarodnog konsenzusa te su u svojoj meta analizi pregledali preko dvjesto uredbi vlada i etičkih načela koje su objavila javna tijela, akademske institucije, privatne tvrtke i organizacije civilnog društva diljem svijeta. Utvrdili su najmanje 17 načela koja prevladavaju u tim podacima te su ih objavili kao otvorenu bazu podataka i alat za buduća istraživanja. Neka od najgorljivijih pitanja tiču se transparentnosti, pouzdanosti, sigurnosti, povjerenja te privatnosti podataka.[54] Chiu i suradnici navode nekoliko izazova uporabe UI u obrazovanju poput nedostatka resursa za personalizirano i prilagođeno učenje za buduća istraživanja UI u obrazovanju, nedostatak povezanosti tehnologija UI i njihove uporabe u poučavanju, nedostatak interdisciplinarnih tehnologija UI za

[47] ALTWIJRI, Lujain–ALGHIZZI, Talal Musaed: *Investigating the integration of artificial intelligence in English as foreign language classes for enhancing learners' affective factors: A systematic review*, Heliyon, 2024/10. 3. (U nastavku: ALTWIJRI, 2024.)
[48] Isto, str. 7.
[49] SCHMIDT, Torben–STRASSER, Thomas: *Artificial Intelligence in Foreign Langugage Learning and Teaching: A CALL for Intelligent Practice*, Anglistik, 2022/33. 1. 171.
[50] ZHAI, Chunpeng–WIBOWO, Santoso: *A systemic review on artificial intelligence dialogue systems for enhancing English as foreign language students' interactional competence in the university*, Computers and Education: Artificial Intelligence, 2023/4. 20–22.
[51] AYOTUNDE, Oke–JAMIL, Dashty–CAVUS-Nadire: *The impact of artificial intelligence in foreign language learning using learning management systems: A systematic literature review*, Information Technologies and Learning Tools, 2023/3. 225.
[52] KARATAŞ, Fatih–ABEDI, Faramarsz–OZEK GUNYEL, Filiz–KARADENIZ, Derya–KUZGUN, Yasemin: *Incorporating AI in foreign language education: An investigation into ChatGPT's effect on foreign language learners*. Education and Information Technologies, 2024. 1.
[53] CORRÊA, Nicholas Kluge et al.: *Worldwide AI ethics: A review of 200 guidelines and recommendations for AI governance*. Patterns, 2023/10. 1.
[54] EUROPEAN COMMISSION: *Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for Educators*, Publications Office of the European Union, 2022. 19–21.

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učenje, produbljivanje jaza u digitalnom smislu među učenicima jer takve tehnologije su više od koristi kompetentnijima i motiviranijima, nedovoljno znanja o UI tehnologijama među nastavnicima te dio negativnih stavova prema UI među učenicima i nastavnicima.[55]

Sve u svemu, vidljiva je nužnost kontinuiranog praćenja i učenja o alatima UI u nastavi stranih jezika, a ovim istraživanjem nastoji se dati doprinos u tom smjeru.

Metoda

Posljednjih godina sve je više istraživanja usmjereno na umjetnu inteligenciju u obrazovanju, a ovim radom nastojimo istražiti na kako se rabi UI u nastavi engleskoga jezika od strane nastavnika, studenata i učenika. Kako bismo postigli taj cilj, postavljamo sljedeća istraživačka pitanja: 1) Koji su stavovi i mišljenja sudionika o uporabi UI u nastavi engleskoga jezika, 2) Koje alate koriste i u koju svrhu te 3) Koje su mogućnosti i izazovi uporabe UI obzirom na novosti i izazove današnjice. Odgovori na ova pitanja mogli bi pokazati i pedagoške implikacije te smjer za buduća istraživanja u ovom području.

Kako bismo istražili ovu temu, formulirane su sljedeće hipoteze istraživanja:

- H1: Učenici i studenti imaju pozitivne stavove prema uporabi UI. Ova hipoteza sugerira da učenici i studenti vide vrijednost i potencijal UI u poboljšanju svog obrazovnog iskustva.
- H2: Nastavnici nisu spremni koristiti UI. Ova hipoteza pretpostavlja da nastavnici mogu imati različite razloge za oklijevanje u prihvaćanju UI u svojim nastavnim praksama.
- H3: Učenici i studenti nisu zabrinuti oko korištenja UI. Ova hipoteza istražuje potencijalne brige i pitanja učenika i studenata u vezi s korištenjem UI u obrazovanju.

Kroz ovo istraživanje, želimo pridonijeti razumijevanju stavova prema UI u obrazovanju i pružiti vrijedne uvide za budući razvoj i primjenu ove tehnologije. Odabran je mješoviti (kvantitativno-kvalitativni) pristup. Podaci su prikupljeni pomoću lekcije s chatbotima koja je održana za osme razrede i studente posebno, a prijepis razgovora sudionika s chatbotom je zabilježen. Nakon sudjelovanja u chatbot lekciji, učenici i studenti su ispunili upitnik konstruiran za potrebe ovoga istraživanja u kojemu se ispituje koliko sudionici smatraju da su razumjeli gradivo učeno pomoću chatbota te kako su se osjećali tijekom takvoga učenja, što ih brine, koje prednosti vide i koje alate općenito koriste za potrebe učenja. Za nastavnike proveden je online webinar o alatima UI u nastavi engleskoga jezika, a zatim su ispunili sličan upitnik gdje su navodili prednosti i nedostatke uporabe takvih alata te svoja mišljenja i stavove o takvoj nastavi. Rezultati su uspoređeni po skupinama sudionika.

[55] CHIU, Thomas–XIA, Qi-ZHOU, Xinyan–CHAI, Ching–CHENG, Miaoting: *Systematic literature review on opportunities, challenges, and future research recommendations of artificial intelligence in education*, Computers and Education: Artificial Intelligence, 2023/4. 12–13.

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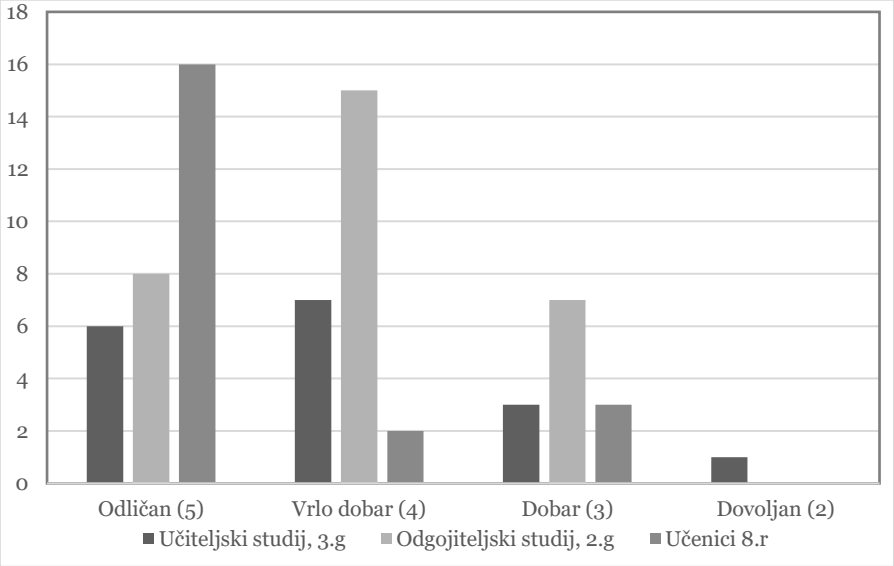
Sudionici su bili prigodan uzorak dostupan istraživaču koji je ujedno poučavao navedene grupe. U osnovnoj školi to je bilo 23 učenika osmog razreda, 38 nastavnika engleskog jezika jedne županije u Hrvatskoj, 28 nastavnika iz online grupe nastavnika engleskog jezika te 48 studenata odgojiteljskog i učiteljskog studija.

Chatbot lekcija dizajnirana je u alatu SchoolAI koji omogućuje izradu chatbota, a lekcija se može podijeliti putem poveznice te pratiti prijepiska učenika i studenata sa chatbotom. Izazov je bio kreirati dobar prompt u kojem će chatbot moći postavljati pitanja za određenu dob učenika ili studenta, na određenu temu u točnom kontekstu te određene ishode, načine vrednovanja i motivaciju studenata koji će izmjenjivati poruke sa chatbotom. Sam program pokazivao je određena ograničenja, te je studentima i učenicima savjetovano da potiču chatbot da postavlja dodatna pitanja ukoliko „zapnu“ na sličnim pitanjima tijekom lekcije. Zahvaljujući tom savjetu, sudionici su lakše napredovali u razgovorima te kritički promatrali sam proces učenja.

Prikupljeni podaci su analizirani kvantitativno i kvalitativno pomoću alata Microsoft Forms te statistički obrađeni pomoću alata Microsoft Excel.

Analiza podataka

Podaci prikupljeni upitnikom na grafikonu prikazuju broj ispitanika (N=68) među studentima i učenicima 8. razreda s njihovim uspjehom iz engleskog jezika na kraju srednje škole odn. na kraju prošle školske godine. Prosječna ocjena za sve sudionike jest 4.22 odn. vrlo dobar uspjeh.



Uspjeh iz engleskoga jezika za studente i učenike 8.r (Grafikon 1.)

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Evaluacija chatbot lekcije upitnikom pokazala je da su studenti bili uglavnom zadovoljni razgovorom s chatbotom na SchoolAI lekciji (M=4.10) te im je tema lekcije uglavnom bila jasno predstavljena (M=4.10). Učenici 8. razreda su dali nešto nižu ocjenu razgovoru (M=3.65) te jasnoći lekcije (M=3.78). Ukupnu procjenu usvajanja gradiva uz chatbot studenti su ocijenili vrlo dobro (M=3.73), slično kao i učenici (M=3.57). Na pitanje iz kojeg dijela je bilo lakše shvatiti novo gradivo, studenti su većinom odabrali chatbot lekciju (67%), dok su učenici 8. razreda pretežito odabrali predavanja uživo s učiteljicom (57%) uz ponuđene chatbot lekcije (26%) i digitalni udžbenik (17%).

Što se tiče kvalitativne analize, na pitanje kako su se osjećali dok su razgovarali s chatbotom, 79% osjećaja studenata kategorizirano je u pozitivne, a neke od izjava navedene su u Tablici 1.

Pozitivni osjećaji	**Negativni i neutralni osjećaji**
ID7 Osjećala sam se kao da razgovaram s prijateljem oko gradiva koje učimo ili ponavljamo.	ID1 Teže ga je pratiti, ide malo prebrzo.
ID20 Nema pritiska ili straha da ću krivo odgovoriti na pitanje ili pogrešno napisati rješenje. S chatbotom mogu uzeti koliko god vremena mi je potrebno za rješavanje zadataka.	ID9 Osjećala sam se normalno, nikakav poseban osjećaj.
ID38 najviše mi se sviđa što neograničeno dugo možemo vježbati te odmah provjeriti svoje znanje i točnost riješenog zadatka.	ID10 Osjećala sam se čudno jer sam razgovarala s nekim tko ne postoji.
ID42 Bilo mi je iznenađujuće zabavno i jako poučno.	ID21 Sumnjivo.
ID46 Dobro, ali me više puta pitao isto pitanje i nije mi bilo jasno na što misli.	ID25 Čudno.
	ID31 Čudno i teško.
	ID34 Morala sam se jako skoncentrirati da shvatim što traži od mene.

Izjave studenata kako su se osjećali prilikom razgovora s chatbotom (Tablica 1.)

Izjave učenika 8. razreda bile su kategorizirane kao 71% pozitivne, a neke su izdvojene u Tablici 2.

Pozitivni osjećaji	**Negativni i neutralni osjećaji**
ID10 Meni je bilo lijepo ali malo čudno zato jer mi je to bilo prvi put.	ID1 Nije bilo zabavno.
ID13 Chatbot je bio sjajan prijatelj za razgovor. Gradivo mi je puno jasnije. Malo sam bila razočarana kada me pitao ista pitanja ali sam ga zamolila da me pita nešto drugo. Pitanja su bila vrlo zanimljiva.	ID12 Neutralno. Mogao sam samo kopirati primjere i iskoristiti kao odgovore.
ID20 bilo je ok ali mislim da se chatbot malo izgubio u nekim odgovorima i da me nije u potpunosti razumio.	
ID21 Osjećala sam se dobro, no jako me živciralo to što lako skreće s teme. Temu smo promijenili 5 puta i nismo naučili mnogo.	

Izjave učenika 8.r kako su se osjećali prilikom razgovora s chatbotom (Tablica 2.)

Da bi se provjerilo jesu li pozitivne emocije povezane s uspjehom iz engleskoga jezika provedena je statistička analiza Pearsonov koeficijent korelacije. Postoji slaba pozitivna povezanost između ocjena (uspjeha) i emocija (r=0.095),

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tj. postoji tendencija da studenti s boljim uspjehom ujedno imaju i pozitivnije emocije prema uporabi UI, ali ta veza nije jaka (p=0.519).

Upitnikom su prikupljena i mišljenja studenata za buduću uporabu chatbota u nastavi engleskoga jezika i njih 48% bi voljelo koristiti chatbote, a njih 92% bi željelo isprobati i druge alate UI u nastavi engleskoga jezika. Učenici 8. razreda, njih 52% također preferira nastavu uživo, a 48% korištenje chatbota, dok njih 87% želi isprobati i druge alate UI u nastavi engleskoga jezika.

Na upit što studente brine oko uporabe umjetne inteligencije u nastavi engleskog jezika, 58% odgovora može se kategorizirati u zabrinutost, a izjave sudionika nalaze se u Tablici 3.

Zabrinutost	**Nezabrinutost**
ID4 Premalo međusobne komunikacije na engleskom jeziku.	ID2 Ništa, smatram da nam tehnologija (ukoliko se koristi ispravno) može pomoći u učenju.
ID5 Da nešto ne bi bilo netočno.	
ID8 Možda što nas ne može ispraviti oko nekih izgovaranja riječi ili nepoznatih riječi.	
ID9,ID12,ID14 Točnost informacija. ID23 Točnost i pouzdanost podataka.	
ID10 Brine me da će umjetna inteligencija jednog dana zamijeniti nastavnike. ID18 Da će zamijeniti posao profesora ID19 Da više neće biti profesorica	ID21 Ne brine me, ali ne volim koristiti umjetnu inteligenciju.
ID13 kvaliteta informacija.	
ID15 Povremeno zaluta preduboko u ono što spomenem.	
ID29 Da krivi shvati moj feedback i ne objasni neke stvari na dobar način ili zbog krivog shvaćanja on pogriješi u svom objašnjenju.	
ID37 Da ne iznese odmah sve bitne činjenice, već bi se za njih možda trebalo više propitkivati, a neka djeca ne bi znala što treba pitati i u kojem smjeru ići.	
ID40 Da možda neće shvatiti naše pisanje kako ga mi sami shvaćamo kada razmišljamo	
ID47 Automatski prijevod, stvaranje ovisnosti	

Izjave studenata o zabrinutosti korištenja UI u nastavi engleskoga jezika (Tablica 3.)

Studenti vide mnogo prednosti uporabe umjetne inteligencije u nastavi engleskoga jezika koje se mogu kategorizirati u skladu s literaturom na sljedeća područja:

1. *Alati usmjereni učeniku kao pomoć u učenju*: Studenti navode da kroz zadatke mogu bolje razumjeti pojedine teme i cjeline, omogućuju lakše učenje i detaljnija objašnjenja zbog velikog opsega informacija u bazama podataka, moguća je personalizacija učenja kroz individualna objašnjenja svakome učeniku te brže usvajanje gradiva.
2. *Pristupačnost, brzina i lakoća upotrebe*: Studenti smatraju da je chatbot uvijek i lako dostupan kao i informacije koje nudi, lako se njime koriste i dostupan je svima.
3. *Strojno prevođenje*: Alati UI omogućuju lakše prevođenje i dolazak do značenja nepoznatih riječi.
4. *Točnost*: Studenti se uvelike oslanjaju na chatbotove i pretpostavljaju da daju točne informacije.

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5. *Komunikacija*: Studenti smatraju da im razgovor s chatbotom omogućuje razvoj u komunikaciji na engleskome kao stranome jeziku jer istovremeno vježbaju čitanje, pisanje i govorenje, bolje šire svoj vokabular jer imaju vremena pitati sve što žele, a pohvalili su alat kao mogućnost za nastavu na daljinu zbog brze komunikacije.
6. *Zanimljivost*: Nastava se doima lakšom i zabavnijom uz chatbotove, a nekima je zanimiljivije učiti na taj način, svidjela im se novina u nastavi zbog atraktivnosti alata, sažetosti i momentalne primjene naučenoga gradiva.
7. *Personalizacija*: Obzirom na neograničeno vrijeme učenja, studenti su mogli raditi na lekciji kada god žele, postavljajući velik broj pitanja i na taj način provjeriti svoje znanje. Neki smatraju da je to efikasan alat za nadoknadu izgubljenog sata, mogućnost dopunske ili dodatne nastave i pomoć u učenju.

Na upit koriste li studenti UI kao pomoć za svoje radove na fakultetu, 54% njih odgovorilo je pozitivno. Može se zaključiti da se UI koristi poglavito kao alat za pronalaženje informacija i pomoć u akademskom radu:

1. *Pronalaženje literature i izvora informacija*: Velik broj studenata koristi UI za pronalaženje relevantne literature, izvora informacija i dodatnih materijala za svoje radove. UI im pomaže da brzo i učinkovito pronađu opsežne odgovore na pitanja, što im štedi vrijeme u usporedbi s tradicionalnim pretraživanjem. Studenti cijene sposobnost UI da im predloži literaturu koja bi mogla biti korisna za određenu temu.
2. *Pomoć u akademskom pisanju*: Studenti koriste UI za generiranje ideja za teme seminara, izradu nacrta radova, pisanje uvoda i oblikovanje podnaslova. UI im pomaže da prevladaju nedostatak inspiracije i da strukturiraju svoje radove. Također, koriste UI za ispravljanje gramatičkih pogrešaka i poboljšanje stila pisanja.
3. *Razjašnjavanje zadataka i provjera točnosti*: Studenti koriste UI da bi razjasnili zahtjeve zadataka i da bi dobili smjernice o tome kako pristupiti određenoj temi. Dodatno, koriste UI za provjeru točnosti svojih odgovora i za dobivanje povratnih informacija o svom radu.
4. *Učinkovitost i ušteda vremena*: Mnogi studenti cijene brzinu i učinkovitost UI, posebice kada su u žurbi ili kada ne mogu pronaći odgovore na tradicionalan način. UI im tada omogućuje da brzo dobiju informacije i da učinkovito obavljaju svoje akademske zadatke.

Rezultat koji je posebno iznenadio jest da čak 65% učenika 8. razreda koristi UI, bez obzira na preporuke i smjernice da ih ne bi smjeli koristiti bez dozvole roditelja, a uglavnom za sljedeće radove u školi:

1. Za izradu domaćih zadaća, sastavaka, projekata i školskih zadaća
2. Za objašnjenja nepoznatih pojmova i preporuke
3. Umjesto pretraživača
4. Kada nešto ne razumiju
5. Za izradu dijelova prezentacija
6. Kao inspiracija za neku temu, za dopunu sastavka i sažimanje misli

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Zanimljivo je da učenici koriste UI i to 80% ChatGPT, a 4% navodi UI alat unutar Snapchat aplikacije, dok ostali navode i slične alate poput Gemini, Ispravi me i Kontekst io.

Kada su upitani o etičkim pitanjima glede uporabe UI, 51% studenata smatra da nije u redu kopirati tekst generiran od strane UI i predati ga kao svoj, dok njih 35% smatra da je taj tekst potrebno preformulirati, a njih 11% smatra da ga je potrebno citirati. Samo 3% studenata u tome ne vidi etičkih dilema.

Na pitanje gdje su studenti označavali emocije koje prevladavaju kod njih kad razmišljaju o UI na Likertovoj skali od pet stupnjeva, za njih 64.8% je to radoznalost, a 27.1% ih je neodlučno. Drugu emociju, strah, odabralo je 25% studenata, 45.8% ih je neodlučno, a 29.2% iskazalo je izostanak straha. Sljedeća emocija bila je indiferentnost, koju je odabralo 22.9% studenata dok ih je većina, 52.1% bilo neodlučno što ukazuje da im nije svejedno kada se radi o UI. Posljednja emocija bila je povjerenje za koje je samo 8.3% studenata iskazalo prema UI, dok je većina neodlučna (68.8%), odn. njih 23% iskazuje manjak povjerenja prema UI.

Upitnik za učitelje engleskoga jezika (N=38) nakon predavanja o alatima UI pokazao je da 68% učitelja ima volju nastaviti koristiti alate UI, a njih 32% je označilo odgovor da će možda nastaviti koristiti alate UI čime se pokazuje otvorenost za korištenje novih tehnologija u budućnosti. Najviše učitelja je odabralo alate *Gamma*[56] i *Canva 12* kao najdraže s predavanja, dok su ostali naveli alate *Quizizz,*[57] *Perplexity,*[58] *ChatGPT*, *Natural Readers*, *Autoclassmate*[59] i *Curipod*.[60]

Zabrinutosti koje iskazuju učitelji (N=66) slični su onima studenata i učenika, a tiču se kvalitete generiranog sadržaja, hoće li biti zamijenjeni od strane UI, etičkih pitanja i slično. Neke izjave zabilježene su u Tablici 4.:

Izjave zabrinutosti učitelja (N=66)	
ID2 kvaliteta sadržaja	ID11 hoće li zamijeniti učitelje? ID20 da će učenici prestati se oslanjati na nastavnike i da će nastavnici postati suvišni
ID4 etička pitanja ID23 razne stvari – od rušenja privatnosti do nedostatka ljudskih elemenata	ID13 neprimjereno ponašanje učenika
ID7, ID24, ID28, ID35 kompliciran ugovori o privatnosti	ID14 da ih neću moći (znati) koristiti ispravno
ID8, ID12, ID19, ID25, ID26, ID29, ID30, ID33, ID36 da ih učenici koriste za varanje i/ili izradu zadaće, zlouporaba, plagijati, lijenost	ID15 trebamo naučiti učenike kako da koriste UI
ID28 algoritamska pristranost zbog neispravnih podataka	ID18 da nećemo koristiti dovoljno razmišljanja (mozak) ID21 moglo bi smanjiti kreativnost učenika

[56] https://gamma.app/
[57] https://quizizz.com/
[58] https://www.perplexity.ai/
[59] https://autoclassmate.io/
[60] https://curipod.com/

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	ID22 da će učenici pretjerano koristiti UI pa će njihova kreativnost, znanje i sposobnosti se smanjiti
ID37 nepouzdanost	ID31 nedostatak autonomije
ID1 Oprezno koristiti, provjeravati. Odgovorna upotreba je jako korisna.	ID34 nedostatak ljudskih misli
ID7 Može pomoći i olakšati pripremu i učenje, no treba biti oprezan	ID21 Korisno, ali treba ju znati usmjeriti preciznim pitanjima i potpitanjima prema odgovoru koji trebamo.

Izjave nastavnika o zabrinutosti korištenja UI u nastavi engleskoga jezika (Tablica 4.)

Na pitanje koje prednosti nastavnici vide u uporabi UI, navode sljedeće izjave u Tablici 5.:

Izjave o prednostima uporabe UI koje navode nastavnici	
ID2 Dobra baza ID26 Dostupno diljem svijeta, odličan alat za skupljanje informacija o temi	ID3, ID4, ID6, ID18, ID20, ID30, ID33, ID34, ID35 Brzina i praktičnost, brze ideje za nastavu i popunjavanje vremena, brzi i precizni odgovori za gotovo bilo koju temu, produktivnost ID7 Brzi i zanimljivi zadaci ID8, ID11, ID16, ID21, ID25 Ušteda vremena i više mogućnosti i načini učenja i poučavanja ID9 Lak način kako doći do novih prezentacija, listića i aktivnosti ID14, ID17, ID31 potrošiti manje vremena za pripreme, pomoć u pripremama za nastavu, dobar vodič u kreiranju zadataka kad nemamo puno vremena ID15, ID27, ID36 čini život nastavnika jednostavnijim i lakšim, puno pomaže
ID3 Mnoge	
ID4, ID29 Kreativnost, kritičko razmišljanje ID11, ID22 Nove ideje, ID13 bolje uključivanje učenika, dinamičnija nastava, ID24 više ideja u manje vremena	
ID19 Generiranje tekstova za vježbanje i testiranje slušanja i čitanja s razumijevanjem. Brza izrada nastavnih materijala.	
ID5 Nova znanja, novi alati za nas ID35 koristan je za nas, zabavno za učenike	
ID23 Personalizacija resursa učenja, praćenje napretka u učenju.	
ID12 Rubrike	ID28 Smanjenje ljudskih pogrešaka, ušteda vremena, digitalna pomoć, nepristrane odluke.
ID37, ID38 Lako za komunikaciju, koristan.	

Izjave nastavnika o prednostima uporabe UI u nastavi engleskoga jezika (Tablica 5.)

Prednosti uporabe UI koje navode nastavnici mogu se kategorizirati u devet kategorija:

1. *Ušteda vremena* (N=25): Sudionici su istaknuli da UI značajno štedi vrijeme u različitim aspektima učenja i pripreme. To uključuje brže smišljanje zadataka, skraćeno vrijeme pripreme materijala i općenito ubrzanje procesa poučavanja i učenja. Također, UI omogućuje brži dolazak do podataka i lakše snalaženje u informacijama.
2. *Brzina izrade materijala* (N=10): UI omogućuje brzu izradu različitih materijala, poput prezentacija, nastavnih listića, aktivnosti i tekstova za vježbu. Sudionici su naglasili brzinu generiranja zadataka i mogućnost brze izrade nastavnih materijala.

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3. *Jednostavnost korištenja* (N=3): Korištenje UI alata ocijenjeno je jednostavnim i brzim. Sudionici su istaknuli praktičnost i lakoću korištenja kao ključne prednosti.
4. *Dostupnost* (N=3): UI je prepoznat kao dostupan alat koji omogućuje brzi pristup informacijama i pomoć u prijevodu. Također, sudionici su spomenuli mogućnost slušanja točnog izgovora i pristup relevantnim materijalima.
5. *Raznolikost i mogućnosti* (N=6): UI nudi raznolike mogućnosti učenja, uključujući simulaciju razgovora, vježbanje govorenja i pristup različitim aplikacijama za učenje engleskog jezika. Sudionici su istaknuli mogućnost pronalaska različitih materijala i ideja za učenje.
6. *Personalizirano učenje* (N=4): UI omogućuje personalizirani pristup učenju, prilagođavajući se individualnim potrebama učenika. Sudionici su spomenuli mogućnost izrade materijala po mjeri i diferencijaciju nastave.
7. *Poboljšanje vještina* (N=7): Korištenje UI-a može poboljšati različite jezične djelatnosti, poput pisanja, čitanja, slušanja i govorenja. Sudionici su istaknuli mogućnost vježbanja govora i dobivanja novih znanja.
8. *Povratne informacije i podrška* (N=7): UI pruža brze povratne informacije i podršku u učenju. Sudionici su spomenuli mogućnost dobivanja formativnog mišljenja i savjeta o učenju.
9. *Kreativnost i ideje* (N=5): UI potiče kreativnost i daje nove ideje za učenje i poučavanje. Sudionici su istaknuli mogućnost dinamičnih lekcija i razvijanje kritičkog mišljenja.
10. *Ostalo*: U ovoj kategoriji sudionici su naveli različite druge prednosti, poput pomoći u gramatici, mogućnosti učenja kroz igru i pristupa novim alatima.

Analiza je pokazala da sudionici vide širok raspon prednosti u korištenju umjetne inteligencije u učenju engleskog jezika. Najčešće spominjane prednosti odnose se na uštedu vremena, brzinu izrade materijala, jednostavnost korištenja i raznolikost mogućnosti. Tu se svakako vidi povezanost s nalazima u literaturi[61] poput interaktivnog i pospješivanja personaliziranog učenja, nadziranja napretka dostupnosti i fleksibilnosti tehnologije UI.[62] Također, sudionici su prepoznali važnost personaliziranog učenja, poboljšanja vještina, povratnih informacija, kreativnosti i ideja koje UI može pružiti. S druge strane, vidljive su i zabrinutosti te izazovi korištenja UI u budućnosti. U literaturi se navodi moguć nedostatak međusobne komunikacije i kulturnog razumijevanja, ograničenja u personaliziranome učenju te problemi tehničke prirode i pouzdanosti, privatnost podataka i etička pitanja te moguća marginalizacija uloge ljudskog učitelja.[63] Naši sudionici navodili su bojazni poput kvalitete sadržaja koju generira UI, strah da

[61] AIJUN, Yang: *On the Influence of Artificial Intelligence on Foreign Language Learning and Suggested Learning Strategies*, International Journal of Education and Humanities (IJEH), 2024/4. 109–113. (U nastavku: AIJUN, 2024.)
[62] PATTY, 2024. 647.
[63] AIJUN, 2024. 113–115.

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će UI zamijeniti učitelje i učiniti ih suvišnima, moguća ovisnost o UI, njena zlouporaba ili pak da će smanjiti kreativnost i inovativnost ljudi.

Rezultati i rasprava

Na temelju analize možemo odgovoriti na prvo pitanje, koji su stavovi i mišljenja sudionika o uporabi UI u nastavi engleskoga jezika. Prva postavljena hipoteza „H1: Učenici i studenti imaju pozitivne stavove prema uporabi UI.“ je potvrđena. Dodatno, kvantitativna i kvalitativna analiza provedenih upitnika pokazala je pozitivne stavove svih sudionika. Učenici i studenti uglavnom iskazuju zadovoljstvo uporabom UI alata, posebno chatbotova, što se odražava u prosječnoj ocjeni "vrlo dobar" (4). Iako su sudionici istraživanja prepoznali da razgovor s UI alatom može pomoći u shvaćanju teme, ocjenjuju da usvojenost znanja nakon jednog razgovora nije na visokoj razini. Prevladavaju pozitivni osjećaji prema uporabi UI, što ukazuje na općenito pozitivan stav prema ovoj tehnologiji, u skladu i s navodima u literaturi.[64]

Druga hipoteza „H2: Nastavnici nisu spremni koristiti UI.“ nije potvrđena. Nastavnici iskazuju želju za korištenjem UI alata u nastavi i prepoznaju potrebu za dodatnom obukom kako bi se učinkovito koristili tim alatima. To ukazuje na spremnost nastavnika da integriraju UI u svoj rad, uz uvjet da dobiju adekvatnu podršku i edukaciju. Dodatno, odgovori na drugo istraživačko pitanje „Koje alate sudionici koriste i u koju svrhu?“ pokazali su da sve skupine ispitanika, od najmlađih učenika 8. razreda, preko studenata sve do nastavnika, koriste UI tehnologije, ponajviše ChatGPT i slične alate u svrhu učenja i kreiranja sadržaja učenja te poučavanja.

Treće istraživačko pitanje „Koje su mogućnosti i izazovi uporabe UI obzirom na novosti i izazove današnjice?“ pokazalo je duh vremena u kojem živimo, a treća hipoteza „H3: Učenici i studenti nisu zabrinuti oko korištenja UI.“ nije potvrđena. Iako učenici i studenti iskazuju interes za UI alate, također su izražene zabrinutosti u vezi s njihovom uporabom, što je u skladu s nalazima iz relevantne literature. Te zabrinutosti uključuju etička pitanja, poput privatnosti podataka i potencijalnog plagiranja. Sudionici istraživanja su svjesni prednosti i nedostataka uporabe UI, što ukazuje na kritički pristup ovoj tehnologiji. Učenici i studenti uglavnom koriste UI alate kao pomoć u akademskom radu, što ukazuje na pragmatičan pristup njihovoj uporabi.

Pedagoške implikacije

Na temelju provedenog istraživanja, mogu se uobličiti sljedeće potencijalne pedagoške implikacije u vidu integracije UI u Kurikule, obuke nastavnika, razvoj smjernica za etičku uporabu UI na razini škola i ustanova, promicanje kritičkog mišljenja i medijske pismenosti, prilagodbe nastave uz personalizaciju učenja, ali i kontinuirano praćenje i evaluaciju UI u nastavi.

[64] ALTWIJRI, 2024. 3.

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S obzirom na pozitivan stav učenika, studenata i nastavnika prema UI, obrazovne institucije trebale bi razmotriti integraciju UI alata u nastavne Kurikule, posebice one koji potiču kritičko razmišljanje i medijsku pismenost u kontekstu UI. Pri tome valja razmotriti kako će se UI primjenjivati u ustanovama na etički način uz neizostavnu edukaciju nastavnika o osnovama UI.

Obuka nastavnika trebala bi biti organizirana na razini odgojno-obrazovnih ustanova kako bi nastavnici stekli praktične vještine korištenja alata UI i pedagoške strategije za njihovu integraciju u nastavu. Neizostavna jest i podrška za nastavnike kao i resursi kako bi im se olakšalo korištenje UI u radu.

Zabrinutost oko etičkih pitanja sve je prisutnija među obrazovateljima, ali i učenicima stoga bi obrazovne institucije trebale razviti jasne smjernice za etičku uporabu UI koje bi trebale obuhvatiti pitanja privatnosti podataka, plagijata, akademske čestitosti i odgovornog korištenja UI alata. Osim toga, nužno je i provoditi edukaciju o etičkim implikacijama UI za učenike, studente i nastavnike.

Promicanjem kritičkog mišljenja i medijske pismenosti, nužno je osigurati edukaciju o provjeri činjenica, prepoznavanju dezinformacija i vrednovanju izvora informacija kako bi obrazovne institucije poticale učenike i studente da kritički promišljaju o utjecaju UI na društvo.

Mogućnosti personaliziranog učenja uz pomoć UI mogu se primjenjivati za prilagodbu nastave individualnim potrebama učenika i studenata. To uključuje korištenje UI alata za analizu podataka o učenju, pružanje personaliziranih povratnih informacija i prilagodbu nastavnih materijala. Učenje uz pomoć UI trebalo bi biti dostupno svim učenicima i studentima, bez obzira na njihovo socioekonomsko podrijetlo.

S obzirom na brzi razvoj tehnologija UI, obrazovne institucije trebale bi kontinuirano pratiti i evaluirati učinkovitost primjene UI alata u nastavi. Osim prikupljanja podataka o učinku UI na ishode učenja, potrebno je uzeti u obzir zadovoljstvo učenika i studenata, te rad nastavnika. Na temelju rezultata evaluacije, zatim je potrebno prilagoditi pedagoške strategije i smjernice za rad s UI.

Zaključak

Iako učenici i studenti imaju pozitivne stavove prema uporabi UI te su uglavnom zadovoljni uporabom UI na primjer chatbot lekcije, pokazalo se da shvaćaju temu na temelju razgovora s chatbotom, ipak niže ocjenjuju usvojenost na temelju jednog razgovora. Pozitivno je što prevladavaju pozitivni osjećaji i da su nastavnici spremni koristiti UI, no potrebna im je obuka za učinkovitiju uporabu. Učenici i studenti su zainteresirani za alate UI, ali prisutna je i povećana zabrinutost oko njihove pravilne uporabe. Izražene su zabrinutosti u skladu s onima iz literature[65], od etičkih pitanja, preko zaštite privatnosti do vještina i sposobnosti sudionika za primjenu UI.

Ograničenja rezultata ovog istraživanja vidimo u slučajnom uzorku koji je odabran te je moguće da rezultati budu drugačiji na većem uzorku pojedine populacije.

[65] Wu, 2024.

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Buduća istraživanja mogu ispitati uporabu UI u hrvatskim školama i ustanovama visokoga obrazovanja te digitalnu pismenost općenito u populaciji. Potrebna je suradnja škola, vlade i obrazovnih stručnjaka kako bi se jačala digitalna pismenost omladine i djelatnika, ali jednako tako da se kreiraju zajednički resursi za poučavanje kao i primjeri dobre prakse za metode poučavanja uz UI za zdrav i održivi razvoj poučavanja stranog jezika uz UI alate. Također je potrebno više akcijskih istraživanja od strane nastavnika u različitim kontekstima obrazovanja.

Mogućnosti uporabe UI u nastavi engleskoga jezika su mnogobrojne, ali ipak doima se da nadvladavaju izazove. S izazovima se treba postaviti educirano, etički i pomoću primjera dobre prakse kojih ima na pretek. Stoga je nužno pratiti trendove u tehnologiji i u obrazovanju kako bismo na vrijeme i s kritičkim promišljanjem učenicima mogli uliti nove vještine za nova jezična ovladavanja.

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Abstract

USING ARTIFICIAL INTELLIGENCE IN THE ENGLISH LANGUAGE ENVIRONMENT – POSSIBILITIES AND RESULTS

This paper provides an overview of artificial intelligence tools as well as a brief overview of the literature on current trends, issues and research results related to the use of AI in English language classes, from teaching to learning. A questionnaire was conducted on the use of AI among English language teachers, students learning English for special purposes and students of higher grades of a primary school. Ethical issues of the use of AI tools are also discussed. Given that AI is changing the world we live in, it is necessary to constantly improve and critically consider for what purposes and when to use it. The results of the research show the attitudes of different groups of participants and provide suggestions for future research and pedagogical implications.

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Ilić, Ivona–Majstorić, Ines–Varga, Rahaela

SUSTAVNA PODRŠKA USVAJANJU MAĐARSKOGA KAO PRVOG JEZIKA: SLUČAJ VERTIKALNE PROHODNOSTI U HRVATSKOME OBRAZOVNOM SUSTAVU

Uvod: Prohodnost obrazovnog sustava u Republici Hrvatskoj

Sustav obrazovanja u Republici Hrvatskoj je višerazinski te započinje ranim odgojem, a prelazi i u obrazovanje odraslih (Slika 1). Ministarstvo znanosti i obrazovanja[1] definiralo je prvu razinu obrazovanja kao odgoj, obrazovanje i skrb o djeci predškolske dobi, a koje se ostvaruje programima odgoja, obrazovanja, zdravstvene zaštite, prehrane i socijalne skrbi za djecu od šest mjeseci do polaska u školu. Sljedeću razinu predstavlja osnovnoškolski odgoj i obrazovanje, koje je u Republici Hrvatskoj obvezno i besplatno za svu djecu u dobi od šeste do petnaeste godine (za učenike s višestrukim teškoćama u razvoju najdulje do 21. godine života). Na razini srednjoškolskog odgoja i obrazovanja svakome se pod jednakim uvjetima i prema njegovim sposobnostima, a nakon završetka osnovnoškolskog odgoja i obrazovanja, omogućava stjecanje znanja i sposobnosti za rad i nastavak školovanja. Prelazak na visokoškolsko obrazovanje predstavlja ulazak u sferu obrazovanja odraslih, koje je dio jedinstvenoga obrazovnog sustava Republike Hrvatske te obuhvaća procese učenja odraslih osoba namijenjene obrazovanju za bolju zapošljivost te osobnom razvoju pojedinca.

Iz navedenih značajki obrazovnog sustava proizlazi potreba za osiguravanjem vertikalne prohodnosti svim učenicima, uključujući i učenike koji su pripadnici nacionalnih manjina, a hrvatski im nije prvi jezik. Vertikalna prohodnost razumijeva se kao omogućeni prelazak djeteta, učenika ili studenta s niže na višu razinu obrazovnog sustava.[2] U tom se procesu zahtjeva transparentnost kako bi se na ključnim točkama sustava mogla pravilno procijeniti učenička opterećenost razvojem kompetencija.[3] Uz vertikalnu, naglašava se i horizontalna prohodnost obrazovnih sustava, koja podrazumijeva učenički transfer između raznovrsnih škola na istoj razini.[4] Prohodnost obrazovnog sustava predstavlja prioritet suvremenih obrazovnih politika u Europi,[5] a radi gospodarske

[1] Ministarstvo znanosti i obrazovanja (2024). *https://mzo.gov.hr/odgoj-i-obrazovanje/109*
[2] CAVES KAatherine, MCDONALD Patric: *Education System Permeability,* CES Working Paper, 2024/17.
[3] KISS Irena: *Novi kurikulum u funkciji kvalitete i prohodnosti obrazovnog sustava.* Prozor u svijet obrazovanja, nauke i mladih, 2023/1. 41–53.
[4] SCHOENFELD Alan H.: *Addressing Horizontal and Vertical Gaps in Educational Systems.* European Review, 2020/1. (28.) 104–120.
[5] Europska komisija: *EUROPE 2020: A strategy for smart, sustainable and inclusive growth COMMUNICATION FROM THE COMMISSION*, Brussels European Commission. https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF
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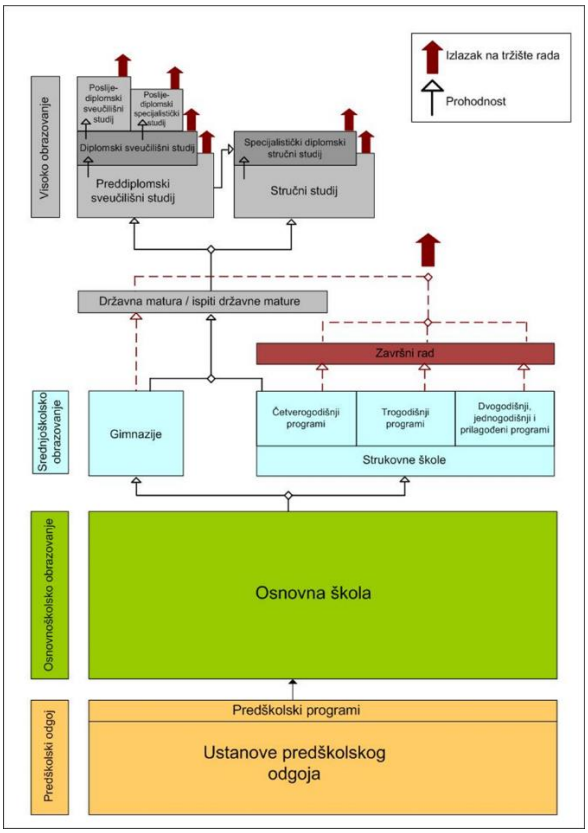
konkurentnosti.[6] Temelj za ostvarivanje vertikalne prohodnosti u slučaju nacionalnih manjina jest uvažavanje različitosti na svim razinama obrazovnog sustava, pri čemu je najistaknutija važnost ostvarivanja interkulturalnosti u svakodnevnom životu odgojno-obrazovne ustanove vidljive u kulturi dječjega vrtića, škole ili fakulteta. Pritom je ključna sustavna raspodjela zadataka i njihovo zajedničko izvršavanje kako bi utjecaj odgoja i obrazovanja na djetetov razvoj bio pozitivan,[7] jer se upravo u tome ocrtava specifičnost kulturne ustanove,[8] a čine ju članovi, običaji određene kulture i njihov odnos prema radu te oblici ponašanja.[9]



Odgojno-obrazovni sustav u Republici Hrvatskoj[10] *(Slika 1)*

[6] EGARIEVWE Stephen: *Vertical Education Enhancement – A Model for Enhancing STEM Education and Research,* Procedia - Social and Behavioral Sciences, 2015/177. 336–344.
YAZDANI Neshat–MCCALLEN, Leigh S.–HOYT L.–BROWN Joshua: *Predictors of Economically Disadvantaged Vertical Transfer Students' Academic Performance and Retention: A Scoping Review,* Journal of College Student Retention: Research, Theory & Practice, 2024/4. (25.) 871–891.
[7] RADIĆ HOZO Endica: *Organizacija rada i komunikacijske relacije u predškolskoj ustanovi,* Sveučilište u Splitu, 2022/372. (2.) 120–145.
[8] VUJIČIĆ Lidija: *Kultura vrtića-sustav koji se kontinuirano mijenja i uči,* Učiteljski fakultet Sveučilišta u Rijeci, 2011/372. (24.) 231–239.
[9] BENNETT Milton J.: *Osnovni koncepti interkulturalne komunikacije*, Intercultural Press, Boston, 2013.
[10] *Shematski prikaz preuzet s* http://ivana-vuletic.from.hr/zanimanja/shema-obrazovnog-sustava/

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Još je u dokumentu UNESCO-a iz 1974. godine prihvaćena različitost kultura i interkulturalizam, koji uključuje poštivanje i uvažavanje ljudskih prava, mira i slobode svakog pojedinca, a u odgojno-obrazovnom kontekstu predstavlja pravo djeteta na odgoj i obrazovanje prema svom materinskom jeziku.[11]

Ideja o uvođenju interkulturalizma u odgoj i obrazovanje ostvariva je kroz različite aktivnosti u nastavi, izdvojene teme u obaveznim nastavnim predmetima, izvanškolske aktivnosti i izvannastavne aktivnosti.[12] Interkulturalni kurikulum sadrži nekoliko pristupa za poticanje društvene primjene i prihvaćanje različitosti kroz modele, a to su modeli koji su usmjereni na razumijevanje kulturne razlike, karakteristike kulture, njihovih vrijednosti i spoznaje, zatim modeli usmjereni na učenike gdje je kombinirana nastava na materinskom jeziku i jeziku većinskog stanovništva u svrhu pomaganja razvoja školskog uspjeha i brže prilagodbe u redovnu nastavu pripadnika jezičnih manjina i modeli usmjereni na društvene promjene, odnosno promjene u strukturi kurikuluma, društveni i politički kontekst vrtića i škole.[13]

Mađarski jezik u hrvatskome obrazovnom sustavu

Obrazovanje pripadnika nacionalnih manjina sastavni je dio obrazovnog sustava.[14] Nacionalne manjine u Republici Hrvatskoj imaju pravo na odgoj i obrazovanje u predškolskim, osnovnoškolskim i srednjoškolskim ustanovama na materinskom jeziku gdje u nastavi uz opći dio programa i sadržaja sadrži i onaj koji je povezan za posebne karakteristike manjine, kao što su materinski jezik, povijest, književnost, kulturalno stvaralaštvo i geografija.

Uz poticanje vlastite kulture, učeniku je obveza uz predmete sadržaja manjinske pripadnosti, učiti i hrvatski jezik prema nastavnom planu i programu, dok visokoškolske ustanove organiziraju provođenje programa obrazovanja odgojitelja, učitelja i nastavnika za vođenje programa na pismu i jeziku nacionalnih manjina. U Republici Hrvatskoj postoje dva osnovna smjera po kojem se vodi obrazovanje manjina u Hrvatskoj, a to su usmjeravanje na jačanje vlastitog identiteta, i na međusobno razumijevanje i toleranciju življenja drugačije kulture i naroda.[15]

Temelj tome pronalazi se u Ustavu Republike Hrvatske,[16] gdje su izričito navedene 22 nacionalne manjine u Republici Hrvatskoj: Srbi, Česi, Slovaci, Talijani, Mađari, Židovi, Nijemci, Austrijanci, Ukrajinci, Rusini, Bošnjaci, Slovenci, Crnogorci, Makedonci, Rusi, Bugari, Poljaci, Romi, Rumunji, Turci, Vlasi i Albanci. Prema podacima Državnog zavoda za statistiku iz posljednjeg popisa stanovništva,[17] u Republici Hrvatskoj živi 10.315 pripadnika mađarske nacionalne manjine. Najviše Mađara živi na području Osječko-baranjske,

[11] SABLIĆ Marija: *Interkulturalizam u nastavi*. Naklada Ljevak, Zagreb, 2014.
[12] HRVATIĆ Neven *Interkulturalni kurikulum i obrazovanje na manjinskim jezicima.* Pedagogijska istraživanja., 2011/1. (8.) 7–17.
[13] Isto.
[14] ARLOVIĆ Mato: *Pravo nacionalnih manjina u Republici Hrvatskoj,* Novi informator, Zagreb, 2015.
[15] BABIĆ Dragutin: *Nacionalne manjine u Hrvatskoj: sociološka perspektiva,* Plejada, Zagreb, 2015.
[16] USTAV Republike Hrvatske (Narodne novine broj 56/1990.)
[17] POPIS stanovništva, kućanstava i stanova 2021. Državni zavod za statistiku. https://dzs.gov.hr/u-fokusu/popis-2021/88

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Vukovarsko-srijemske, Bjelovarsko-bilogorske i Primorsko-goranske županije te na području Grada Zagreba.

Pripadnici mađarske nacionalne manjine svoje pravo na odgoj i obrazovanje ostvaruju sudjelovanjem u predškolskom odgoju i obrazovanju na materinskom jeziku; sudjelovanjem u modelu A, modelu B i modelu C osnovnoškolskog obrazovanja te u modelu A i modelu C srednjoškolskog obrazovanja.[18]

Pohađanje nastave na jeziku i pismu nacionalne manjine u odgoju i obrazovanju ostvaruje se kroz Državni pedagoški standard predškolskog, osnovnoškolskog i srednjoškolskog odgoja i obrazovanja.[19] U osnovnoj školi programi za nacionalnu manjinu pružaju obrazovanje na njihovom materinskom jeziku u sklopu svih predmeta ili se pak radi o dvojezičnim programima, gdje je jednaki omjer materinskog jezika i hrvatskog jezika u nastavi. Republika Hrvatska pruža tri modela programa ovisno o broju učenika.[20] Prvi je model A, koji podrazumijeva pohađanje cjelokupne nastave na jeziku nacionalne manjine, gdje je sadržaj programa identičan kao i pohađanju nastave na hrvatskom jeziku, uz proširivanje dodatnih nastavnih sadržaja iz kulture nacionalnih manjina, kao što je književnost, povijest, geografija, likovna i glazbena kultura.[21]

Drugi je model B, koji uključuje izvođenje nastave na jeziku nacionalne manjine i na hrvatskom jeziku, odnosno dvojezična nastava, gdje je sadržaj podijeljen prema hrvatskom jeziku u predmetima prirodne grupe, dok se nastava na jeziku nacionalne manjine provodi u društvenim predmetima.

Treći je model C, koji uključuje nastavu na hrvatskom jeziku uz fakultativno učenje sadržaja nacionalne manjine, kao što su materinski jezik, književnost, povijest, geografija, likovna i glazbena kultura.

U Osječko-baranjskoj županiji mađarski je jezik među tri najzastupljenija manjinska jezika u obrazovnom sustavu,[22] pa se nameće pitanje zadovoljava li obrazovanje metodičko-organizacijske uvjete kako bi se osigurala vertikalna prohodnost kroz sustav.

Metodologija istraživanja

Cilj istraživanja

Cilj se istraživanja odnosio na metodičke preduvjete odgoju i obrazovanju na mađarskom jeziku. Konkretnije, zanimalo nas je kakav je organizacijsko-metodički profil odgojno–obrazovnih ustanova koje omogućavaju obrazovanje na mađarskome jeziku kako bi se odgovorilo na pitanje je li osigurana vertikalna prohodnost unutar sustava odgoja i obrazovanja za učenike koji se žele obrazovati na mađarskome jeziku kao prvom jeziku. Istraživanje se pritom usmjerilo na odgojno-obrazovne ustanove na području Osječko-baranjske županije, budući da je u njoj koncentriran najveći udio Mađara.

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[18] Ured za ljudska prava i prava nacionalnih manjina. 2024. https://pravamanjina.gov.hr/nacionalne-manjine/nacionalnemanjine-u-republici-hrvatskoj/madjari/375

[19] Državni pedagoški standard predškolskog, osnovnoškolskog i srednjoškolskog odgoja i obrazovanja. 2008.

[20] HRVATIĆ Neven: *Interkulturalni kurikulum i obrazovanje na manjinskim jezicima*. Pedagogijska istraživanja., 2011/1. (8), 7–17.

[21] SABLIĆ Marija: *Interkulturalizam u nastavi*. Naklada Ljevak, Zagreb, 2014.

[22] Isto.

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U svrhu ostvarenja cilja bilo je potrebno proći sljedeće korake:
– utvrditi koje ustanove u Osječko-baranjskoj županiji provode odgoj i obrazovanje na mađarskom jeziku,
– odrediti koje su razine obrazovanja prisutne,
– postaviti kriterije po kojima će se provesti analiza organizacijsko-metodičkih specifičnosti,
– analizirati službene internetske stranice ustanova koje provode odgoj i obrazovanje na mađarskom jeziku u Osječko-baranjskoj županiji,
– provesti popratni intervju s čelnicima ustanovama koje provode odgoj i obrazovanje na mađarskom jeziku,
– obraditi i ustaviti prikupljene podatke.

Opseg i metode istraživanja

Istraživanje je obuhvatilo ustanove koje provode odgoj i obrazovanje na mađarskome jeziku u Osječko-baranjskoj županiji na različitim razinama odgoja i obrazovanja u školskoj godini 2022/2023., a odnosilo se na dječje vrtiće, osnovne škole, srednju školu i fakultet. Kao istraživačke metode primijenjene su:
a) analiza sadržaja službenih internetskih stranica ustanova i
b) popratni intervju s čelnicima istih ustanova.
Postavljeni kriteriji analize odnosili su se na tri glavne kategorije, a to su:
a) dionici odgoja i obrazovanja,
b) organizacija rada ustanove i
c) opremljenost ustanove.

Primjerice, za osnovne je škole analiziran broj učenika, broj učitelja, broj stručnih suradnika, broj pomoćnog osoblja, broj djelatnika sveukupno, broj odjela, broj smjena, postojanje dežurstva unutar ustanove, model programa nastave, broj računala u ustanovi, postojanje sportskih dvorana, postojanje kuhinja i postojanje knjižnice. Kriteriji za predškolske i školske ustanove razlikovali su se od kriterija za analizu ustanova visokoškolskog obrazovanja, kojim se zapravo pokriva obrazovanje odraslih osoba.

Rezultati i rasprava

Podatci dobiveni istraživanjem ustustavljeni su i tablično prikazani prema razinama sustava obrazovanja, počevši od najniže prema najvišoj razini. Na području Osječko-baranjske županije utvrđene su sljedeće ustanove koje organiziraju rani i predškolski odgoj i obrazovanje na mađarskom jeziku: Prosvjetni kulturni centar Mađara u Republici Hrvatskoj, područni vrtići Kopačevo, Vardarac i Lug (Tablica 1).

Nazivi ustanove Kriteriji	**Prosvjetni kulturni centar Mađara u Osijeku**	**Područni vrtić Kopačevo**	**Područni vrtić Vardarac**	**Područni vrtić Lug**
Broj upisane djece	40	13	8	17
Dob djece	3-7 godina	3-7 godina	3-7 godina	3-7 godina

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Broj skupina	2	1	1	1
Model programa	A	B	B	B
Program boravka	cjelodnevni	poludnevni	poludnevni	poludnevni
Postojanje kuhinje	+	+	+	+
Postojanje igrališta	+	+	+	+

Obilježja dječjih vrtića na mađarskom jeziku (Tablica 1)

Na području Osječko-baranjske županije osnovnoškolske ustanove za odgoj i obrazovanje koje omogućuju školovanje na mađarskom jeziku su: Prosvjetni kulturni centar Mađara u Republici Hrvatskoj, Osnovna škola Lug, Osnovna škola Zmajevac te područne osnovne škole Kotlina, Novi Bezdan, Suza, Kopačevo i Vardarac (Tablica 2 i Tablica 3).

Nazivi ustanove Kriteriji	**Prosvjetni centar Mađara u Osijeku**	**Osnovna škola Lug**	**Osnovna škola Zmajevac**
Broj učenika	31	67	91
Broj učitelja	30	29	36
Broj stručnih suradnika	2	2	2
Broj pomoćnog osoblja	9	5	9
Broj djelatnika ukupno	45	39	48
Broj odjela	11	14	17
Broj smjena	2	1	1
Postojanje dežurstava	+	-	+
Model programa	A	A i B	B
Broj računala u ustanovi	53	36	48
Postojanje sportske dvorane	+	+	+
Postojanje kuhinje	+	+	+
Postojanje knjižnice	+	+	+

Obilježja matičnih osnovnih škola na mađarskom jeziku na području Osječko-baranjske županije (Tablica 2)

Nazivi ustanove Kriteriji	**Područna Osnovna škola Kotlina**	**Područna Osnovna škola Novi Bezdan**	**Područna Osnovna škola Suza**	**Područna Osnovna škola Kopačevo**	**Područna Osnovna škola Vardarac**
Broj učenika	6	18	9	4	5
Broj učitelja	8	13	6	6	6
Broj stručnih suradnika	2	2	2	2	2
Broj pomoćnog osoblja	1	1	1	2	2
Broj djelatnika ukupno	9	4	5	10	10
Broj odjela	3	3	4	2	2
Broj smjena	2	1			1

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Postojanje dežurstava	+	+	+	+	+
Model programa	A	A	B	B	B
Broj računala u ustanovi	3	3	3	3	3
Postojanje sportske dvorane	-	-	-	-	-
Postojanje kuhinje	-	Čajna kuhinja	Čajna kuhinja	-	Čajna kuhinja
Postojanje knjižnice	-	-	-	-	-

Obilježja područnih osnovnih škola na mađarskom jeziku na području Osječko- baranjske županije (Tablica 3)

Srednjoškolsko obrazovanje na mađarskom jeziku moguće je steći u sklopu Prosvjetnog centra Mađara u Republici Hrvatskoj, jedinoj ustanovi koja u Osječko-baranjskoj županiji organizira odgoj i obrazovanje na sekundarnoj razini obrazovnog sustava. Centar nudi četverogodišnje (program opće gimnazije, program za hotelijersko-turističkog tehničara i program za ekonomista) i trogodišnje programe (kuhar i prodavač). U Tablici 4 prikazana su obilježja ove ustanove.

Nazivi ustanove Kriteriji	**Prosvjetni kulturni centar Mađara u Republici Hrvatskoj u Osijeku**
Broj učenika	43
Broj učitelja	33
Broj stručnih suradnika	2
Broj pomoćnog osoblja	9
Broj djelatnika ukupno	44
Broj odjela	11
Broj smjena	1
Postojanje dežurstava	+
Model programa	A
Broj računala u ustanovi	45
Postojanje sportske dvorane	+
Postojanje kuhinje	+
Postojanje knjižnice	+

Organizacijska struktura srednje škole na mađarskom jeziku u Osječko-baranjskoj županiji (Tablica 4)

Kako bi nastavili obrazovanje na mađarskome jeziku na visokoškolskoj razini, pripadnicima mađarske nacionalne manjine dostupan je i studij Mađarskog jezika i književnosti. Sveučilište Josipa Jurja Strossmayera u Osijeku, u sklopu Katedre za mađarski jezik i književnost na Filozofskome fakultetu nudi mogućnost

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pohađanja preddiplomskog studija mađarskog jezika i književnosti u trajanju od 3 godine (bakalaureat) i diplomski studij mađarskog jezika i književnosti u trajanju od 2 godine (magistar struke).

Budući da se radi o dvopredmetnom studiju, što znači da studenti uz mađarski jezik i književnost studiraju još jedan smjer po izboru (npr. engleski jezik, informatologiju, sociologiju, filozofiju, itd.), programski je najviše podudaran modelu C. Uvjet upisa na preddiplomski studij nije nacionalna pripadnost niti određena razina znanja mađarskoga jezika pa studenti mogu biti i pripadnici većinskog naroda bez prethodnog znanja mađarskoga jezika.

Opremljenost ustanove za izvođenje ovog studijskog programa ujednačena je s uvjetima za izvođenje ostalih jezičnih studija, a omjer broja nastavnika i studija je povoljan. Tablica 5 pokazuje kako je taj omjer 1:5.

Nazivi ustanove **Kriteriji**	**Sveučilište J. J. Strossmayer u Osijeku** **Filozofski fakultet** **Katedra za mađarski jezik i književnost**	Ukupno
Broj studenata po godinama u ak. god. 2023./2024.	Preddiplomski studij: 1. god=10, 2.god =9, 3. god=4 Diplomski studij: 1. god = 5, 2. god = 10	38
Broj redovitih profesora	1	7
Broj izvanrednih profesora	2	
Broj docenata	1	
Broj lektora	2	
Broj viših asistenata	1	

Odnos broja nastavnika i studenata na studiju mađarskog jezika i književnosti (Tablica 5)

Rezultati koji proizlaze iz prikupljenih podataka pokazuju kakva je organizacijska struktura ustanova na mađarskom jeziku u Osječko-baranjskoj županiji. Iz Tablice 1, Tablice 2, Tablice 3 i Tablice 4 razvidno je da svaka ustanova ima svoje djelatnike koji čine organizaciju rada, a to su učitelji/odgojitelji, stručni suradnici od kojih je prema rezultatima pedagog i knjižničar, zatim pomoćno osoblje u što se ubrajaju spremačice, domar i kuhari. U svakom objektu nalazi se kuhinja, u matičnim objektima po jedna sportska dvorana i knjižnica, dok u područnim objektima postoji igralište na zelenoj površini i čajna kuhinja, računala su dio odgojno-obrazovnog rada u svrhe predmeta informatike; u učionicama i vrtićima nalaze se prijenosna računala koja su pod odgovornošću odgojitelja i učitelja.

Unazad dva desetljeća u Hrvatskoj povećan je interes za predškolskim i osnovnoškolskim odgojem i obrazovanjem na jeziku i pismu nacionalne manjine, što je dovelo do većeg otvaranja ustanova koje uključuju program i sadržaje na materinjem jeziku nacionalnih manjina.[23] Pritom je model A praćen negativnim trendom za osnovnoškolsko obrazovanje i srednjoškolsko obrazovanje, dok se povećao interes za odgoj i obrazovanje prema modelu C.

Prema Nacionalnom planu razvoja sustava obrazovanja za razdoblje do 2027,[24] namjera je nastaviti sa sustavnom podrškom s ciljem unaprjeđenja odgoja

[23] BJEŽANČEVIĆ Sanja: *Trendovi u obrazovanju nacionalnih manjina u Hrvatskoj*, Zbornik radova Pravnog fakulteta u Splitu, Split, 2022.
[24] Ministarstvo znanosti i obrazovanja. 2024.

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i obrazovanja djece i učenika pripadnika nacionalnih manjina kroz podupiranje odgojno-obrazovnih ustanova koje provode neki od modela obrazovanja (model A, B i/ili C). U sklopu te mjere pružat će se potpora u usvajanju jezičnih i drugih kompetencija nastavnika i stručnih suradnika koji rade u školama s nastavom na jeziku i pismu nacionalnih manjina. Navedena mjera predviđa potporu uz stručna usavršavanja ravnatelja odgojno-obrazovnih ustanova, putem studijskih putovanja u zemlje matičnog naroda ili zemlje sa značajnom (ili brojnom) zajednicom nacionalne manjine te izdavanje suglasnosti za ustroj nastave i zapošljavanje učitelja i nastavnika. Ostale mjere uključuju izradu razlikovnih kurikuluma u nastavi prema modelu A i kurikuluma za model C; pravodobno osiguravanje udžbenika u nastavi na jeziku i pismu nacionalnih manjina, te suzbijanje diskriminacije. Navedene mjere usklađene su s Nacionalnom razvojnom strategijom Republike Hrvatske do 2030. godine te doprinose ciljevima/podciljevima održivog razvoja UN-ove Agende 2030 (SDG).

Zaključak

Nacionalna manjina predstavlja skupinu ljudi koji su slijedom političkih ili povijesnih događanja ostali izvan granice i njeguju svoje običaje i jezik. Mađarska nacionalna manjina u Republici Hrvatskoj ima pravo na njegovanje toga jezika kroz odgoj i obrazovanje. Organizacijsko-metodička struktura ustanova omogućuje kvalitetan proces provođenja rada u odgoju i obrazovanju s ciljem kvalitete rada i ostvarivanjem određenog obrazovnog cilja. Organizacijsku strukturu čine svi sudionici, djelatnici i učenici ustanove, svi objekti koji pružaju odgoj i obrazovanje djece u ustanovi i program po kojemu je organiziran rad. Prava nacionalnih manjina na odgoj i obrazovanje na prvom jeziku i pismu podrazumijevaju omogućavanje osnivanja ustanova u kojima se provodi program na jeziku i pismu manjine od najranije dobi, što je potvrđeno u ovom radu u rezultatima istraživanja.

Naime, na području koje je obuhvatilo istraživanje postoje četiri dječja vrtića koja pružaju tu mogućnost. Nadalje, pokazalo se kako je Prosvjetni kulturni centar Mađara u Republici Hrvatskoj u Osijeku jedina ustanova takve vrste koja provodi učenje isključivo prema modelu programa A i to na sve tri razine obrazovanja (vrtić, osnovna škola i srednja škola su u istom objektu). Također, Centar ima najveći broj upisane djece u vrtić, i to u cjelodnevnom boravku. U ostalim ustanovama Osječko-baranjske županije prevladavaju model A ili B, svi objekti sadržavaju kuhinju, dvoranu i knjižnicu, dva stručna suradnika od kojih je jedan pedagog, a drugi knjižničar, broj učenika i djelatnika ovisi o naseljenosti područja. Pokazalo se da ruralni dio (u Baranji), ima veći broj ustanova od urbanog dijela (u Slavoniji), od kojih su sve podjednako kvalitetno uređene i opremljene u usporedbi s ostalim ustanovama u Županiji.

Zaključno se može konstatirati kako Republika Hrvatska podržava vertikalnu prohodnost obrazovnog sustava za govornike mađarskog jezika, i to od najranije dobi do razine diplomskog sveučilišnog studija, u slučaju da se polaznici odluče na studiranje Mađarskoga jezika i književnosti. Pritom je važno napomenuti da se vertikalna prohodnost sustava ne smije promatrati kao socijalno

https://mzo.gov.hr/odgoj-i-obrazovanje/109doi:10.1017/S1062798720000940

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isključivanje manjina iz života većinske zajednice, budući da je kroz sva tri modela nužno usvajanje hrvatskog jezika, a upisi u takve programe ne koriste kriterij nacionalne pripadnosti već uključuju i djecu (ili odrasle) koja su ne-mađarske nacionalnosti.

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Abstract

SYSTEMATIC SUPPORT TO AQCUISITION OF HUNGARIAN AS L1: THE CASE OF VERTICAL PERMEABILITY IN CROATIAN EDUCATION SYSTEM

Achieving the quality of teaching and learning requires organized support from the education system, and education in the language of a national minority represents an additional challenge to quality assurance. The paper deals with the issue of the acquisition of the Hungarian language as the mother tongue (L1) of the Hungarian national minority in Croatia, focusing on the support provided through the education system.

The aim was to investigate the organisational and methodologycal profile of educational institutions that provide education in Hungarian in the area of Osijek-Baranja County in order to answer the question of whether vertical mobility within the education system is ensured for students who want to be educated in the Hungarian language as L1. An analysis of the methodical conditions for maintaining teaching and learning at different levels of the educational system (ECEC, primary, secondary and higher education) was carried out.

The results confirm the existence of systematic support for the acquisition of the Hungarian language as the first language of the Hungarian national minority in the Republic of Croatia, since within the Osijek- Baranja County, vertical mobility is ensured at all levels of the educational system with methodological conditions similar to those in institutions operating exclusively in the Croatian language. More specifically, it is possible to go through the entire education system using Hungarian as the first language, because programmes in Hungarian are organised in four kindergartens, eight primary schools, and one secondary school. There is also one university undergraduate and graduate study programme available – Hungarian language and literature.

Keywords: mother tongue, teaching conditions, education system, organised support, national minority

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Sabolić, Valentina–Bockovac, Timea Anita

UTJECAJ MAĐARSKOG JEZIKA NA GRAMATIČKE KOMPETENCIJE UČENIKA DVOJEZIČNIH HRVATSKO-MAĐARSKIH ŠKOLA

1. Uvod

U Mađarskoj su dvije dvojezične hrvatsko-mađarske gimnazije. Jedna je u Budimpešti, a druga u Pečuhu. Riječ je o gimnazijama u kojima učenici bez poznavanja hrvatskoga jezika imaju mogućnost upisa u 9./N razred, tijekom kojega se pripremaju za redoviti 9. razred. Po završetku 9./N razreda ta se skupina priključuje onoj skupini koja dolazi iz 8. razreda hrvatsko-mađarske osnovne škole te zajedno slušaju sve predmete prema aktualnom *Planu i programu* od 9. do 12. razreda i na kraju 12. razreda maturiraju iz hrvatskog jezika i književnosti na srednjem ili višem stupnju. Dvojezično gimnazijsko obrazovanje podrazumijeva učenje Povijesti, Narodopisa, Zemljopisa, Hrvatske gramatike i Hrvatske književnosti na hrvatskom jeziku, a preostale predmete uglavnom na dvama jezicima – mađarskom i hrvatskom.

Najsnažnija motivacija za upis u dvojezičnu hrvatsko-mađarsku školu učenicima i njihovim roditeljima jest predačka povezanost s hrvatskom kulturom i hrvatskim jezikom. Najčešće se upisuju oni učenici čiji su roditelji pohađali tu školu. Njihovi su preci pripadnici raznih subetničkih skupina Hrvata u Mađarskoj, koji su se na te prostore doselili u periodu 17. i 18. stoljeća, stoga su sačuvali svoje arhaične zavičajne jezične idiome. U skladu s tim, u jednom razrednom odjelu mogu se naći učenici koji svaki dan govore barem s jednim roditeljem ili s bakom i/ili djedom na nekom hrvatskom dijalektu, zatim učenici koji ne govore hrvatski jezik i nisu njime svakodnevno okruženi, ali bake ili djedovi govore taj jezik pa im je on poznat i blizak barem na razini prepoznavanja. Tako u jednom razredu nastavu prate i nasljedni i predački govornici. Jelaska ta dva pojma razlikuje definirajući nasljedni jezik kao onaj koji je učenik usvojio od svojih bližnjih i može ga barem razumjeti, a možda je i na određenoj razini i dvojezičan, dok su predački govornici oni koji moraju učiti jezik, ali su svjesni da je dio identiteta njihovih predaka pa se i oni s njim lakše identificiraju[1]. Motivacija bi i kod nasljednih i kod predačkih govornika trebala biti visoka, a to je potvrdilo i istraživanje provedeno 2023. godine u dvjema dvojezičnim gimnazijama u Mađarskoj (Budimpešta i Pečuh), gdje su rezultati analize stavova učenika prema hrvatskom jeziku pokazala visoku razinu motiviranosti i pozitivne stavove prema hrvatskom kao manjinskom jeziku.[2] Ipak, autorice Banković-Mandić i Peruško smatraju da se s vremenom ta identifikacijska motivacija gubi zbog prevladavanja većinskoga jezika u svakom aspektu života učenika pa oni manjinske škole više ne

[1] JELASKA, Zrinka: *Vrste nasljednih govornika*. Lahor, 2014/17. 83–105. orcid.org/0000-0001-6189-2485

[2] BOCKOVAC, Timea Anita–SABOLIĆ, Valentina: *Stavovi srednjoškolaca prema hrvatskom kao manjinskom jeziku u Mađarskoj* (u postupku objave). 2023.

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upisuju intrinzično motivirani, već na nagovor svojih roditelja. Autorice dalje smatraju i da je baš zbog toga potrebno analizirati jezične vještine i potrebe učenika kako bi se zatim mogla i adaptirati nastava prema njihovim potrebama.[3] Upravo na tim promišljanjima temelji se jezična analiza u ovome radu. Ova analiza inicijalna je analiza, kojoj je cilj utvrditi s kojim se poteškoćama suočavaju mađarski govornici tijekom pisane produkcije na standardnom hrvatskom jeziku.

2. Gramatička točnost u pisanoj produkciji nasljednih i predačkih govornika

Gramatička se kompetencija smatra vrlo važnim temeljem komuniciranja na nekom jeziku. Prema ZEROJ-u ona podrazumijeva morfosintaktičko poznavanje jezika koji se uči te sposobnost da se proizvedu gramatički i semantički ispravne rečenice.[4] Canale je 1984. istaknuo važnost posjedovanja gramatičke kompetencije jer je ona temelj za korištenje znanja i vještina koje su potrebne za prenošenje doslovnih informacija u nekom jeziku.[5] Jelaska navodi da nasljedni govornici najčešće mnogo bolje vladaju govornom produkcijom jezika budući da se rijetko služe pisanim diskursom i zato se razina njihova poznavanja gramatičkih zakonitosti najbolje iščitava iz pisanih radova. Nasljedni govornici mogu se usmeno sporazumijevati bez većih poteškoća, no iz pisanog se diskursa vidi imaju li osviješteno znanje o jeziku.[6] Educiranje o gramatičkim zakonitostima u jeziku dolazi u institucionalnim okvirima. U Mađarskoj su to osnovne i srednje škole s dvojezičnim hrvatsko-mađarskim programom, odnosno škole s tzv. predmetnom nastavom hrvatskoga jezika. Nasljedni govornici često vladaju nekim hrvatskim dijalektom koji su usvojili od svojih članova obitelji pa ih je u školi potrebno poučavati standardnom hrvatskom jeziku. Takvim je govornicima lakša komunikacija na hrvatskom jeziku nego predačkim govornicima ili inim govornicima, no činjenica da oni poznaju neki od idioma hrvatskoga jezika ne pretpostavlja i da će im biti lako savladiva standardnogramatička razina jezika.[7]

S obzirom na to da je gramatika vrlo bitan dio učenja svakoga jezika, a hrvatski i mađarski jezik nisu genetski i tipološki srodni jezici,[8] cilj je ovoga rada prikazati poteškoće s kojima se susreću mađarski srednjoškolci tijekom učenja hrvatskoga jezika. Kako bi se ostvarila uspješna komunikacija, potrebna je visoka razina znanja o gramatičkim zakonitostima, a hrvatska je gramatika prilično kompleksna. Budući da se jednom analizom ne mogu obuhvatiti sve razine jezika (fonološka, morfološka, sintaktička i leksička), u ovom će radu naglasak biti na morfološkoj i sintaktičkoj razini jezika kako bi se uvidjelo kojim se i kakvim

[3] BANKOVIĆ-MANDIĆ, Ivančic–PERUŠKO, Katja: *Pristup gramatičkim temama u hrvatskom kao inom jeziku*. SlavVaria, 2023/1. https://journals.lib.pte.hu/index.php/slavvaria/article/view/6737
[4] ČELIKOVIĆ, Vlasta–BRESSAN, Valnea et. all (ur.): *Zajednički europski referentni okvir ta jezike: učenje, poučavanje, vrednovanje*. Školska knjiga, Zagreb, 2005.
[5] BAGARIĆ, Vesna–MIHALJEVIĆ DJIGUNOVIĆ, Jelena: *Definiranje komunikacijske kompetencije*. Metodika, 2007/1. (8.), 84–93.
[6] JELASKA, Zrinka: *Ovladavanje materinskim i inim jezikom*. Agencija za odgoj i obrazovanje, Zagreb, 2012.
[7] Isto.
[8] Hrvatski jezik pripada indoeuropskoj jezičnoj porodici i dio je južnoslavenskih jezika te je flektivni jezik, a mađarski jezik pripada ugrofinskoj jezičnoj porodici, u kojoj su svi jezici aglutinativni. (Usp. Barić i dr. *Hrvatska gramatika*. 2005. i *Hrvatska enciklopedija, mrežno izdanje*).

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jezičnim konstrukcijama služe učenici 9. razreda kako bi prenijeli informacije te kako njihov materinski jezik utječe na tu proizvodnju. Pretpostavlja se da će rečenice biti kratke i sažete, da će u sastavcima najzastupljenije vrste riječi biti imenice i pridjevi te glagoli u prezentu zbog svoje frekventnosti na početnim razinama učenja.

3. Istraživanje utjecaja mađarskog jezika na gramatičku kompetenciju učenika

Hržica navodi da je *cilj [je] podučavanja povećati učenikovo znanje drugog jezika. Da bi se to postiglo, učitelj poučavatelj proces usvajanja jezika promatra obrnuto. Ako se želi povećati učenikovo znanje, potrebno ga je prvo procijeniti. To se može postići jedino vrednovanjem postignuća koje jezično znanje omogućuje, znači procjenom izlaza/iznosa*.[9] Kako bismo znali koje su potrebe učenika, što je ono što on treba dobro naučiti kako bi svakom nastavnom godinom napredovao, potrebno je provesti provjere znanja, vještina i jezičnih sposobnosti da bi se na temelju toga mogli oblikovati nastavni sadržaji i nastavni planovi. Budući da do sada u Mađarskoj nisu provedena sustavna istraživanja i analize jezičnih kompetencija polaznika hrvatsko-mađarskih osnovnih i srednjih škola, smatra se da je vrlo važno krenuti u tom smjeru i utvrditi koje su to razine (hrvatskoga) jezika koje učenicima manjinskih škola stvaraju teškoće i kakav utjecaj na njih ima većinski (mađarski) jezik. Kada se govori o hrvatskom kao inom jeziku, istraživanja i analize provedene su većinom u kontekstu Republike Hrvatske s ciljem unapređenja nastave za inojezične doseljenike te odrasle govornike koji se ili zbog posla ili iz hobija počinju baviti učenjem jezika. O hrvatskom kao manjinskom jeziku u Mađarskoj još uvijek nema dovoljno takvih radova i projekata.[10]

3.1. Metodologija

Istraživanje, koje se opisuje u ovome radu, provedeno je tijekom šk. god. 2023./2024. u jednoj dvojezičnoj hrvatsko-mađarskoj gimnaziji u Mađarskoj. Analiza radova temelji se na pisanom diskursu učenika 9. razreda. Učenici su tijekom školske godine u više navrata pisali sastavke na zadane teme, primjerice *Moj vikend*, *Opis moje sobe/učionice*, *Tjedan hrvatskoga jezika* i *Najbolji dan u mojem životu*. Učenicima su ponuđene teme koje prate nastavni *Plan i program* te one teme koje prate aktualna školska događanja. Učenici su uz svoje sastavke zamoljeni i za predaju obaviještenog pristanka.

[9] HRŽICA, Gordana: *Kada je hrvatski jezik pretežak i Hrvatima: metodologija nastave hrvatskog kao drugog jezika*. 2006.

[10] Vjekoslav Blazsetin i Maja Matijević u studenom 2023. izložili su zapažanja na temu *Hrvati u Mađarskoj boje se od psa i sviraju na tamburi: utjecaj većinskoga mađarskog na hrvatski kao manjinski jezik* u sklopu Međunarodnog znanstvenog skupa – *Hrvatski kao ini jezik – VIII. HIDIS.*, a analiza rada obuhvaća utjecaj mađarskoga jezika na produkciju odraslih obrazovanih ljudi koji djeluju u hrvatskim medijima u Mađarskoj.

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3.2. Ispitanici

U istraživanju je sudjelovalo 16 ispitanika, a korpus čine 64 sastavka. Ispitanicima nije unaprijed utvrđena razina znanja hrvatskoga jezika prema ZEROJ-u. U dvojezičnim hrvatsko-mađarskim školama ne postoji sustavno provođenje ispitivanja razine znanja te se u jednom razrednom odjeljenju mogu pronaći učenici od razine A2 do B2 (prema procjenama nastavnika). Svim je ispitanicima zajedničko da im je materinski jezik mađarski, ali im je razina znanja hrvatskoga jezika različita te su neki učenici predački govornici, a neki nasljedni. Takva se skupina smatra nehomogenom skupinom.[11]

3.3. Pretpostavke

Cilj je ovoga rada utvrditi utječe li mađarski jezik, koji je s hrvatskim u genetsko-tipološkoj nesrodnosti, na gramatičke kompetencije učenika, odnosno na morfološke i sintaktičke razine u pisanoj proizvodnji.

U skladu s tim nameću se ova istraživačka pitanja:

1) Imaju li učenici kojima je mađarski materinski jezik poteškoća u savladavanju hrvatskoga roda?
2) Stvaraju li hrvatski padežni nastavci poteškoće učenicima kojima je mađarski prvi jezik?
3) Kako poredak riječi u mađarskim rečenicama utječe na poredak riječi u hrvatskim rečenicama?

Pretpostavke su ove analize sljedeće:

P1: Učenicima, kojima je gramatički rod iskustveno nepoznat, imat će problema pri njegovu određivanju u hrvatskom jeziku.

P2: Hrvatski padežni nastavci, s obzirom na sva tri roda i oba broja, učenicima će predstavljati poteškoće u pisanom izražavanju.

P3: Sintaktičke zakonitosti mađarskoga jezika odrazit će se u pisanoj produkciji učenika na hrvatskom jeziku.

3.4. Rezultati

3.4.1. Rezultati morfosintaktičke analize imenskih riječi

Analizom radova odlučeno je da će se rezultati prikazati kroz padežnu podjelu pogrešaka imenskih riječi neovisno o rodu i broju imenskih riječi. U nastavku će se dati prikaz pogrešaka kroz svih sedam hrvatskih padeža, a unutar te podjele bit će riječi i o problematici određivanja gramatičkoga roda i broja imenica. Prvo će se navesti primjeri pronađeni u učeničkim radovima, zatim mađarski ekvivalent (ako se smatra da je riječ o mađarskom utjecaju), a potom pravilni hrvatski izraz. Za potrebe ovoga rada izložit će se samo pogreške vezane uz imenske riječi i njihove kategorije, iako je analiza pokazala gramatičke pogreške i pri uporabi drugih vrsta riječi, npr. glagola.

[11] GULEŠIĆ MACHATA, Milvia: *Apriorna analiza odstupanja u gramatičkom rodu (s obzirom na prvi jezik učenika)*. Opera Slavica, 2013/4. 174–186.

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3.4.1.1. Nominativ

Tijekom analize tekstova utvrđene su pogreške na leksičkoj i morfološkoj razini u nominativu. U većini tih slučajeva pretpostavlja se da su pogrešno naučeni oblici riječi budući da učenici u školi riječi uče čitajući polazne tekstove. Nakon što pročitaju neki tekst, određuje se značenje nepoznatih riječi pa je moguće da dolazi do pogrešnog zapisivanja nominativnoga oblika u bilježnice. To dokazuju riječi: *medija*, *radija*, *novinara*, *završetka*, *novina*, koje su percipirane kao imenice ženskoga roda jednine. Utjecaj mađarskog jezika u produkciji hrvatskoga iščitava se u primjerima poput:

interju (mađ. *interjú*) → *intervju*
nije problema (mađ. *nincs probléma*) → *nije problem*

U ostalim primjerima nesigurnost pri utvrđivanju gramatičkoga roda i broja očituje se u nesročnosti atributa i imenice te neslaganja imenske riječi s glagolom:

prostor je velika i moderna → *prostor je velik i moderan*
moja tata[12] → *moj tata*
omiljen boja mu je crn → *omiljena mu je boja crna*
dva manje ptice → *dvije manje ptice*
Jako mi se sviđala ovaj tjedan. → *Jako mi se sviđao ovaj tjedan.*
vrata je crvena → *vrata su crvena*

3.4.1.2. Vokativ

Vokativni nastavci predstavljaju dosta problema i izvornim govornicima, a posebne poteškoće zadaju inojezičnim govornicima, kojima je teško objasniti sve njegove zakonitosti. Zbog toga vokativni oblici i u izvornojezičnih i inojezičnih govornika predstavljaju izazove.[13]

Budući da u mađarskom jeziku nema posebnih vokativnih oblika, govornici mađarskoga jezika i u pisanom obraćanju drugoj osobi na hrvatskom jeziku vokativ uvijek izjednačuju s nominativom:

Poštovana profesorica/nastavnica! (mađ. Tisztelt Tanárnő!) → *Poštovana profesorice/nastavnice!*
Poštovana ravnateljica! (mađ. *Tisztelt Igazgatónő!*) → *Poštovana ravnateljice!*
Ivan! Dušan! Janja! (mađ. *Iván! Dusán! Agnes!*) → *Ivane! Dušane! Janjo!*

3.4.1.3. Genitiv

Analogno nominativu jednine, u kojemu se riječ *radio* (m. r.) pojavljuje kao *radija* (ž. r.), ta riječ u genitivu jednine pojavljuje se u sljedećem obliku:

... pokretanje naše školske radije ... → *... pokretanje našeg školskog radija.*

Genitiv jednine predstavlja poteškoće i zbog toga što se često nalazi uz imenice ili glagolske imenice u drugim padežima pa se ti nastavci poistovjećuju, kao što su sljedeći primjeri:

jačinom glasom → *jačinom glasa*

[12] Uočeno je da učenici imenicu *tata* (m. r.) dovode u vezu s imenicom *mama* (ž. r.) i percipiraju ih obje kao imenice ženskoga roda. Učenici su usmeno pojasnili da *tata* ne može biti muškoga roda jer je njezin oblik jednak obliku *mama* i jednako se sklanja. Zatim im je rečeno da za tu riječ trebaju zapamtiti da je muškoga roda i neka si pomognu time da ona označava muškog roditelja. To je jedan od frekventnih primjera koji su učenici do ove razine učenja trebali naučiti kao iznimku, no analiza je pokazala da nije tako.

[13] SALAK, Tanja: *Vokativ u nastavi hrvatskoga kao inoga jezika*. Philological Studies, 2022/2. 146–163.

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izražavanje osjećaje → izražavanje osjećaja
obrađuju temu iz politiku → obrađuju temu iz politike

Posebnu kategoriju zacijelo čine imenice *pluralia tantum*, poput visokofrekventne imenice *vrata*, a koja stvara poteškoće u svim padežima zbog svoje specifičnosti. Učenici tu riječ percipiraju kao imenicu ženskoga roda zbog nominativnog nastavka -a, a ne kao imenicu srednjega roda -a deklinacije:

Iza vrate je jedan umivaonik … → Iza vrata je umivaonik …

3.4.1.4. Dativ

Uz glagole kretanja učenici uvijek koriste prijedlog *kod* uz genitiv umjesto prijedloga *k* uz dativ ili besprijedložnog dativa.

Ići ću kod bake i djeda. → Ići ću (k) baki i djedu.
Išao sam kod liječnika. → Ići ću (k) liječniku.
Išla sam kod prijatelja. → Ići ću (k) prijatelju.

Zanimljivo je da mađarski jezik razlikuje ta dva izraza pa bi prema tomu mađarski govornici trebali bez problema razlikovati statično mjesto i put do nekoga mjesta i u hrvatskom jeziku. Razlike u mađarskom jeziku glase ovako:

Menni fogok a nagyszüleimhez. (Ići ću k baki i djedu.)
A nagyszüleimnél voltam. (Bio sam kod bake i djeda.)

I unatoč tome, sastavci na hrvatskom jeziku pokazali su odstupanja od uobičajene prakse u mađarskom pa se smatra da je u ovom slučaju riječ o utjecaju nastavnika i okoline, u kojoj se danas sve češće na hrvatskom razgovornom idiomu čuju takvi, nenormativni prijedložni izrazi.

3.4.1.5. Akuzativ

U skladu s tim što se na ovoj obrazovnoj razini učenici pretežito služe jednostavnijim gramatičkim konstrukcijama i jednostavnim rečenicama, u tekstovima je pronađeno najviše akuzativnih izraza.

I akuzativom i lokativom označava se da se nešto nalazi u nekim granicama, ali se akuzativom označava kretanje prema unutrašnjosti, dok se lokativom označava da se nešto nalazi ili kreće u unutrašnjosti.[14] Takve minimalne razlike učenicima zadaju posebne poteškoće pa je iz primjera vidljivo da im je u tom značenju najteže razlikovati ta dva padeža.

Išli smo u Harkanju … (L) → Išli smo u Harkanj … (A)
Idemo u Šeljinu. (L) → Idemo u Šeljin. (A)
Idemo u Crnoj Gori. (L) → Idemo u Crnu Goru. (A)
… stigli smo u dvorani. (L) → … stigli smo u dvoranu. (A)
Kad idemo u školi … (L) → Kad idemo u školu, … (A)
Ako idem u šumi … (L) → Ako idem u šumu, … (A)
Idemo na Balatonu. (L) → Idemo na Balaton. (A)
… zašto želim ići u ovoj školi … (L) → … zašto želim ići u ovu školu … (A)

Osim miješanja akuzativnog i lokativnog značenja, učenicima problem stvara i akuzativni nastavak s obzirom na sva tri roda u hrvatskom jeziku pa se mogu pronaći različiti nastavci kojima se nastoji iskazati imenska riječ u akuzativu:

Šaljem Vam motivacijsku pismu. → Šaljem Vam motivacijsko pismo.

[14] PRANJKOVIĆ, Ivo: *Druga hrvatska skladnja*. Hrvatska sveučilišna naklada, Zagreb, 2001.

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Vidjeli smo kazalištu i katedralu. → *Vidjeli smo kazalište i katedralu.*
Volim narodne glazbe… → *Volim narodnu glazbu…*
… jako čekam sljedeću ljeto. → *… jedva čekam sljedeće ljeto.*
Škola ima i veliku dvorištu … → *Škola ima i veliko dvorište …*

Utjecaj mađarskoga jezika možda je najbolje vidljiv pri uporabi prijedložnih izraza, gdje dolazi do doslovnog prevođenja materinskog jezika na ciljni jezik.

… putovati na Budimpeštu … (mađ. Budapestre utazni) → *putovati u Budimpeštu*
Došli smo za 8. / Doći za 10.[15] (mađ. *8-ra jöttünk./ Gyere 10-re.*) → *Došli smo u 8.00. / Doći u 10.00.*

3.4.1.6. Lokativ

Kao što je bilo spomenuto u prethodnom odlomku, učenici često mijenjaju akuzativ i lokativ jer i jedan i drugi označavaju lokacije, a učenici ne raspoznaju razlike pri označavanju statičnoga mjesta (*L: biti u školi*) i mjesta kao cilja kretanja (*A: ići u školu*). Učenicima je kroz brojne primjere potrebno prikazati razlike te ih raznim usmenim i pisanim vježbama izvježbati u njihovu razlikovanju.

… učenje u ljetnu školu … → *… učenje u ljetnoj školi …*
… trebamo biti u školu … → *… trebamo biti u školi …*
Želim nastaviti učenje i na sveučilište. → *Želim nastaviti učenje i na sveučilištu.*
… baviti se sportom u Hrvatsku . → *… baviti se sportom u Hrvatskoj.*
U prošlog tjedna imali smo tjedan hrvatskoga jezika u školu. → *Prošlog tjedna imali smo Tjedan hrvatskog jezika u školi.*

Osim navedenih primjera, lokativni nastavci zbunjuju učenike 9. razreda jer oni nisu fiksni kao u mađarskom jeziku, koji ne poznaje gramatički rod. I u lokativu, kao i u ostalim padežima, najviše poteškoća zadaje neraspoznavanje gramatičkoga roda imenice koja se sklanja.

… obrađuju temu o politiku ili novac … → *… obrađuju temu o politici ili o novcu…*
članak o koncerti / članak o koncert → *članak o koncertu*
U moljem obitelju … → *U mojoj obitelji …*
U našem školu … → *U našoj školi …*

3.4.1.7. Instrumental

I u instrumentalu se potvrđuju poteškoće pri određivanju gramatičkoga roda imenica, a još se pojavljuje i problem pridjevsko-zamjeničke sklonidbe, koja se razlikuje od imeničke. Time se potvrđuju rezultati dosadašnjih istraživanja vezanih uz usvajanje hrvatskoga kao inog jezika:

Volim nešto praviti s mojom prijateljim. → *Volim nešto raditi sa svojom prijateljicom.*
… učionica sa jednom bijelom umivaonikom. → *… učionica s jednim bijelim umivaonikom.*

[15] Ovi primjeri mogu dovesti do nesporazuma u komunikaciji između izvornojezičnog i inojezičnog govornika jer izvornojezični govornik takvu tvrdnju može shvatiti kao *Doći za 10 minuta.* Učenike je potrebno upozoriti na različita značenja tih prijedloga u hrvatskome jeziku.

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sa sivim zavjesima → *sa sivim zavjesama*
s obiteljem, s njezini obitelji → *s obitelji, s njezinom obitelji*

U nekim je primjerima vidljivo i da se zanemaruje glasovna promjena prijeglas te se iza palatala koristi instrumentalni nastavak *-om*, a ne *-em*.

... igrat ću sa bratićom → *igrat ću se s bratićem*

Katkada se pojavljuje nastavak *-am* umjesto nastavaka *-om* ili *-em*, *-i*:

s maikam, sa tatam i mamam, sa obiteljam → *s majkom, s tatom i mamom, s obitelji*

Najproblematičnija je imenica *obitelj*, za koju se pojavljuje nekoliko varijanti instrumentala:

sa obiteljam, s obiteljom, s obiteljem → *s obitelji*

S obzirom na to da je *obitelj* vrlo frekventna riječ među osnovnoškolskim i srednjoškolskim uzrastom, kada se uči deklinacija imenica ž. r. -i vrste učenicima je potrebno ponuditi primjere imenica *obitelj*, *radost*, *ljubav*, a tek kasnije proširivati ostalim, manje frekventnim primjerima. Previše informacija odjednom stvara kod učenika kaos i nerazumijevanje, a prototipni primjeri dokazuju im da je gramatika savladiva i da je svakodnevnom primjenom mogu dobro naučiti.

3.4.2. Rezultati sintaktičke analize sastavaka

U 9. razredu gimnazije učenici se pretežito služe jednostavnim sintaktičkim konstrukcijama kojima nastoje prenijeti osnovne informacije. U pokušaju pisanja složenih rečenica, često dolazi do gubljenja smisla jer učenici još ne poznaju sintaktička pravila složenih rečenica.

Analizom sastavaka utvrđeno je da učenici dobro vladaju jednostavnim rečenicama. Manje im poteškoća zadaju nezavisnosložene rečenice, a više poteškoća zavisnosložene rečenice. Učenici 9. razreda uglavnom pišu sastavne rečenice, i to uporabom veznika *i* (mađ. *és*), suprotne rečenice uporabom veznika *ali* (mađ. *de*), rastavne rečenice uporabom veznika *ili* (mađ. *vagy*). Iako su im poznati osnovni veznici, iz tekstova se vidi da nisu načisto s pravopisnim normama koje se odnose na pisanje zareza ispred pojedinih veznika. Primjeri rečenica s veznicima *pa*, *te*, *ni*, *niti*, *dakle*, *zato*, *stoga* i sl. nisu pronađeni. Njihova neuporaba jedan je od pokazatelja razine gramatičkog znanja.

... idemo igrati košarku i poslije idemo jesti.
... ići ćemo u kino a poslije imamo trening. → *... ići ćemo u kino, a poslije imamo trening.*
... i poslije išla sam oprala sam moju kosu poslije osušila sam kosu. → *... i poslije sam oprala svoju kosu, a zatim sam je i osušila.*

U takvim složenijim konstrukcijama uočava se da se zanaglasnica uvijek nalazi iza glagola, što je vjerojatno posljedica učenja perfekta prema formuli: glagolski pridjev radni + nenaglašeni prezent pomoćnog glagola *biti*.

U sljedećim primjerima iščitava se utjecaj materinskog jezika u produkciji na hrvatskom:

...još neznam što ću radit ali to već znam da imam trening. (mađ. *még nem tudom mit fogok csinálni, de azt már tudom, hogy edzésem van.*) → *... još ne znam što ću raditi, ali već znam da imam trening.*

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Možda da ću ići kod bake… (mađ. *Lehet, hogy a nagymamámhoz megyek.*) → *Možda ću ići k baki.*
Pitanje je da što me usrećuje. (mađ. *A kérdés az, hogy mi tesz boldoggá.*) → *Pitanje je što me usrećuje.*
… može biti bolje ako svaki čovjek zna da što će biti program … (mađ. *… lehetne jobb, ha minden ember tudná, hogy mi lesz a program…*) → *… može biti bolje ako svi znaju kakav je program …*

Tekstovi opisa interijera obiluju neodređenim determinatorom *jedan / jedna/ jedno*. Iako ga imamo i u hrvatskom jeziku, on se ne upotrebljava u svim kontekstima kao što je to u mađarskom, gdje se determinator *egy* koristi gotovo uvijek kad je nečega jedan komad ili ako je riječ o nečem neodređenom.

Ondje je jedan veliki nastavnički stol. (mađ. *Ott van egy nagy tanári asztal.*) → *Ondje je veliki nastavnički stol.*
Ondje se nalazi jedna bijela ploča. (mađ. *Ott van egy fehér tábla.*) → *Ondje se nalazi bijela ploča. / Ondje je bijela ploča.*
Možemo vidjeti jedan velika ormar. (mađ. *Lehet látni egy nagy szekrényt.*) → *Možemo vidjeti veliki ormar. / Vidimo veliki ormar.*
Nadam se da si pronašla jedno dečko. (mađ. *Remélem, hogy találtál egy barátot.)* → *Nadam se da si pronašla dečka.*

Zbog upotrebe determinatora *jedan* često se imenice ne slažu s glagolom:

Iza vrate je jedan umivaonik i jedan zrcalo. (mađ. Az ajtó mögött egy kézmosó és egy tükör van.) → *Iza vrata su umivaonik i zrcalo.*

Uz glagol *ovisiti* mađarski govornici upotrebljavaju prijedložni izraz *od + genitiv* (*ovisiti od nečega*), umjesto lokativnoga izraza (*ovisiti o nečemu*). U ovom je primjeru riječ o utjecaju mađarskoga izraza *valamitól függ*, čiji se sufiks *-tól/-től* na hrvatski prevodi kao prijedlog *od*.

… ovisi od toga da kako imam vremena. (mađ. *… attól függ, hogy mennyi időm van.)* → *… ovisi o tome imam li vremena.*

Sintaktičko svojstvo instrumentala jest da dolazi uz prijedloge *s* i *sa* te da se instrumentalna značenja razlikuju ovisno o kontekstu. Uporaba tih prijedloga ili njihova neuporaba dovode do razlikovanja instrumentalnog značenja društva i sredstva,[16] a u pisanim tekstovima učenika vidljivo je da im ta razlika nije posve jasna:

Došao sam sa autobusom. → *Došao sam autobusom.* (instrumentalnost)
Komunicira prijateljima. → *Komunicira s prijateljima.* (socijativnost)

Konstrukcija poput *mi smo s njim bili* (u značenju: *on i ja smo bili*) karakteristična je za mađarski jezik, ali ne i za hrvatski. Ipak se pojavljuje vrlo često u učeničkim radovima:

Sa svojim prijateljicama ljetovale smo zajedno na Orfú. (mađ. *A barátnőimmel együtt nyaraltunk az Orfűn.*) → *Sa svojim sam prijateljicama ljetovala na Orfú. / Prijateljice i ja ljetovale smo na Orfú.*

[16] SILIĆ, Josip–PRANJKOVIĆ, Ivo. *Gramatika hrvatskoga jezika za gimnazije i visoka učilišta*. Školska knjiga, Zagreb, 2005.

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Glagol *bojati se* koristi se uz prijedložni izraz *od* + *genitiv*, umjesto besprijedložno i to zato što se u mađarskom jeziku koristi sufiks *-tól/-től*, koji bi se u hrvatskom preveo prijedlogom *od*.

bojim se od toga da… (mađ. *attól félek, hogy…*) → *bojim se toga da…*

Glagol *boljeti* u analiziranim sastavcima uvijek dolazi uz dativ osobne zamjenice. U radovima su pronađeni primjeri u kojima se vidi izravan utjecaj materinskog, mađarskog jezika: *boli* + *meni/mi*, *boli tebi/ti* … (mađ. *nekem*, *neked fáj* …), dok u hrvatskom glagol *boljeti* dolazi uz imenicu ili zamjenicu u akuzativu (*boli* + *me*, *te*…).

Boljeo mi je stomak… (D) (mađ. *Nekem fájt a hasam.*) → *Bolio me stomak. (A)*
Meni je bolila glava. (D) (mađ. *Nekem fájt a fejem.*) → *Mene je boljela glava. (A)*

4. Zaključak

Analizom pisanih radova učenika 9. razreda dvojezične hrvatsko-mađarske gimnazije pronađeno je najviše gramatičkih pogrešaka koje se odnose na padežne nastavke i gramatički rod imenskih riječi. I na morfološkoj i na sintaktičkoj razini uočen je velik broj odstupanja povezan upravo s tim dvjema kategorijama, što potvrđuje postavljenu pretpostavku, s obzirom na to da mađarski jezik ne poznaje gramatički rod i zbog toga njegovi govornici moraju ulagati dodatni kognitivni napor kako bi razlikovali rodove i padeže imenskih riječi. Također je uočeno da je učenicima problem razlikovati prijedložni akuzativ od lokativa jer ne razumiju značenjske razlike tih padeža (cilj kretanja i statičnost). Analizom se utvrdilo i da se učenici 9. razreda služe jednostavnim rečeničnim konstrukcijama, pokušavajući na taj način prenijeti cjelovitu i točnu informaciju. U tekstovima se osjeća utjecaj mađarskoga jezika, materinskog jezika učenika, što je rezultat doslovnog prevođenja rečenica s mađarskog na hrvatski jezik. Sukladno tomu, na nastavi je potrebno upozoravati na to da se ni jedan jezik ne može učiti doslovnim prevođenjem s materinskoga jezika. Potrebno je objasniti da ekvivalentni izraz u hrvatskom jeziku moraju naučiti, čime proširuju svoje znanje jezika. Iako su u ovom radu izneseni rezultati morfosintaktičke razine, analiza učeničkih pisanih uradaka otvorila je cijeli niz pitanja zbog kojih se zaključuje da je potrebna sustavna kvalitativna i kvantitativna analiza, koja bi otkrila utjecaj većinskoga jezika na manjinski na svim razinama jezika. Primjeri izneseni u radu mogu poslužiti učiteljima i nastavnicima hrvatskoga jezika na mađarskom govornom području kako bi unaprijedili nastavu. Takva i slična istraživanja potrebna su da bi se stvorio primjereni način poučavanja gramatike u dvojezičnim osnovnim i srednjim školama. Budući da se od 9. do 12. razreda prema *Planu i programu* sustavno uči hrvatska gramatika, potrebno je sustavno pratiti razvoj gramatičke kompetencije učenika kako bi na kraju 12. razreda svi udovoljili maturalnim zahtjevima.

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Abstract

THE INFLUENCE OF HUNGARIAN IN THE GRAMMATICAL COMPETENCIES OF STUDENTS ATTENDING BILINGUAL SCHOOLS IN HUNGARY

The aim of this paper is to establish linguistic abilities and needs of native Hungarian students through the analysis of corpora collected from 6th graders and high school freshmen in Pécs. The question of influence of the Hungarian language on students who learn Croatian grammar within institutional bounds is elaborated on. Considering that Croatian grammar education is quite explicit in school, students are commonly observed knowing the rules but having difficulties applying them in real situations. Previous research has shown that students, as speakers of a language that is unrelated, find mastering grammatical gender notably difficult, the assumption is that the very same category will present an obstacle. Furthermore, it is expected that Hungarian syntax will play a major role in Croatian sentence assembling. In order to teach the language successfully teachers ought to be acquainted with the most common mistakes their students stumble upon and adjust their teaching accordingly. That is why the aim of this paper is to provide palpable insight into the grammatical categories which are predicted to give both elementary and high school native Hungarian students the most trouble and to subsequently adjust the process. Research from 2023 has shown that students of bilingual Hungarian-Croatian schools in Pécs and Budapest have an overwhelmingly positive attitude towards the Croatian language. To maintain mentioned attitude it is essential to adapt the educational process to the students' needs. The students' identified motivation is slowly dissipating which is why Banković-Mandić and Peruško emphasize the need for analysis of their language skills and needs.

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Banja Čipanj, Rene–Plavac, Morana

FRAZEMI U FUNKCIJI IGRE – U SVJETLU PREVOĐENJA I DVOJEZIČNOSTI

Uvodno o poticaju za istraživanje frazema

Kada se govorilo i pisalo o velikoj hrvatskoj spisateljici Ivani Brlić-Mažuranić, uglavnom se stavljao naglasak na interpretaciju njezinih djela, no u zadnje se vrijeme velika pažnja posvećuje i jeziku. Kako je autoričin književni opus ujedno i bogata riznica frazema, tako se i ovaj rad dotaknuo nekih frazema i njihovih prijevodnih rješenja u poznatom romanu o (ne)zgodama šegrta Hlapića. Rad se sastoji od nekoliko dijelova te će biti riječi o frazemima u romanu izvornoga i ciljnog (mađarskog) jezika, o metodologiji rada, analizi mađarskih prijevodnih ekvivalenata u odnosu na frazeme iz izvornoga jezika, frazemima u kontekstu poučavanja hrvatskoga jezika na mađarskome tlu kao nekim prijedlozima zadataka.

Frazemi kao sastavnica *Čudnovatih zgoda šegrta Hlapića* na izvornome i ciljnome (mađarskom) jeziku

U nastavku rada bit će riječ o metodologiji rada, romanu na izvornom i ciljnom jeziku te određenim prijevodnim rješenjima frazema u romanu *Čudnovate zgode šegrta Hlapića* Ivane Brlić-Mažuranić. Točnije, polazi se od hrvatskih frazema koji većinom nemaju svoj prijevodni ekvivalent u mađarskome jeziku, što predstavlja osobit prevoditeljski izazov, dok su u drugome poglavlju rada istraživačke težnje usmjerene na prijedloge/preporuke obradbe hrvatskih frazema u nastavi hrvatskoga jezika u Mađarskoj, ali će pritom biti riječ o frazemima za koje postoji mađarski ekvivalent. Drugim riječima, frazemima se u drugome poglavlju osim iz kontrastivnoga i translatološkoga pristupilo i iz metodičkoga gledišta. U skladu s rečenim u nastavku se najprije navode frazemi izdvojeni iz (izvornoga) hrvatskoga romana, a u odnosu na njih analiziraju se oni izdvojeni iz njegova prijevoda na ciljni, mađarski jezik. Cilj jest – nakon iznošenja ključnih podataka o samome romanu i njegovu prijevodu na mađarski jezik te temeljnih podataka o frazemima i njihovu (izazovnom) prevođenju – prikazati i protumačiti razlike između hrvatskih i mađarskih poredbenih frazema, i to onih koje je prevoditeljica odabrala kao prijevodne ekvivalente. Spomenuti je roman prvi put objavljen 1913. godine u Zagrebu, a njegov je naslov ujedno i tema te je glavni junak dobar i plemenit šegrt koji odlazi u svijet gdje doživljava čudnovate zgode i nezgode koje svojom mudrošću uspješno savladava. O jeziku ovoga, ali i ostalih djela Brlić-Mažuranić neprestano se pisalo i piše se, a Stjepko Težak ju je nazvao *virtuozom naše riječi*.[1] Roman je preveden na brojne jezike pa tako i na mađarski jezik, a prevela ga je književnica, povjesničarka umjetnosti i prevoditeljica Katalin Kémeny, supruga

[1] BABIĆ, Stjepan–BRLIĆ-MAŽURANIĆ, Ivane: *Za autentične tekstove hrvatskih pisaca, u „Jezik“*. br. 3, Zagreb, 1995. 69.

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Béle Hamvasa. Prijevod romana objavila je izdavačka kuća Móra Könyvkiadó u Budimpešti 1978. godine. Frazemima autorica unosi živost u svoje pripovijedanje.[2] Ona rabi frazeme koje djeca mogu razumjeti i koji su i djeci poznati.[3] U radu će se, kako je uvodno i najavljeno, mahom istražiti poredbeni frazemi, koji, tvrdi se najčešće, izražavaju intenzitet u „tertium comparationis" sadržanog svojstva, stanja ili radnje, a intenzitet se očituje obično u vidu stupnjevanja kvalitetne ili kvantitetne prirode nastalog značenja.[4] Frazemi su slikoviti, izražavaju već gotove elemente koje upotreblja-vamo u jeziku kako u svakodnevnoj komunikaciji, tako i u književnim djelima, no postavlja se pitanje njihova prijevoda na ciljni jezik. Dosadašnja empirijska istraživanja pokazala su kako postoji velik broj frazema koji su zajednički, ali i različiti u pojedinim jezicima.[5] S obzirom na to da frazemi u sebi sadrže i elemente određene kulture, njihov je prijevod veliki izazov jer je frazeologiju jednoga jezika, osobito njezin nacionalni dio, ponekad teško, pa gotovo i nemoguće, uspješno prevoditi na druge jezike.[6] Osim toga, osobina frazema jest metaforičnost i slikovitost. Kako je slika, uz značenje, vrlo važna i kod prevođenja frazema, možemo reći i da je odgovarajući, potpuno ili djelomično ekvivalentan frazem, zapravo zamjenski frazeološki preslikač.[7] Istodobno je i prijevod svojevrsna kopija odnosno reprodukcija, ponovni uradak koji u određenoj mjeri može odstupati od originala, ali ne smije narušavati tok misli i slijed slika te poruke i značenja koja one nose.[8]

Analiza mađarskih prijevodnih ekvivalenata u odnosu na frazeme iz izvornoga jezika

Ako se pak posveti usporedbi i analizi poredbenih frazemâ iz korpusa, prije svega vrijedi reći da već na početku romana, obraćajući se malim čitateljima, spisateljica opisuje glavnoga junaka između ostaloga i riječima *mudar kao knjiga*, a *dobar kao sunce*,[9] što, dakako, znači da je glavni junak bio jako pametan i jako dobar. Česta je uporaba poredbe *dobar kao kruh,* no autorica je izabrala *sunce* jer će tijekom svojega putovanja drugima donositi radost i toplinu, a prijevod ne odstupa znatnije od izvornika te glasi *bölcs, mint a jó szó; és jóságos, akár a nap*,[10] što, zapravo, navodi na zaključak da je prevoditeljica u ovome slučaju posegnula za rješenjima s leksemima čije se značenje, i to samo kada je u pitanju prvi navedeni frazem, tek neznatno razlikuje. Nadalje, opisujući Hlapićeva gospodara, majstora Mrkonju, autorica između ostaloga ističe da je *imao je*

[2] KOLENIĆ, Ljiljana: *Riječi u svezama, povijest hrvatske frazeologije*. Matica hrvatska, Osijek, 2006. 233.
[3] Isto, str. 233.
[4] MATEŠIĆ, Josip: *O poredbenom frazemu u hrvatskom jeziku, u „Filologija"*. br.8, Zagreb, 212.
[5] MERŠIĆ, Žuža–KREKIĆ, Tomislav: *Prilog kontrastivnoj analizi hrvatskih i mađarskih frazema*
[6] MENAC, Antica–FINK-ARSOVSKI, Željka–VENTURIN, Radomir: *Hrvatski frazeološki rječnik*. Zagreb, Naklada Ljevak, 2003. 7.
[7] VIDOVIĆ BOLT, Ivana: *Poteškoće u prevođenju frazema (na primjerima hrvatskih i poljskih frazema)*. Strani jezici, 2006/35. 64.
[8] Isto, str. 65.
[9] BRLIĆ-MAŽURANIĆ, Ivana: *Čudnovate zgode šegrta Hlapića*, 4. https://lektire.skole.hr/djela/cudnovate-zgode-segrta-hlapica/
[10] BRLIĆ-MAŽURANIĆ, Ivana: *Dikics inas csudálatos viszontagságai*. Móra, Bp., 1978. 5.

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kuštravu kosu kao lav,[11] aludirajući na to da je majstor imao raščupanu, kudravu, veliku kosu kao griva, a u kolokvijalnom će se stilu čuti da netko ima *grivu na glavi*. U prijevodu će rečenica glasiti *Üstöke bozontosan kondorott, mint az oroszlán sörénye…*,[12] iz čega se uočava da je prevoditeljica i u ovom primjeru uglavnom ostala vjerna značenju izvornoga frazema iako je to izrazila drugim jezičnim sastavnicama, npr. u prvome je dijelu frazema uporabila prilog i glagol (*bozontosan kondorodott*), dok se u hrvatskoj varijanti nalazi glagolski predikat s objektom (*imao je kuštravu*). Dok je Hlapić pripremao svoj bijeg *u noći je sve tvrdo spavalo* i sve je bilo tamno *kao u zatvorenoj škatulji*[13] prevodi se *Éjszaka, amikor mindenki mélyen aludt…*[14] *Sötét volt körülötte, akár egy bezárt skatulyában,* prvi frazem, iako nije poredbeni, znači biti u stanju dubokoga sna, dok se drugi odnosi na mrak kao u kutiji, a u razgovoru se zna reći da je *mračno kao u rogu*. Usporedivši ta dva frazemska para, zapaža se jedino razlika s obzirom na prvi, i to jer je umjesto priloga *tvrdo* prevoditeljica uporabila prilog *mélyen*, što znači ‘duboko’, tj. nije uporabila leksem istovjetnoga značenja. U drugome se frazemu međutim ne zapažaju nikakve razlike ni s obzirom na odabir leksema, tj. struktura je mađarskoga frazema značenjski u cijelosti podudarna s izvornim. Jednako tako, odmarajući se od puta, *Hlapić je spavao i nije baš ništa čuo, kao da ima bazgu u ušima,*[15] a na ciljnom je jeziku *Dikics aludt, és az égvilágon semmit sem hallott, mint akinek bodzabél van a fülében;*[16] u ovome je frazemskome paru također uočljivo tek odstupanje u pogledu odabira mađarskih leksema, tj. u prvome je dijelu u svrhu izražavanja sadržaja prvoga dijela hrvatskog frazema uporabljen mađarski izraz *az égvilágon semmi(t),* koji može imati više varijanata s obzirom na uporabu nastavaka na svojoj posljednjoj sastavnici.[17] U iznenadnom i nelagodnom susretu sa čovjekom u crnoj kabanici, u noći skriveni pod mostom od kiše i oluje, zaspao je Hlapić, njegov pas Bundaš i sumnjivi čovjek u crnoj kabanici koji *se samo okrenuo i počeo hrkati kao vuk,*[18] odnosno *Az bizony oldalt fordulva horkolt, akár egy farkas,*[19] u čemu se zapaža gotovo potpuna značenjska vjernost izvornomu frazemu; samo je u prvome dijelu prevoditeljica još uporabila pojačivač *bizony*, u značenju ‘zaista, naravno, sigurno’.[20] U dijelu romana kada na svojem putu Hlapić susreće djevojčicu Gitu, koja mu se pridružuje, nastavljaju zajedno put na kojem ne manjka novih pustolovina i iznenađenja. Tako su četvrtoga dana putovanja došli u selo gdje su dobili mjesto za spavanje, no u selu je iznenada tijekom noći izbio požar, gorjela

[11] BRLIĆ-MAŽURANIĆ, Ivana: *Čudnovate zgode šegrta Hlapića*, 5. https://lektire.skole.hr/djela/cudnovate-zgode-segrta-hlapica/
[12] BRLIĆ-MAŽURANIĆ, Ivana: *Dikics inas csudálatos viszontagságai*. Móra, Bp., 1978. 7.
[13] BRLIĆ-MAŽURANIĆ, Ivana: *Čudnovate zgode šegrta Hlapića*, 6. https://lektire.skole.hr/djela/cudnovate-zgode-segrta-hlapica/
[14] Isto, str. 10.
[15] Isto, str. 11.
[16] Isto, str. 20.
[17] *Arcanum*: https://www.arcanum.com/hu/online-kiadvanyok/Lexikonok-a-magyar-nyelv-ertelmezo-szotara -1BE8B/s-4893A/semmi-49145/
[18] BRLIĆ-MAŽURANIĆ, Ivana: *Čudnovate zgode šegrta Hlapića*, 16. https://lektire.skole.hr/djela/cudnovate-zgode-segrta-hlapica/
[19] BRLIĆ-MAŽURANIĆ, Ivana: *Dikics inas csudálatos viszontagságai*. Móra, Bp., 1978. 34.
[20] SUČEVIĆ-MEĐERAL, Krešimir i dr., *Mađarsko-hrvatski rječnik*, *Institut za hrvatski jezik i jezikoslovlje*, Zagreb, 2013. 90.

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je vatra *koja je bila crvena kao u paklu,*[21] odnosno *hatalmas tűz lángolt, és úgy vöröslött, akár a pokol;*[22] u usporedbi se ovih dvaju frazema, hrvatskoga i mađarskoga, također zapaža uporaba, kao što je to slučaj u jednome od već opisanih frazema, glagolskoga oblika, tj. predikatnoga mađarskoga glagola umjesto kojega u hrvatskoj varijanti stoji imenski predikat. Mali je šegrt pomagao gasiti požar, no nezgodno je pao u škrinju punu brašna i *počeo je vikati Hlapić sjedeći u brašnu kao miš u posijama*[23] te u mađarskom prijevodu glasi *tört fel a kiáltás Dikicsből, ahogy ott ült a lisztben, mint egér a korpában;*[24] prevoditeljica je radi stvaranja mađarskoga ekvivalenta uporabila značenjski gotovo istovjetne lekseme, jedino je na mjestu hrvatskoga glagolskoga predikata (*počeo je vikati*) uporabljena sveza *tört fel a kiáltás* u značenju 'prodro je krik'. Također, petoga dana svojega putovanja Hlapićeva družina opet je srela čovjeka u crnoj kabanici, a *Crni čovjek ošinu vranca i konji potrčaše kao strijele,*[25] znači hitro, brzo te će u prijevodu glasiti tj. *a fekete köpenyes a lovak közé csapott, azok meg, mint a nyíl, tovarobogtak a széles országúton;*[26] pri prevođenju je ovoga hrvatskoga frazema pak prevoditeljica ponudila drukčije rješenje u odnosu na gotovo sve dosad opisane, tj. uporabila je više leksema i složenije sveze, ali je izvorno značenje sačuvano. Na koncu, šestoga dana putovanja Hlapić i Gita našli su se na sajmu u velikom gradu, a *Imao je taj grad stotinu ulica, a u svakoj ulici vrvjeli su ljudi kao mravi,*[27] odnosno *Volt ennek a városnak vagy száz utcája, és minden utcában úgy hemzsegtek az emberek, akár a hangyák;*[28] u strukturi su mađarskoga ekvivalenta razvidne samo rubne razlike, tj. kako bi naglasila da je količina koja je u pitanju tek procijenjena, prevoditeljica je uporabila prilog *vagy* u značenju 'otprilike'. Usporedbom i analizom navedenih hrvatskih i mađarskih frazema, koje je prevoditeljica uporabila kao prijevodne ekvivalente, može se zaključiti da je pretežito ostala vjerna frazemskoj strukturi iz izvornoga jezika, što je – kada je riječ o izricanju poredbenoga odnosa – ponajprije postigla odabirom većinom istoznačnih leksema u ciljnome jeziku. Kao uzrok je takvom postupanju, uzgred rečeno, moguće pretpostaviti (i) nepostojanje uvriježenih ekvivalenata u mađarskome jeziku. Razlike su pak utvrđene tek ponegdje, i to u vidu uporabe pojedinih, ustaljenih mađarskih sveza, a to se, s druge strane, može objasniti pretpostavkom da ih je ocijenila kao svojstven(ij)e ciljnom jeziku, pa samim tim i kao prikladn(ij)a rješenja.

Frazemi u kontekstu poučavanja hrvatskoga jezika na mađarskome tlu

Nakon što su u prethodnome poglavlju izdvojeni i uspoređeni poredbeni frazemi iz dvaju jezika – odnosno iz korpusa istoga književnog djela na izvornome

[21] BRLIĆ-MAŽURANIĆ, Ivana: *Čudnovate zgode šegrta Hlapića*, 23. https://lektire.skole.hr/djela/cudnovate-zgode-segrta-hlapica/
[22] BRLIĆ-MAŽURANIĆ, Ivana, *Dikics inas csudálatos viszontagságai*. Móra, Bp., 1978. 49.
[23] Isto, str. 25.
[24] Isto, str. 53–54.
[25] Isto, str. 34.
[26] Isto, str. 73.
[27] Isto, str. 37.
[28] BRLIĆ-MAŽURANIĆ, Ivana: *Dikics inas csudálatos viszontagságai*. Móra, Bp., 1978. 80.

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(hrvatskom) i ciljnome (mađarskom) jeziku – čime se, u konačnici, nastojao dati uvid i u (izazovno) prevođenje frazema, tj. u njihovo poimanje iz translatološkoga gledišta, u ovome će se poglavlju, kako je i rečeno, frazemima također pristupiti kontrastivno, ali ne samo iz translatološkoga nego i iz metodičkoga gledišta. Drukčije rečeno, zadaća ovoga dijela rada jest dati prijedloge/preporuke obradbe frazema u nastavi hrvatskoga jezika koja se izvodi u manjinskim (hrvatskim) školama na prostoru današnje Mađarske i/ili u sklopu nastave hrvatskoga jezika kao izbornoga predmeta. Stoga će se u ovome poglavlju kao primjeri iznijeti određeni hrvatski frazemi te, dakako, njihovi uvriježeni mađarski prijevodni ekvivalenti, i to u sklopu zadatka predloženog za njihovu obradbu u nastavnoj praksi. U vezi s tim bitno je istaknuti da je takav, metodički, pogled na hrvatske frazeme i njihove mađarske prijevodne ekvivalente u prvome redu potaknut dvojezičnošću govornikâ, a kojom se zasigurno ističu i učenici mađarskih škola, i to zato što pojedinci postaju dvojezični (i) samim tim što su uključeni u obrazovni sustav službenoga ili kojega drugog jezika ili su primorani služiti se kojim drugim jezikom radi sporazumijevanja s okolinom i slično.[29] Iz dvojezičnosti (ili višejezičnosti) zatim proizlaze jezične interferencije; to je naziv koji je prvi uporabio i definirao U. Weinreich u svome djelu *Languages in Contact* (1953), a podrazumijevajući njime utjecaje jednoga jezika na drugi, i to je poglavito riječ o utjecaju materinskoga jezika tijekom procesa usvajanja drugoga i/ili stranoga jezika; definiciju su otad dopunili drugi jezikoslovci.[30] Stoga se pri obavljanju zadatka predloženoga u ovome radu u učeničkim rješenjima pretpostavlja i utjecaj mađarskoga jezika, što, dakako, u prvome redu vrijedi za učenike čiji je materinski jezik. Iako, imajući na umu činjenicu da je u Mađarskoj mađarski i jezik većine, njegov je utjecaj moguće pretpostaviti u svih govornika bez obzira na materinski jezik. Uzgred, o statusu je hrvatskoga jezika u Mađarskoj vrijedno napomenuti da, nažalost, dolazi do sužavanja prostora na kojima se rabi, ali da je i dalje prvi jezik određenim skupinama govornika, pa se naposljetku (još uvijek) aktivno rabi i njeguje i u svakodnevnoj komunikaciji.[31]

Prijedlog zadatka za poučavanje frazema u nastavi hrvatskoga jezika u Mađarskoj

Na samome početku iznošenja zadatka, koji je osmišljen u svrhu usvajanja frazema na nastavi hrvatskoga jezika u školama u Mađarskoj, valja naglasiti da se njime nastoje ostvariti sljedeći odgojno-obrazovni ishodi:

1. uočiti da se zadani hrvatski i mađarski frazemi razlikuju po sastavnicama iako im je značenje isto
2. uočiti sličnosti među dvama jezicima kada su u pitanju zadani frazemi – internacionalni frazemi

[29] JELASKA, Zrinka i suradnici: *Hrvatski kao drugi i strani jezik*. Zagreb: Hrvatska sveučilišna naklada. 2005. 39.

[30] KISS, Jenő: *Társadalom és nyelvhasználat*. Nemzeti Tankönyvkiadó, Bp., 2002.; THOMASON, Sarah Grey–KAUFMAN, Terrence: *Language Contact, Creolization, and Genetic Linguistics*. Berkeley and Los Angeles: University of California Press, 1991.; ROMAINE, Suzanne: *Bilingualism*. Second Edition. Oxford: Blackwell, 1995. i dr.

[31] BOCKOVAC, Tímea: *O ugroženosti jezika Hrvata u Mađarskoj*. Studia Slavica Savariensia 1–2., 2018. 32–39.

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3. definirati značajke frazema: preneseno značenje, iste sastavnice, isti broj sastavnica
4. primijeniti zadane hrvatske frazeme u govoru i pismu

Zadatak je, imajući u vidu i zacrtane ishode, oblikovan na sljedeći način: učenici trebaju promotriti zadane mađarske frazeme – i to prije svega jer je jezik većine, a nekima možda i materinski – te ih pokušati prevesti na hrvatski jezik, tj. prevođenje se, što je bitno naglasiti, zastupa kao prvobitna aktivnost potrebna za obavljanje zadatka. Pritom se temeljnom smatra pretpostavka da će im mađarski frazemi zbog utjecaja mađarskoga jezika kao jezika većine biti poznatiji nego hrvatski, pa će ih većinom pokušati prevesti doslovno iako za zadane mađarske frazeme postoje hrvatski ekvivalenti. Stoga se s obzirom na izneseno pretpostavljaju sljedeća učenička rješenja:

mađarski jezik	**hrvatski jezik**
Bámul, mint borjú az újkapura.	*Bleji kao tele u nova vrata.*
Olajat önt a tűzre.	*Ulje lije na vatru.*
Kerülgeti, mint macska a forró kását.	*Izbjegava kao mačka vruću kašu.*
Szegény, mint a templom egere.	*Siromašan kao miš crkve.*
Ki korán kel, aranyat lel.	*Tko rano ustaje, pronalazi zlato.*
Esik, mintha dézsából öntenék.	*Pada kao da iz kabla liju.*
Sötét, mint az éjszaka.	*Mračan kao noć.*
Úgy tancol valaki, ahogy ő fütyül.	*Netko tako pleše, kako mu on/ona zviždi.*

Pokušajte prevesti zadane mađarske frazeme na hrvatski jezik. (Tablica 1.)

Nakon što učenici iznesu svoja rješenja – za koja se, dakle, pretpostavlja da će većinom biti doslovni prijevodi zadanih mađarskih frazema jer će im hrvatski ekvivalenti uglavnom biti nepoznati – prikazat će im se tablica s odgovarajućim rješenjima, tj. hrvatskim ekvivalentima, a koja se nalazi u nastavku.

mađarski jezik	**hrvatski jezik**
Bámul, mint borjú az újkapura.	*Bleji kao tele u šarena vrata.*
Olajat önt a tűzre.	*Dolijevati ulje na vatru.*
Kerülgeti, mint macska a forró kását.	*Obilaziti/motati se kao mačak/mačka oko vruće kaše.*
Szegény, mint a templom egere.	*Biti siromašan kao miš crkve.*
Ki korán kel, aranyat lel.	*Tko rano rani, dvije sreće grabi.*
Esik, mintha dézsából öntenék.	*Padati kao iz kabla.*
Sötét, mint az éjszaka.	*Glup kao noć.*
Úgy tancol valaki, ahogy ő fütyül.	*Plesati kako tko svira.*

Pokušajte prevesti zadane mađarske frazeme na hrvatski jezik. (Tablica 2.)

Promotrivši hrvatske ekvivalente zadanih mađarskih frazema učenici će, dakako uz eventualno navođenje, tj. primjenom (i) razgovorne metode itd., moći zaključiti sljedeće: da se zadani hrvatski i mađarski frazemi razlikuju po leksemima iako im je značenje na koncu isto; da među jezicima, pa tako i između hrvatskoga i mađarskoga, dvaju susjednih jezika, postoje isti/slični frazemi; da frazemi isključivo imaju preneseno značenje, iste riječi i isti broj riječi; da će naučene hrvatske frazemi moći primijeniti za služenja hrvatskim jezikom u govoru i pismu. Dakle, navedeni se odgojno-obrazovni ishodi u okviru opisanoga zadatka ponajprije nastoje postići aktivnošću prevođenja s mađarskoga na

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hrvatski jezik, tj. zadatak je u konačnici osmišljen kao primjer kako uklopiti prevođenje u praksu poučavanja hrvatskoga jezika u Mađarskoj, a svoje uporište pronalazi u dvojezičnosti/višejezičnosti učenikâ kao i u odnosu većinskoga i manjinskoga jezika.

Zaključak

Frazemi opisani u ovome radu smješteni su hrvatsko-mađarski kontekst, a u istaživačkom im se pogledu nastojalo pristupiti iz kontrastivnog, translatološkog i metodičkog gledišta. U prvome su se dijelu analize usporedili određeni poredbeni frazemi na izvornome (hrvatskom) i ciljnome (mađarskom) jeziku, odnosno oni iz romana *Čudnovate zgode šegrta Hlapića* i njegova prijevoda na mađarski jezik. Rezultati toga dijela analize pokazali su kako je autorica u gotovo potpunoj mjeri zadržala značenje izvornih (hrvatskih) frazema, što je postigla odabravši gotovo istoznačne lekseme na ciljnom jeziku. Odmak se očituje tek uporabom ponekih izraza svojstvenih mađarskom jeziku, ali se njima izvorno značenje također uspjelo sačuvati, a što je posebno značajno zbog toga što je riječ o poredbenim frazemima za koje ne postoje uvriježeni mađarski ekvivalenti. U drugome se dijelu rada frazemima nastojalo pristupiti i metodički, tj. dan je prijedlog njihove obradbe u nastavnoj praksi, i to u kontekstu poučavanja hrvatskoga jezika u Mađarskoj, što je svoj oslonac pronašlo u dvojezičnosti te odnosu većinskoga (mađarskoga) i manjinskoga (hrvatskoga) jezika na tome prostoru. Radom se u prvome redu nastojalo doprinijeti produbljivanju odnosa dvaju jezika kada je u pitanju prevođenje frazema, ali i metodičkome segmentu, tj. (kontrastivnom) poučavanju hrvatskoga jezika na tlu današnje Mađarske.

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Abstract

PHRASEMES IN THE FUNCTION OF THE GAME – IN THE LIGHT OF TRANSLATION AND BILINGUALISM

Phrasemes are combinations of words that are present in all functional styles as well as in spoken and written communication, and they consist of multi-membered linguistic units that are always reproduced as a whole in a speech act, while a permanent connection consists of at least two words. In addition, phrasemes have a special meaning and can be actualized in all syntactic functions. This paper is based on the contrastive analysis of the phrasemes in the children's novel *The Brave Adventures of Lapitch* by Ivana Brlić-Mažuranić and its Hungarian translation. The mentioned analysis aims to determine which, and what kind of, phrasemes did Katalin Kemény found in the Hungarian Language as solutions for the Croatian phrasemes from the original novel. Other than that, the phrases in this paper are not being approached only contrastively and translationally, but methodicaly too. In other words, the paper also aims to give a suggestion for approaching the phrasemes in teaching practice of the Croatian Language in Hungary, which is also being based on translation, which is motivated by bilingualism and the relation between the majority (Hungarian) and minority (Croatian) language.

Keywords: idiom, phraseology, pairs of idioms, translation of idioms

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Simon Krisztián

ASSESSING VOCABULARY DEVELOPMENT POSSIBILITIES AND STUDENTS' PERCEIVED USEFULNESS USING TED TALKS IN A FIRST-YEAR LANGUAGE SKILLS DEVELOPMENT COURSE

Introduction

Vocabulary acquisition is a key aspect of language learning, and as a complex area, it underlies all four skills. For this reason, setting level-appropriate learning and achievement goals in instructed acquisition is of key importance. Familiarity with the learning process, possible challenges that can emerge during it and various scaffolding techniques will help instructors to provide their students with meaningful learning experiences. In terms of situating vocabulary requirements, the CEFR[1] defines the range for each of its six levels ranging from "familiar everyday expressions" for the A1 level to "virtually everything heard or read" for the C2 level. Based on these descriptors, teachers can further refer to CEFR- or corpus-based vocabulary lists. Regarding essential vocabulary, the New General Service List[2] contains level-based collections of the 2,800 most common words. Similarly, the New Academic Word List[3] represents the most frequently used academic words. However, various other resources, such as the Oxford 3,000[4] and 5,000[5] lists, build on the CEFR and cover words from A1 until C1 level, representing similar comprehensive lists of items for teachers to use. Thus, the main challenge that follows is scaffolding vocabulary acquisition to meaningfully develop, extend, and build on language learners' existing vocabulary knowledge.

The study at hand presents the findings of a longitudinal vocabulary development project with first-year non-native speaker English teacher majors (N=15). Students worked with interactive materials using TED talks and various scaffolding solutions, such as learning primers, illustrated vocabulary flashcards and practice tests. The participants completed multiple data collection instruments, and the findings show that students' vocabulary increased differently on global and individual levels. Students also reflected on the frame and expressed high levels of motivation and engagement. In the following, key aspects of vocabulary acquisition, multimedia support and EFL classroom challenges are addressed that underlie the study and pedagogical conclusions are drawn related to the main findings.

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[1] COUNCIL OF EUROPE. *Global scale – Table 1 (CEFR 3.3): Common Reference levels*. 2024. https://bit.ly/4bb6pBo

[2] BROWNE, Charles. *A New General Service Vocabulary List: Helping students help themselves*. The Language Teacher, 2013/4, 13–16.

[3] COXHEAD, Averil: *A New Academic Word List*. TESOL Quarterly, 2000/2. 213–238.

[4] OXFORD UNIVERSITY PRESS. *The Oxford 3,000 By CEFR Level*. 2024a. https://bit.ly/4b5mMin

[5] OXFORD UNIVERSITY PRESS. *The Oxford 5,000 By CEFR Level*. 2024b. https://bit.ly/4b7Am4R

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Theoretical background

In terms of vocabulary benchmarks, Nation[6] established that ideal coverage, which stands for understanding 98% of the given discourse, can be set at "8,000-9,000" and "6,000-7,000 word families"[7] for written and spoken text respectively. Further positioning these values, Nation and Beglar's[8] Vocabulary Size Test explains that non-native university students' vocabulary level can be approximated to 5,000-6,000 word families.[9] Skill-specific findings, like Matthews'[10] study on listening skills further support the level established in the Vocabulary Size Test as the comprehension of mid-frequency items was established as a predictor of higher language proficiency.[11] What these numbers entail is the complexity of vocabulary acquisition as word families contain several related words across various types. For this reason, focusing on increasing not just the breath of students' vocabulary[12] (i.e., "the number of words known"[13]) but its depth or (i.e., "the richness of word knowledge"[14]) should be promoted[15] through the development of "semantic links among lexical items".[16]

In terms of scaffolding students' vocabulary development, Nation[17] addresses that vocabulary instruction needs to factor in three main aspects of vocabulary knowledge: form, meaning and use.[18] Strong connections between components[19] such as "form–meaning link, derivatives, multiple meanings, and collocations"[20] have also been identified. Thus, in providing students with meaningful and relevant learning opportunities for encountering words, using them in various contexts that aids the development of a multilayered vocabulary knowledge, instructors can increase the potential extension of learners' productive vocabulary. Akşit and Şükran[21] have also found that the vocabulary level of first-year

[6] NATION, Ian Stephen Paul: *How large a vocabulary is needed for reading and listening?* The Canadian Modern Language Review, 2006/1, 59–82. (Hereinafter: NATION, 2006)
[7] NATION, 2006. 79.
[8] NATION, Ian Stephen Paul–BEGLAR, David. *A vocabulary size test*. The Language Teacher, 2007/7. 9–13. (Hereinafter: NATION and BEGLAR, 2007)
[9] NATION and BEGLAR, 2007. 12.
[10] MATTHEWS, Joshua: *Vocabulary for listening: Emerging evidence for high and mid-frequency vocabulary knowledge*. System, 2018/72. 23–36. (Hereinafter: MATTHEWS, 2018)
[11] MATTHEWS, 2018. 31.
[12] LI, Miao-KIRBY, John R. *The effects of vocabulary breadth and depth on English reading*. Applied Linguistics, 2015/5. 611–634. (Hereinafter: LI and KIRBY, 2015)
[13] LI and KIRBY, 2015. 611.
[14] Ibid.
[15] ENAYAT, Mostafa Janebi-DERAKHSHAN, Ali. *Vocabulary size and depth as predictors of second language speaking ability*. System, 2021/99/102521 1–15. (Hereinafter: ENAYAT and DERAKHSHAN, 2021)
[16] ENAYAT and DERAKHSHAN, 2021. 11.
[17] NATION, Ian Stephen Paul. *Learning vocabulary in another language*. 2013. Cambridge University Press. (Hereinafter, NATION, 2013)
[18] NATION, 2013. 49.
[19] GONZÁLEZ-FERNÁNDEZ, Beatriz–SCHMITT, Norbert: *Word knowledge: Exploring the relationships and order of acquisition of vocabulary knowledge components*. Applied Linguistics, 2020/4. 481–505. (Hereinafter: GONZÁLEZ-FERNÁNDEZ and SCHMITT, 2021)
[20] GONZÁLEZ-FERNÁNDEZ and SCHMITT, 2021. 481.
[21] AKŞIT, Zeynep-SAYGI, Şükran: *Which components of word knowledge do EFL learners learn?* Language Learning in Higher Education, 2024/1. 253–268. (Hereinafter: AKŞIT and SAYGI, 2024)

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university students is not only connected to their previous exposure to English but can dictate their vocabulary acquisition strategies during their studies with first resorting to L1 (lower vocabulary level students) or L2 dictionaries (higher vocabulary level students).[22]

Regarding the challenges language teachers may face in the EFL classroom, Schmitt[23] outlines a complex picture that includes appropriate vocabulary size, multilayered vocabulary knowledge, students' varying learning speeds, connections to previously learned concepts, learners' knowledge development and vocabulary instruction.[24] These variables represent an interconnected web that greatly affects students' eventual vocabulary development. The variables can be grouped based on their roles in the learning process. Thus, diagnostic ones, like required vocabulary size and vocabulary knowledge need to be set as benchmarks that should specify the types of vocabulary knowledge development that are expected from learners. Formative variables involve providing opportunities for acquisition to take place at various learning speeds and fostering students' understanding of the interconnectedness of vocabulary and knowledge development. Finally, teaching methodology includes creating engaging learning experiences based on individual and classroom variables.

Advances in information technology have greatly contributed to the multitude of vocabulary acquisition support options language teachers and learners have access to. Although the central focus of the present study is video-based (i.e., listening-focused) vocabulary acquisition, it is important to address that a multitude of relevant materials, if they are accessible and can be integrated meaningfully, are prime sources for vocabulary development purposes. For example, a subgroup of such projects focuses on using various online news platforms for targeted vocabulary extension, which, as shown in Dang and Lu's[25] study can lead to university students' increased academic vocabulary.

Accessing multimedia and a wealth of learning applications has never been easier. While the focus of the present study is university-level EFL students, it is important to note that songs have been used for receptive vocabulary development as early as the pre-school level.[26] Teachers can integrate authentic materials such as videos into their ELF lesson while also making use of various scaffolding tools like subtitles, rewinding and playback speed that can help with differentiated instruction. Furthermore, applications such as Quizlet or Duolingo utilize gamification to increase learners' motivation. A multitude of key benefits of using multimedia have been identified, such as increased retention with the help of digital flashcards,[27] the motivating aspect of using mobile learning in vocabulary

[22] AKŞIT, Zeynep-SAYGI, 2024. 263.
[23] SCHMITT, Norbert: *Key issues in teaching and learning Vocabulary*. In: CHACÓN-BELTRÁN, Rubén–ABELLO-CONTESSE, Christian–DEL MAR TORREBLANCA-LÓPEZ, María (Eds.): *Insights into non-native vocabulary teaching and learning*. Multilingual Matters, 2010. 28–40. (Hereinafter: SCHMITT, 2010)
[24] SCHMITT, 2010. 28.
[25] DANG, Thi Ngoc Yen–LU, Cailing: *Learning academic vocabulary through reading online news*. International Review of Applied Linguistics in Language Teaching. 2024, March, 1–27.
[26] see COYLE, Yvette–GÓMEZ GRACIA, Remei: *Using songs to enhance L2 vocabulary acquisition in preschool children*., ELT Journal, 2014/3. 276–285.
[27] YOWABOOT, Chadaporn–SUKYING, Apisak: *Using digital flashcards to enhance Thai EFL primary school students' vocabulary knowledge*. English Language Teaching, 2022/7. 61–74

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development[28] as well as videos being a resource that students enjoy working with as a self-paced learning strategy.[29] The format has potential for incidental learning[30] which is the process of acquiring[31] "new lexical items without intending to do so".[32] Furthermore, illustration-based scaffolding[33] lessens the possible learning challenges associated with the "audio information [in videos] that may impose additional cognitive load",[34] learning applications can meaningfully contribute to the development of student autonomy[35] and learner engagement can increase with a gamified approach.[36] The various benefits of technology-based vocabulary acquisition support point towards not only the possibility but the potential need for extending the learning space beyond the classroom and giving students scaffolding and control in how they want to approach their own vocabulary development after a certain proficiency level.

Study

The study at hand was conducted during the fall semester of the 2023–2024 academic year at the Institute of English Studies at the University of Pécs in the English Language Development I course. As a compulsory 14-week-long course in both the BA and teacher training programs, it provides first-year English majors with opportunities for developing their listening and speaking skills in particular. Further courses, focusing on reading and writing skills as well as targeted grammar development are also part of the compulsory courses in both programs. Furthermore, these courses also aid students' preparation for their Proficiency Exam at the end of their second semesters, which is a C1-level milestone exam required for the majority of upper-year courses.

The participants of the study were a group of first-year English majors (N=15, F: 10, M: 5, average age: 18.76 years) who had previously completed the advanced-level school-leaving exams in English. However, regarding their proficiency levels, the group was quite heterogenous with a range between B2 and C1 levels. In terms of study backgrounds, the group was made up of teacher trainees exclusively which meant that they had three separate study tracks: the English teacher, their other teaching major and the pedagogy track. As one of the core motivations for the project at hand was to pilot a vocabulary development

[28] XUEHONG, He–LOEWEN, Shawn: *Stimulating learner engagement in app-based L2 vocabulary self-study: Goals and feedback for effective L2 pedagogy*. System, 2022/105/ 102719. 1–13. (Hereinafter XUEHONG and LOEWEN, 2022)
[29] WILLOUGHBY, Luisa–SELL, Cathy: *Online videos for self-directed second language learning*. Language Learning & Technology, 2024/1. 1–15.
[30] TENG, Mark Feng: *Incidental vocabulary learning from listening, reading, and viewing captioned videos: frequency and prior vocabulary knowledge*. Applied Linguistics Review, 2024. 1–31.
[31] ENDER, Andrea: *Implicit and explicit cognitive processes in incidental vocabulary acquisition*. Applied Linguistics, 2016/4. 536–560. (Hereinafter ENDER, 2016)
[32] ENDER, 2016. 537.
[33] ZOU, Di–TENG, Mark Feng: *Effects of tasks and multimedia annotations on vocabulary learning*. System, 2023. 115. 1–15. (Hereinafter: ZOU and TENG, 2023)
[34] ZOU and TENG, 2023, 13
[35] DALY, Nigel. P.: *Investigating learner autonomy and vocabulary learning efficiency with MALL*. Language Learning & Technology, 2022/1. 1–30.
[36] ZHANG, Ruofei–ZOU, Di–CHENG, Gary: *Learner engagement in digital game-based vocabulary learning and its effects on EFL vocabulary development*, System, 2023/119/103173. 1–19.

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support system that utilizes self-paced learning, the teacher trainees represented a relevant test group for the study as they have more courses than their BA peers and would benefit from such a language learning scaffolding system. For data protection purposes, students are referred to using codes, like S1 (S: student).

The study had three main research questions that aimed to assess the impact of the self-paced vocabulary development approach by collecting data on students' vocabulary development pre- and post-treatment (RQ1), students' experiences (RQ2) and language learning scaffolding (RQ3). As such, the research questions are as follows:

1. How does the implementation of interactive materials affect students' vocabulary level?
2. How do students evaluate key aspects of their language learning experiences using interactive vocabulary development materials?
3. In what ways does the interactive book-based format scaffold language learning?

Set 1	**Set 2**	**Set 3**	**Set 4**	**Set 5**
accumulate	*archeologist*	*demonstrate*	*explore*	*fancy*
android	*convinced*	*deviant*	*headline*	*recommendation*
century	*embarrassed*	*engineer*	*obsessed*	*sustainability*
collaborate	*flourish*	*pinnacle*	*quote*	*talent*
constant	*prominent*	*remarkable*	*spontaneously*	*wander*
Set 6	**Set 7**	**Set 8**	**Set 9**	**Set 10**
advance	*appeal*	*dormant*	*government*	*pattern*
alarming	*commercial*	*encounter*	*invisible*	*regret*
armor	*determined*	*genius*	*modulate*	*regret*
behavior	*disaster*	*individual*	*paraphrase*	*rehearse*
appointment	*implication*	*irony*	*pretend*	*trivial*

The 50 vocabulary items used in the pre- and post-treatment tests (Table 1.)[37]

A	*dormant*		the funny or strange aspect of a situation that is very different from what you expect
B	*encounter*		a meeting, especially one that is sudden, unexpected or violent
C	*genius*		a person considered separately rather than as part of a group
D	*individual*		unusually great intelligence, skill or artistic ability
E	*irony*		not active or growing now but able to become active or to grow in the future

Excerpt from the pre- and post-treatment instruments illustrating the matching sets (Table 2.)[38]

The following data collection instruments were utilized in a mixed-methods design using a paper and pencil format administered in-class: a pre-treatment test (week 1), two vocabulary tests (weeks 6 and 11), a post-treatment test and an end-term course assessment feedback questionnaire (both week 12). The pre- and post-tests contained the same 50 items in a matching test format

[37] Vocabulary items were selected from the ten TED talks used in the study (see Table 3 for the complete list)

[38] Definitions for the vocabulary items were taken from the Oxford Learner's Dictionaries (https://www.oxfordlearnersdictionaries.com/) and the Merriam-Webster Dictionary (https://www. merriam-webster.com/)

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(see Tables 1 and 2). Students then worked with five sets of interactive vocabulary development materials on Moodle (the university's LMS) that accounted for fifteen percent of their grade and completed two ten-item matching vocabulary tests in-class which attributed to ten percent of their final course grades. Finally, after completing the post-treatment test, students also filled out the end-term course assessment feedback questionnaire which contained 26 five-point Likert-scale subitems encompassing accessing the interactive materials (Q1a-c), working with learning priming questions (Q1d-f), video-based learning experiences (Q1g-o), flashcard-based learning experiences (Q1p-u), reflections regarding the practice tests (Q1v-x) and views on scheduling and further exposure (Q1y-z). These were followed by two open-ended items collecting information for students' perceived benefits and limitations of the approach (Q2a-b) and two open-ended items regarding their overall impressions (Q3a-b) and descriptive statistical data for their gender and age.

Preparing interactive books for vocabulary development

This section presents the preparation, design, administration and assessment of the interactive materials developed for scaffolding participants' vocabulary development. The central aim of the project was to provide students with self-paced learning possibilities using authentic materials and utilizing various interactive materials in an integrated fashion. Thus, the goal was to prepare engaging interactive scaffolding solutions using authentic resources that are not only intuitive to access but also build on the possible learning preferences and build on potential language learning strategies students have developed during their secondary studies. For this reason, the authentic materials were represented by thematic TED talks and the interactive solutions were integrated into H5P interactive books on Moodle.

The large variety of topics covered by TED talks makes them perfect candidates for language development projects. For this reason, the English Language Development I course utilized them in a quasi-flipped classroom manner. A key feature of flipped classroom design[39] is students working with materials shared on the learning management system on their own before the in-class meetings,[40] the approach allowed for a topic-based integration. However, it was a limited implementation of the flipped-classroom as only the general topics were readdressed during the face-to-face lessons.

Illustrating the quasi-flipped lesson design, the second week of the course had creativity as a central topic (see Table 3). The chosen TED talk students watched prior to the face-to-face session (Manoush Zomorodi: How boredom can lead to your most brilliant ideas) discussed out-of-the-box thinking. This was a central strategy addressed in a gamified group-based problem-solving task students worked with during week two where they practiced generating, evaluating and presenting their ideas using the Persuasion Map[41] graphic

[39] GALINDO-DOMINGUEZ, Héctor: *Flipped classroom in the educational system. Trend or effective pedagogical model compared to other methodologies?* Educational Technology & Society, 2021/3. 44–60. (Hereinafter: GALINDO-DOMINGUEZ, 2021)
[40] GALINDO-DOMINGUEZ, 2021. 44.
[41] Available on the ReadWriteThink website at https://bit.ly/4byohCr

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organizer (see Figure 1). Although the quasi-flipped classroom frame was present throughout the course, its implementation was not a primary objective but rather it served as a set of thematic connection points between students' in-class and out-of-class learning.

Topic and (week)	Presenter	Title of talk
Creativity (W1)	Manoush Zomorodi	*How boredom can lead to your most brilliant ideas*
Communication (W2)	Celeste Headlee	*10 ways to have a better conversation*
School life (W3)	Sir Ken Robinson	*Bring on the learning revolution!*
Travelling (W4)	Ann Morgan	*My reading a book from every country in the world*
Genres (W6)	Adam Savage	*My love letter to cosplay*
Festivals and traditions (W7)	Alexis Charpentier	*How record collectors find lost music and preserve our cultural heritage*
Digital word (W8)	Tim Urban	*Inside the mind of a master procrastinator*
Arts (W9)	Tom Wujec	*Got a wicked problem? First, tell me how you make toast*
Time (W10)	Laura Vanderkam	*How to gain control of your free time*

Thematic list of TED talks utilized in the interactive vocabulary development materials (Table 3.)

H5P, which stands for interactive html5 materials,[42] is available as a Moodle plugin and enables instructors to develop many engaging activities that prioritize some form of interaction[43]. While individual H5P content types can be developed and inserted on the Moodle course spaces, doing so can end up giving the participants a fragmented learning experience or may even lead to confusion. This is even more problematic when self-paced learning, where students do not have access to immediate instructor feedback is intended to be a key feature. Thus, developing interactive vocabulary learning materials began by creating an interactive book template for two reasons. First, the H5P interactive book enables the integration of various subunits into a major one and the interactive books lists them as chapter in their table of contents (see left side of Figures 2–6). Second, familiarity with the format can help students progress through the materials easier. Thus, each interactive book included the following sections with a simple symbol system in order for students to get an immediate idea of what they need to complete at a glance:[44]

1. an instructions page with the list of activities students needed to complete,
2. a learning priming 'before listening' page for familiarizing students with the given week's topic and getting them ready for learning with two brainstorming questions and a quote from the given TED talk (see Figure 1),
3. a 'this week's TED talk' page with the chosen TED talk as an embedded YouTube video (see Figure 2),

[42] See https://h5p.org/
[43] The content list with examples can be accessed on https://h5p.org/content-types-and-applications
[44] Icons were taken from Emojipedia (https://emojipedia.org)

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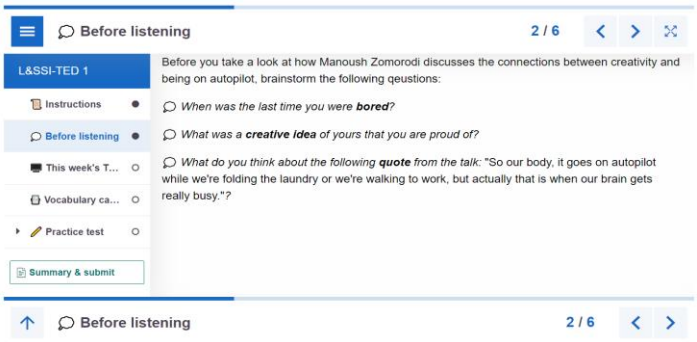
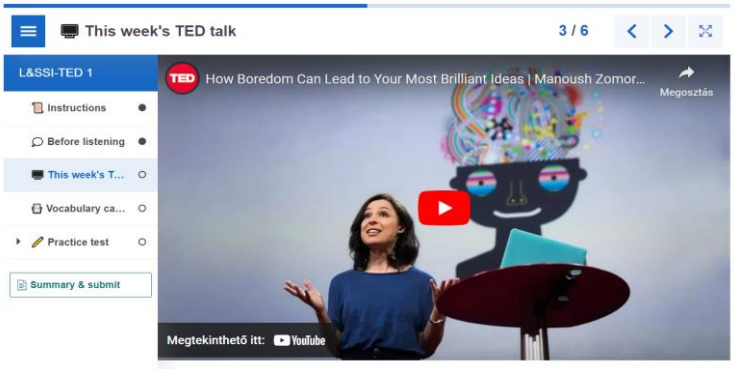
4. a 25-item vocabulary flashcard set with an illustration,[45] the word, its type on one side and its definition as well as a sample sentence on the other side[46] for the selected vocabulary items (see Figures 3 and 4),
5. a ten-item matching practice test with immediate feedback (see Figure 5).

The ten interactive books were developed using Lumi[47] and uploaded to Moodle where they were scheduled to become available one week before the in-class sessions to which they had some topical connections (e.g., the interactive book shown on Figured 2–5 was connected to the second week's in-class topic and was available from week one). Besides the date-based restrictions, students had access to all interactive books throughout the semester and could return to them as many times as they wanted to review the flashcards and retake the practice tests.



The 'before listening' learning priming questions in the first interactive book (Figure 1)



The 'this week's TED talk section in the first interactive book (Figure 2)

[45] Illustrations for the flashcards were taken are from Pixabay (https://pixabay.com) and Pexels (https://www.pexels.com)
[46] Definitions and sample sentences taken from the Oxford Learner's Dictionaries (https://www.oxfordlearnersdictionaries.com) and the Merriam-Webster Dictionary (https://www.merriam-webster.com)
[47] Lumi is a desktop H5P editor (https://app.lumi.education)

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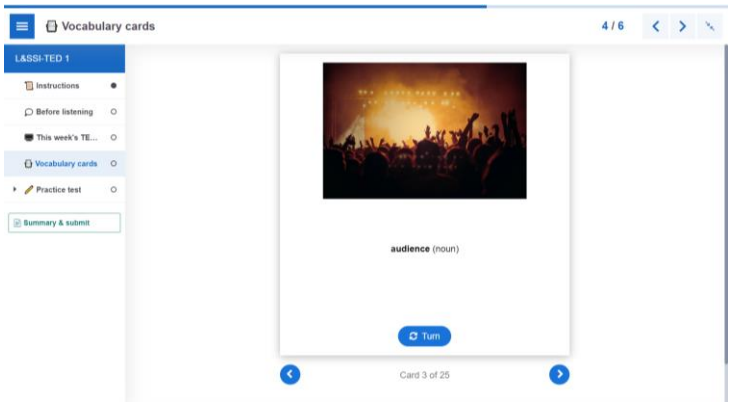
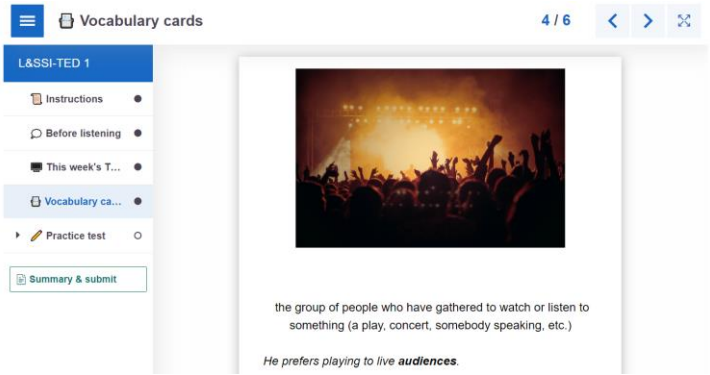
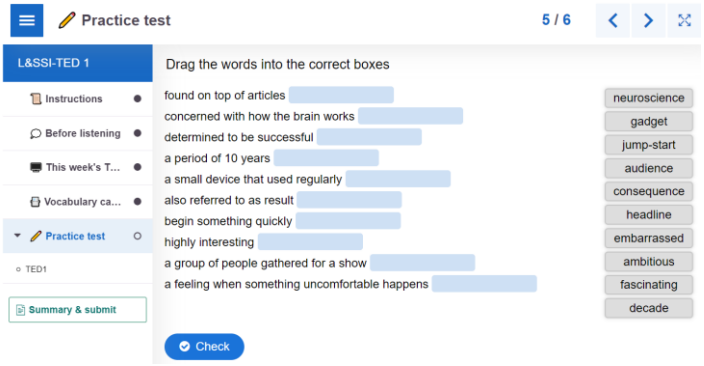


The term side of the vocabulary flashcards in the first interactive book (Figure 3)



The definition side of the vocabulary flashcards in the first interactive book (Figure 4)



The drag-and-drop matching practice test at the end of the first interactive book (Figure 5)

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Data collection and analysis

The study used quantitative and qualitative data analysis protocols for the data collection instruments. As every instrument was administered in paper-and-pencil format, the first step was digitizing them. Next, basic descriptive statistics were calculated to determine the mean (M.) and standard deviation (S.D.) values for the pre- and post-treatment tests, the two vocabulary tests and the five-point Likert-scale items in the end-term feedback questionnaire (n=11). In order to ensure comparability of the pre- and post-test values, only those students' scores were included who completed both tests. Finally, the answers to the open-ended items were analyzed and color coded to establish meaningful trends. Overall, six of categories emerged:

1. interactive book benefits: reflections connected specifically to advantages of the interactive book-based format (e.g., S5 "It was really great that I could practice on my own and I still understand everything."),
2. language learning benefits: answers related to general and specific experiences (e.g., S9: "I can understand and use more words than before."),
3. limitations: shortcomings and issues with the LMS or the interactive books (e.g., S4: "I was just missing the listening part when I didn't know how to say a word."),
4. general benefits: overall reflections regarding the format (e.g., S2: "It was really enjoyable working with the flashcards after watching the video."),
5. being pleased with the approach: overall positive reflections (e.g., S11: "I didn't find problems with it"),
6. development as a teacher: answers connected to the possible future use of the interactive book-based vocabulary development frame as a teacher (e.g., S1: "If I get to the part of being a teacher, I will definitely use this method, hoping it will make it as easy for my students as it was for me.").

Findings and discussions

In the following, findings and answers relevant to the three research questions are discussed. The first research question was concerned with whether there are identifiable changes in students' vocabulary level due to the implementation of interactive vocabulary development materials that can be measured using the pre- and post-treatment 50-item vocabulary matching tests. As indicated before, only those students' scores were included in the comparison who completed both tests (N=11). As Table 4 shows, students already scored quite high on the pre-treatment test (group M=42.9/50, S.D.: 5.61) and there was only a small measurable global increase with a difference of 2.55 in the post-treatment test (group M=45.45/50, S.D.: 6.28). When looking at the mean group scores in the two in-class vocabulary tests, similar patterns emerge regarding the relatively stable group values (test 1: M=8.6/10, S.D.=2.23; test 2: M=8.14/10, S.D.=2.74).

In terms of students' global (i.e., whole class) vocabulary level, the vocabulary test values remain rather stable being in the 80+ percent range and there was only an incremental overall increase due to the treatment. These

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findings are consistent with the possible challenges[48] as students have highly different language learner backgrounds that affect their vocabulary level and background knowledge. Similarly, as first-year non-native speaker English majors, their vocabulary level could have been around the 5,000-6,000 word families range[49]. Furthermore, a limitation of the tests used in the study was that it only focused on students' receptive knowledge which can be significantly larger than the productive one. However, reviewing the differences between the pre- and post-treatment test scores reveals a high degree of individual variability. A surprising result is that S7 shows a five-point decrease. In the case of two students (S6 and S8), there were no changes, however, the majority of the sample shows increases (S1, S4, S5, S10, S11, S12, S13 and S15) that can even reach twelve points in difference in the case of S4 (i.e., a 24% increase). Thus, the implementation of interactive vocabulary development materials showed minimal changes on the whole-class-level, however, they resulted in significant changes on the individual-student-level.

Student	Pre-test			Post-test			Difference
	Score	M.	S.D.	Score	M.	S.D.	
S1	47	0.94	0.4	48	0.96	0.2	+1
S4	38	0.76	0.43	50	1	0	+12
S5	39	0.78	0.42	50	1	0	+11
S6	50	1	0	50	1	0	0
S7	48	0.96	0.2	43	0.86	0.2	-5
S8	48	0.96	0.2	48	0.96	0.2	0
S10	46	0.92	0.27	50	1	0	+4
S11	32	0.64	0.48	33	0.66	0.48	+1
S12	39	0.78	0.42	34	0.68	0.47	+3
S13	40	0.8	0.4	46	0.92	0.27	+6
S15	45	0.9	0.2	48	0.96	0.2	+2
Overall	42.9		5.61	45.45		6.28	+2

An overview of the pre- and post-treatment test results (Table 4.)

The second research question was concerned with students' reflections as language learners concerning the interactive material-based vocabulary development project. Students completed an end-term questionnaire during week twelve of the English Language Development I course and the first question had 26 subitems that asked students to evaluate their experiences using five-point Likert scales regarding accessing the materials, the learning priming questions, video-based learning, flashcard-based learning, practice tests as well as scheduling and further exposure. Students rated the statements on five-point scales (1: completely disagree; 2: somewhat disagree; 3: neither agree, nor disagree, 4: somewhat agree; 5: completely agree). In the following, key aspects are discussed, and conclusions are drawn regarding students' experiences as concerning the interactive materials. These items are referred to using the main question and subitem for clarity (e.g., Q1a represents the first subitem).

[48] see SCHMITT, 2010. 28.
[49] see NATION and BEGLAR, 2007. 12.

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Accessing the interactive materials	**M.**	**S.D.**
a) *Finding the interactive books on the Moodle course space was easy.*	4.18	1.17
b) *The interactive books were logically structured.*	4.55	0.93
c) *It was clear what my tasks were with the individual interactive book segments (instructions, before listening, this week's TED talk, vocabulary flashcards, practice test).*	4.55	0.82
Working with learning priming questions	**M.**	**S.D.**
d) *I reviewed the 'before listening' questions before watching the weekly TED talk.*	3.55	1.04
e) *The weekly 'before listening' questions supported my language development.*	3.82	0.75
f) *The 'before listening' questions helped me prepare for the topic of the TED video that week.*	4.36	1.03
Video-based learning experiences	**M.**	**S.D.**
g) *The weekly TED talks supported my language development.*	4.7	0.48
h) *I found the topics covered in the TED talks interesting.*	4.18	1.17
i) *I could understand the TED talks without any problems.*	3.91	1.04
j) *I could not understand the TED talks without problems.*	2	1.49
k) *Watching videos is a great way to develop my language skills.*	4.45	1.21
l) *I could develop my vocabulary with the chosen TED talks.*	4.36	1.21
m) *I will watch more TED talks because of the project.*	4.09	1.38
n) *I watched the weekly TED talks multiple times.*	3.27	1.19
o) *I would have liked to have more TED talks per week.*	3.00	1
Flashcard-based learning experiences	**M.**	**S.D.**
p) *The weekly vocabulary flashcard sets supported my language development.*	4.55	0.82
q) *The illustrations improved my understanding of the terms.*	4.36	1.03
r) *The word types improved my understanding of the terms.*	4.36	0.92
s) *The sample sentences improved my understanding of the terms.*	4.27	0.9
t) *The TED talks had many unknown words.*	2.82	1.08
u) *I like working with vocabulary flashcards*	4.64	0.67
Working with the practice tests	**M.**	**S.D.**
v) *The practice tasks supported my language development.*	4.45	0.93
w) *I found the practice tests easy to complete.*	3.91	0.94
x) *I would have like to see more types of practice tests.*	3.91	0.7
Learning scheduling and further exposure	**M.**	**S.D.**
y) *I could easily fit completing the interactive books in my weekly schedule.*	4.18	0.75
z) *I would like to see interactive books in my other courses as well.*	4.64	0.67

Students' categorized assessments regarding the interactive materials (Table 5.)

Students had no trouble accessing the interactive books on Moodle (Q1a: M=4.18/5, S.D.=1.17), found the structure logical (Q1b: M=4.55/5, S.D.=0.93) and could easily work with individual segments (Q1c: M=4.55/5, S.D.=0.82). While students indicated that they found the 'before listening' learning priming questions useful for getting them ready for working with the weekly TED talks (Q1f: M=4.36/5, S.D.=0.82), only some of them reviewed the items regularly (Q1d: M=3.55/5, S.D.=1.04), however, students also expressed that the priming questions had a rather positive impact on their language development (Q1e: M=3.82/5, S.D.=0.75).

As a defining feature of the interactive materials, students strongly agreed that the selected TED talks supported their language development (Q1g: M=4.7/5, S.D.=0.48) and they also found the topics covered in them interesting (Q1h:

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M=4.18/5, S.D.=1.17). These results are further supported by the participants expressing that they only had smaller issues with understanding the contents of the talks (Q1i: M=3.91/5, S.D.=1.04; Q1j: M=2/5, S.D.=1.49). Generally, students highly enjoyed working with videos as language skills development materials (Q1k: M=4.45/5, S.D.=1.21) and strongly agreed that the TED talks improved their vocabulary (Q1l: M=4.36/5, S.D.=1.21). In terms of their motivation for working with TED talks, they were mostly motivated to work with further such content due to their involvement in the vocabulary development project (Q1m: M=4.09/5, S.D.=1.38). They partially agreed with having viewed the TED talks multiple times (Q1m: M=3.27/5, S.D.=1.19) indicating that the chosen videos were mostly suitable for their proficiency levels and were neutral regarding the prospect of having multiple TED talks per week in the project (Q1o: M=3/5, S.D.=1).

Students' views concerning their flashcard-based learning experiences were similarly favorable. They strongly agreed that the weekly flashcard sets contributed to their language learning (Q1p: M=4.55/5, S.D.=0.82) and highlighted the illustrations (Q1q: M=4.36, S.D.=1.03), word types (Q1r: M=4.36/5, S.D.=0.92) and the sample sentences (Q1s: M=4.27/5, S.D.=0.9) as highly useful additions for scaffolding their learning. In terms of the vocabulary level of the TED talks, students indicated that they did not find a large number of unknown words in them that would have hindered their comprehension (Q1t: M=2.82/5, S.D.=1.08). Furthermore, participants also expressed that they highly enjoyed working with the flashcards (Q1u: M=4.64/5, S.D.=0.67).

Based on students' assessments, the practice tests at the end of the interactive books also reached their goal as there was a high degree of agreement among the participants that the test supported their language development (Q1v: M=4.45/5, S.D.=0.93). They also strongly agreed that the tests were easy to complete (Q1w: M=3.91/5, S.D.=0.94) and would have like to have had more types of practice tests integrated in the materials (Q1x: M=3.91/5, S.D.=0.7). Finally, students indicated that they could easily integrate completing their weekly interactive books in their schedule (Q1y: M=4.18/5, S.D.=0.75) and expressed their strong desires to work with the format in other courses too (Q1z: M=4.64/5, S.D.=0.67).

The final research question focused on identifying the various ways in which the interactive book-based vocabulary development format can scaffold students' language learning. Furthermore, a goal of this research question was also to gather qualitative data to contrast with the findings of the quantitative questionnaire results. Students' answers to the open-ended items in the end-term questionnaire were analyzed and grouped to identify emerging trends. These items included the participants' views on the strengths (Q2a) and limitations (Q2b) of the project as well as their overall impressions (Q3a) and further comments (Q3b).

Analyzing students' answers revealed six trends that complement the findings for the second research question. The benefits identified for the interactive books (N=17), namely flashcards (n=6), videos (n=4), self-paced learning (n=2), topics (n=2) and scaffolding such as sample sentences (n=1), pictures (n=1) and tasks (n=1) represent the largest category of students' answers. Similarly, the language learning benefits group (N=15) was overwhelmingly

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represented by flashcards (n=10), however, language development (n=3) and practice opportunities (n=2) were directly mentioned as well. Regarding limitations (N=9), four students expressed technical issues with Moodle. Only one answer mentioned the difficulty of the integrated vocabulary. The lack of further practice opportunities (n=4) was also present in the sample which further underlies that students enjoyed working with the format and would have welcomed additional activities as well. Four answers indicated that they were pleased with the project and would not implement changes with one participant directly reflecting on being motivated to use the interactive material-based vocabulary development approach in her future teaching career.

The findings for the second and third research questions highlight various benefits of using interactive, multimedia-based materials for language learning support. Students expressed high levels of motivation while working with the various resources, similarly to the increased engagement, previously identified in studies assessing mobile learning experiences specifically.[50] The underlying reasons show similarities of the interactive books to language learning smartphone applications, self-paced learning integration and appropriate cognitive load. Thus, the design of the interactive books shared key functions, like a similar practice feature using the vocabulary flashcards and immediate feedback in the practice tests as found in various popular learning applications (e.g., Quizlet) specifically to make learning progression intuitive for students. Potentially, it also corresponded to a structure students might have already been familiar with from the secondary school studies which can influence their L2 strategies regarding unknown words.[51] Also, students' positive relationship with videos as learning resources[52] not only contributed to their increased motivation and engagement but enabled the meaningful integration of cognitive load lowering scaffoldings in the form of illustrations[53] besides Nation's[54] categories of form (word and definition), function (word type) and usage (sample sentence).

Conclusion, limitations and further research

The present study piloted an H5P interactive book-based vocabulary development project integrating authentic video-based materials targeting first-year non-native English majors. The main findings show that the frame had limited positive effects on students' overall in-class vocabulary development, however, major individual differences have also emerged (RQ1). Students identified key language learning benefits of the interactive book-based vocabulary development project that were consistent with the initial design of the frame. Their assessment is consistent with the literature as their answers showed that for meaningful self-paced learning, materials need to use a clear and intuitive structure, integrate students' existing learning preferences such as videos and digital flashcards and provide meaningful practice opportunities with immediate feedback (RQ2). Thus,

[50] see XUEHONG and LOEWEN, 2022
[51] see AKŞIT and ŞÜKRAN, 2024. 263.
[52] see WILLOUGHBY and SELL, 2024
[53] see ZOU and TENG, 2023. 13.
[54] see NATION, 2013. 49.

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the main ways in which the frame can scaffold language learning concerns engagement, motivation, exposure to authentic materials and managing cognitive load in a self-paced learning structure (RQ3). A main limitation of the project was its context and the small sample size that does not allow for the generalization of the findings. However, based on the results, further research should be conducted with a larger sample size (e.g., all first-year English majors at the University of Pécs) with data collection concerning productive use as well as the study only focused on receptive vocabulary knowledge.

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Abszrakt

A SZÓKINCSFEJLESZTÉSI LEHETŐSÉGEK ÉS A HALLGATÓK ÁLTAL TAPASZTALT HASZNOSSÁG FELMÉRÉSE *TED TALKS* SEGÍTSÉGÉVEL EGY ELSŐÉVES NYELVI KÉSZSÉGFEJLESZTŐ KURZUSON

A tanulmány egy feltáró, kis léptékű vizsgálat eredményeit mutatja be, amelyet a Pécsi Tudományegyetem Angol Tanulmányok Intézetében végeztek a 2023–2024 -es tanév őszi félévében. A projekt középpontjában az elsőéves, nem anyanyelvi angoltanár szakos hallgatók (N=15) szókincsének fejlesztése állt, a nyelvi készség-fejlesztő kurzuson kiválasztott TED-előadások segítségével, halláskészség-alapú megközelítéssel. A hallgatók tíz előre elkészített H5P interaktív könyvvel dolgoz-tak (a Moodle-on megosz-tva), amelyek tartalmaznak, tanulási alapozó kérdése-ket, TED-beszélgetéseket, szókincs-tárcsákat és gyakorló teszteket. A résztvevők szókincsszintjét a kezelés előtt és után, valamint két szókincs-teszttel mértük, és a tanfolyam végén reflektáltak tapasztalataikra. Bár a szókincsszint általános növekedése nem volt szignifikáns, jelentős pozitív egyéni különbségek mutatkoz-tak, ami azt jelzi, hogy a keret alkalmas a tanulók szókincsfejlesztésének megala-pozására, valamint a tanulók motivációjának és a nyelvtanulás iránti elkötelezett-ségének növelésére.

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Krisztina Szőcs

YOUNG LEARNERS AND AUTONOMY SUPPORT IN LANGUAGE LEARNING

Justifications for promoting learner autonomy are manifold, however, throughout the previous decades, the majority of research on learner autonomy has focused on adult or teenage language learners, with limited attention given to elementary school students. This led to a lack of research on young learners, even though this group is recognized as the fastest growing group of language learners worldwide.

The concept of autonomy in learning suggests that knowledge is not just passed on and learned but is instead created actively by individuals in the learning process and is developed through social interaction. Over the past 40 years, researchers have embraced different research methodologies to investigate the development of learner autonomy. According to one of the most influential definitions of the concept, learner autonomy is the ability to take charge of one's own learning,[1] which implies that it is an attribute of the learner, there are degrees of autonomy, which are unstable and variable. Autonomy in learning refers to learners' ability and desire to manage their learning both in and outside of the classroom using learning strategies and resources, recognize their strengths and weaknesses, and evaluate their learning process through reflection. The term autonomy has been used in at least five different ways:[2] for situations in which students learn entirely on their own; for a set of skills which can be learned and applied for self-directed learning; for an inborn capacity which is suppressed by institutional education; for the practice of learners' responsibility for their own learning; for the right of learners to determine the direction of their own learning.

Research[3] revealed that autonomy grows the most in the area where ability, desire, and freedom intersect, defining freedom as the extent to which learners can manage their own learning process. While the overlap is limited, teachers have a clear impact on learners' skills, knowledge, motivation, and autonomy in learning. Autonomy comes in various dimensions and forms, which vary depending on the person and their surroundings and learners display independent actions in diverse manners.

The main field of autonomy research is the interaction between motivation and self-regulated learning. It has been recognized that motivation is crucial in autonomous learning and now motivation and autonomy are seen as closely interconnected concepts,[4] research identified learner autonomy as one of the

[1] HOLEC, Henri: *Autonomy and foreign language learning*. Pergamon Press, Oxford, 1979.
[2] BENSON, Phil; VOLLER, Peter: *Autonomy and independence in language learning*. Routledge, 2014.
[3] BENSON, Phil: *Teaching and researching: Autonomy in language learning*. Routledge, 2013.
[4] KORMOS Judit: *A nyelvtanulási autonómia, az önszabályozó stratégiák és a motiváció kapcsolatának vizsgálata*. Magyar Pedagógia, 2012/1. 3–17.; USHIODA, Ema: *Motivation and good language learners*. Cambridge University Press, 2008.

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essential factors for motivating language learners. Autonomous learners experience increased enjoyment in learning, highlighting the relationship between intrinsic motivation, self-directedness and autonomy, motivation being one of the most important predictors of the success in language learning.

Despite the benefits of learner autonomy, teachers may encounter various obstacles when guiding their students in developing autonomy: success depends on individual differences, level of motivation, momentary state of mind, students' socioeconomic background, and the learning environment, including classroom atmosphere, group dynamics, and time constraints.[5] Furthermore, supporting autonomy with young learners can be even more difficult because they may not be mature enough to make decisions, and teachers may face challenges such as institutional restrictions and requirements from school management when trying to promote autonomy. Also, learners show autonomous behaviours in various ways, this leads to different approaches to autonomy that should be taken into consideration when fostering learner autonomy in different school contexts.

Teachers play a crucial role in autonomy development[6] by establishing a classroom environment that encourages learner independence. This often entails acknowledging students' past learning experiences and highlighting the advantages of taking more control over their own learning. Teachers need to recognize their impact on learning and the need of change in their roles: they are expected to be not only knowledge providers but also managers, resource persons, and counsellors. Therefore, it is important to understand teachers' perspectives on autonomy[7] as teachers' attitudes influence the choices they make, ultimately shaping how they behave in the classroom. Nevertheless, beliefs can be intricate, sometimes conflicting, and subject to change.[8] Additionally, teachers may not always align their beliefs with their classroom practices, which can be influenced by experience, context, and situational constraints. According to a case study,[9] teachers were open to the idea of including learner autonomy in their teaching but hesitated to engage students in methodological choices and referred to institutional limitations as hindering them in autonomy support.

The importance of autonomy in learning had been acknowledged to the extent that it was integrated into the main objectives of the National Core Curriculum, which was implemented in 1996 and established the criteria for various knowledge areas, since then it has undergone multiple revisions. The modifications to the curriculum led to a transition from focusing on encyclopaedic knowledge to emphasizing the use of knowledge and skills. However, the overview

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[5] SZŐCS Krisztina: *Teachers' and learners' beliefs about language learning autonomy and its implications in the classroom: A mixed method study*. Apples: Journal of Applied Language Studies, 2017. 11.

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[9] CAMILLERI GRIMA, Antoinette: *Pedagogy for autonomy, teachers' attitudes and institutional change: A case study*. Peter Lang GmbH, 2007.

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on recent research in the Hungarian language teaching and learning context show that willingness to learn autonomously decreases with age,[10] there may be a difference between different types of schools, more experienced language learners also have problems in managing their learning process autonomously, furthermore, there is not a complete overlap between learners' beliefs and autonomous behaviour, and negative language learning experiences are more likely to lead to autonomy than positive ones.[11]

Reasons for encouraging self-directed learning are manifold: learner involvement in decision-making concerning the learning process boosts motivation, makes learning more purposeful, thus resulting in more efficient learning.[12] Since it is impossible to teach everything that students need, it is essential to impart skills that can be applied to various learning situations, recognizing that learning continues beyond the classroom.[13] In the 21st century content knowledge is increasingly shifting to skill and competence knowledge; the development of autonomous learning competences may be one of the answers to the problems and challenges of education today.

It is agreed[14] that autonomous learners have insights into their learning styles and strategies, play active role in their learning, use learning resources, they can identify their strengths and weaknesses, make the most of their time in the classroom and organize their own learning outside the classroom. They are also willing to take risks, i.e., to communicate in the target language at all costs, are good guessers, place importance on accuracy as well as appropriacy; develop the target language into a separate reference system, have a tolerant and outgoing approach to the target language, reflect on their learning process and evaluate their learning. Altogether, autonomous learners understand the purpose of their learning, show responsibility, and are voluntarily involved in opportunities for practice. Furthermore, looking into young learners' characteristics, there can be seen several features that point towards autonomy: young learners are agreed to be curious and enthusiastic, open for interaction, keen to make guesses.[15] Therefore, keeping in mind that children learn by doing, have an instinct for fun and play, and have capacity for indirect learning, i.e. choosing age-appropriate techniques, it is reasonable to introduce autonomy development at an early age.

As mentioned earlier, teachers play a paramount role in autonomy support, therefore, investigating their beliefs concerning learner autonomy could lead to

[10] ALBERT Ágnes–TANKÓ Gyula–PINIEL Katalin: *A tanulók válaszai a 11. évfolyamon. Vizsgálat a köznevelésben folyó idegennyelv-oktatás hatékonyságáról*. Kutatási jelentés, OH-EMMI, Bp., 2018. 93–63.

[11] CSIZÉR Kata–ÖVEGES Enikő: *Nyelvtanulási autonómia és nyelvi tervezés: egy vegyes módszerű kutatás eredményei*. Modern Nyelvoktatás, 2020/1-2. 44–58. https://ojs.elte.hu/modernnyelvok/article/view/1459/1241 [02.11.2024]

[12] LITTLE, David: *Language learner autonomy: Some fundamental considerations revisited*. International Journal of Innovation in Language Learning and Teaching, 2007/1. 14–29.

[13] NUNAN, David: *Learner-centered English language education: The selected works of David Nunan*. Routledge, 2012.

[14] LITTLE, David: *Language learner autonomy: Rethinking language teaching*. Language Teaching, 2022/1. 64–73.; BENSON, Phil: *Teaching and researching: Autonomy in language learning*. Routledge, 2013.

[15] PINTÉR Annamária: *Teaching young language learners*. Oxford University Press, 2017.

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deeper understanding regarding their practices as beliefs affect teachers' decision making which has an impact on classroom practices**.** However, researching beliefs can be challenging as they are complex, not directly observable and can change over time.[16] Looking into teachers' perceptions, research revealed that teachers agreed on the positive effects of learner autonomy and emphasised the importance of the personalised pace of learning, deeper understanding and sense of achievement.[17] They viewed motivation as the most powerful factor to influence autonomy in language learning, considered learners' socioeconomic background essential in autonomy development and found life experience and language learning experience more relevant than age. Teachers' views on autonomy were shaped by their own learning experiences and the impact of their previous teachers. Research revealed that teachers were aware of the strong potential of technology, although they emphasised the need for proper guidance. As drawbacks, they found error correction problematic, feared to lose control over their lessons and agreed on the importance of teacher-directedness.[18] Altogether, teachers believed that most students were not ready to take control over their learning, they were more concerned about immediate learning goals and driven by extrinsic motives.

The study

The purpose of the study was to gain insight into primary school teachers' autonomy supportive practices and perceived difficulties in autonomy support with young learners. The participants of the research were six elementary school English teachers, from a medium sized elementary school in a county seat in the central part of Hungary, where English as a foreign language is taught from the first grade starting from one lesson per week, reaching three lessons per week in the 6th grade. The number of pupils in a language class ranged between 11–17. The age of the participants varied between 34–57, five female and one male, they spent 10–35 years on the field of education. Data was collected with semi-structured interviews in Hungarian in 2023 December.

Looking for emerging patterns, the interviews revealed that even though supporting autonomy has its acknowledged benefits, practicing teachers faced several challenges when trying to support it with young learners. From the responses of the participants three major areas could be identified as when they were asked about the most challenging factors in promoting autonomy with their pupils: individual differences, temporary- and external factors. Among the individual differences the most frequently mentioned characteristics were lack of motivation, passivity, students not willing to speak up or cooperate in different work forms, referring to a great variety of excuses or expect the teacher to make decisions for them. Four of the respondents mentioned that their pupils might not be

[16] BORG, Simon: *Teacher cognition and language education*. Continuum, London, 2015. 1–384.
[17] BORG, Simon–AL-BUSAIDI, Saleh: *Learner autonomy: English language teachers' beliefs and practices*. British Council, London, 2012.
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mature enough for decision making. As for temporary factors, all the participants recalled the short attention span as a characteristic of young age, early fatigue, being easily distracted, and pupils' momentary state of mind. Teachers agreed that autonomy requires lots of skills and they could observe different levels of autonomy with their learners.

External factors were also prevalent when discussing the challenges participants faced during autonomy support: learning context, classroom atmosphere, group dynamics were identified from the immediate circumstances. As for the larger scale, institutional expectations and constraints and the effects of the period of digital education generated by the Covid-19 pandemics were recalled to hinder autonomy support. Students' socio-educational background was also mentioned by half of the respondents as a cause for different levels of autonomy and different extent of openness towards learning autonomously. All teachers agreed that one of the biggest difficulties for them to integrate autonomy supportive practices into their daily classroom routine is cause by time constraints. Although autonomy was viewed as a desirable goal to reach, teachers had diverging views about the level of freedom their students should be given in the classroom.

As learning continues beyond the classroom, teachers must provide students with skills and strategies that they can apply to different learning scenarios to become their own most effective helpers,[19] I asked the interviewees to describe activities and techniques that they included into their everyday practice that supported pupils' autonomy in language learning, that they found sustainable and feasible in their teaching context.

Offering appropriate learning strategies tailored to the learners' age is crucial. To achieve this, two of the respondents mentioned that they started the schoolyear with a "Learning to learn" module, where they provided pupils with language learning strategies in a playful way (i.e. how to organize notes, learn vocabulary, etc.). This can empower students to oversee their own progress in different areas of language learning, such as learning new vocabulary or organizing study materials.

Teachers found important to grab the attention of their young learners at the beginning of the learning process. Taking small steps was found especially important with young learners, just like taking advantage of play and scaffolding activities to increase confidence by making the activities familiar to the children. Three participants believed that it was simpler to handle a group of pupils when they were offered a selection of materials and tasks that cater to diverse learning styles and varying levels of abilities. They supported making smaller choices at the beginning, for example, students could choose between singing a song or acting out a story at the end of a lesson, select their role in a performance, determine the sequence of activities (if possible), make presentations on topics of their own choice (6th grade), and choose tasks based on their preferences from a list of options (e.g.: crossword or a wordsearch activity). Some of these opportunities for decision making were offered by the coursebook material. Four teachers provided learners with extra language exercises to differentiate between the higher

[19] BENSON, Phil: *Teaching and researching: Autonomy in language learning*. Routledge, 2013.

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achievers and/ or pupils with special needs, one of them relied heavily on Kréta IFM, a language learning application with a gamification approach, which made differentiation on the level of individual students more feasible and manageable. When students were given the opportunity to choose topics for the upcoming class or were motivated to bring or create resources relevant to the lesson, it fosters a sense of importance in their contributions to the classroom, ultimately boosting their engagement in their own learning.[20] Moreover, enhancing lesson plans by incorporating real-life examples and referencing their own language learning experiences will increase involvement and motivation.

Encouraging students to act independently can be achieved by shifting from deductive to inductive methods when teaching grammar, vocabulary, and writing. Instead of direct instruction, students can deduce rules and meanings from examples, promoting guessing and taking risks in their learning process. Even though worded differently and in different classroom contexts, but allowing space for guessing and risk-taking in their daily practice was mentioned by five teachers.

As for work forms, participants agreed that group work and pair work was less manageable in the 1st and 2nd grade than with the older students, however, they tried to introduce all work forms early. Two teachers mentioned to introduce groupwork to discuss the instructions of the next activity, pupils could ask from the teacher only afterwards. Project work was found very time-consuming but enjoyable and rewarding for the pupils.

Concerning feedback and assessment, the interviewees said that they provided relevant feedback bearing in mind the individual level of autonomy of each pupil, worded accordingly. Three participants mentioned different ways of peer-assessment, where pupils could give opinion about or correct each other's work. An interviewee mentioned to include self-assessment in the language class by encouraging students to edit their written work starting from the 4th grade. She believed that mistakes are necessary and useful, they help pupils improve, also, support risk-taking. She asked her pupils to revise their corrected work (5th and 6th grade) and categorise their mistakes according to the following: a. I know this, but somehow forgot; b. I didn't know this, but it'd be good to remember it; c. I don't understand this.

Reflection on learning and identifying strengths and weaknesses is an important element in the process of becoming a self-directed learner,[21] however, asking students to reflect on their learning experiences might not be realistic with young learners. Still, teachers assisted them in recognizing their strong points and areas needing improvement. To become more independent and to acquire the skill of assessing their own learning accurately, the series of coursebooks used at the institution offer checklists for self-assessment and reflection. Incorporating "Can do" statements at the conclusion of a lesson was found to be an easy method to do this. Additionally, a more detailed self-evaluation could be done by assigning a number between 1–5 to the statements to indicate their confidence levels in

[20] USHIODA, Ema: *Motivation and good language learners*. Cambridge University Press, 2008.
[21] BENSON, Phil: *Teaching and researching: Autonomy in language learning*. Routledge, 2013.

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the language area, however, only one participant mentioned that she incorporated in into her monthly practice.

To sum up, teachers believed that it is crucial to spark curiosity and captivate their students' attention at the beginning of the learning process. Additional support should be given in the early stages, with a gradual reduction in guidance as learning progresses, similarly, opportunities for practicing decision making should also be provided. They found that young learners showed some level of independence as they had some understanding of their learning styles and strategies, they understood their preferences but their actions were more based on what they liked rather than conscious strategy choice, several pupils approached learning tasks actively, however, they required additional encouragement and teacher support at times. Just like teenage and adult language learners,[22] young learners were found to be open to taking risks, such as willingly communicating in English but not without limitations, enjoying experimenting with English.

Conclusions

The research showed that teachers had positive attitudes towards autonomy in language learning and were aware of autonomy supportive strategies that they integrated into their practices. Young learners' autonomy showed similar patterns as that of teenage learners': pupils could take some responsibility for their work if favourable conditions are provided and encouraged by the teacher. In a learner-friendly, positive environment where children feel safe it is more likely to be enthusiastic and motivated to work. Young learners also work more effectively if they are allowed to choose activities from options provided to them. Striving for autonomy with young learners is only the initial stage in their journey towards self-directed learning, self-awareness, and taking ownership of their growth. Developing learner autonomy with young learners is a lengthy process, not one step, but many, its successful implementation depends largely on the persistence of the teacher. The findings of the research carry pedagogical implications to practicing teachers and teacher educators as teachers' awareness should be raised about the importance of learner autonomy to help primary school teachers shape their learners' early learning experiences positively regarding autonomy development as they are the fastest growing group of language learners globally.

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Absztrakt

FIATAL TANULÓK ÉS AZ ÖNÁLLÓSÁG TÁMOGATÁSA A NYELVTANULÁSBAN

A nyelvtanulói önállóság támogatása a nyelvtanulásban már korai életkortól kezdve alapvető fontosságú, mivel ez képessé teszi a tanulókat arra, hogy maguk irányítsák a tanulási folyamatot, növeli a motivációt és az elkötelezettséget. Az autonómia előmozdításával a tanárok hatással vannak az olyan alapvető készségek fejlődésére, mint a kritikus gondolkodás, a problémamegoldás és a döntéshozatal. Ezzel a tanulmányommal a tanulói önállóság megértését kívánom elmélyíteni, és a gyakorló általános iskolai tanárok autonómiatámogató gyakorlatának vizsgálatával néhány stratégiát kívánok feltárni az autonómia korai nyelvtanulásban való kiépítésére.

A gyakorlati stratégiák közé tartozik a tanulóközpontú környezet megteremtése, a választás és a reflexió lehetőségeinek felkínálása, valamint a tanulók önértékelési készségeinek erősítése. A technológia integrálása továbbá erősítheti az autonómiát azáltal, hogy személyre szabott tanulási tapasztalatokat és a különböző forrásokhoz való hozzáférést kínál. A nyelvtudás növelése mellett a tanulói önállóság elfogadása az alap-fokú nyelvoktatásban az egész életen át tartó tanulás szokásait is kialakítja, és felké-szíti a fiatal tanulókat a sikerre egy egyre inkább összekapcsolódó és dinamikus világban. Ezen elképzelések megvalósítását hangsúlyozva a tanulmány kiemeli a tanárképzés, a tantervek adaptálása és a folyamatos támogatási rendszerek szükségességét.

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Legac, Vladimir

KAKVE SU RAZLIKE U STRAHU OD ENGLESKOG JEZIKA U RAZREDNOJ SITUACIJI IZMEĐU ROMSKE I NEROMSKE DJECE U OSNOVNIM ŠKOLAMA U MEĐIMURJU?

Uvod

U ovome radu donosimo prikaz jednog istraživanja s temom straha od engleskog jezika u razrednim situacijama. Rad uspoređuje opći uspjeh u školi, uspjeh u učenju engleskog jezika kao stranog, strah od jezika kao stranog između romskih i neromskih učenika u dijelu Hrvatske u kojem su Romi najveća manjinska skupina. Strani jezik je obavezan predmet u hrvatskim školama od prvog razreda. Većina učenika uče engleski kao prvi jezik. Ako ga se ne uči kao prvi, učenici ga najčešće počinju učiti u četvrtom razredu kao drugi strani jezik. Strah od jezika je jedan od najvažnijih afektivnih čimbenika koji najčešće ima negativan učinak na učenje stranog jezika. Autor ovog članka je inače iskusan istraživač u području jezičnog obrazovanja i studija manjina. Najprije se daju najvažniji podatci o romskoj nacionalnoj manjini u Hrvatskoj a potom isti za Međimursku županiju. Slijedi upoznavanje čitatelja s obilježjima straha od jezika kao afektivnog čimbenika i spoznajama o razlikama tog čimbenika između monolingvalnih i bilingvalnih učenika kao i specifičnostima romskih učenika u Međimurju s obzirom na njihov status vezan uz opoziciju jednojezičnost-dvojezičnost kao odrednice pojedinci. Glavni dio rada čini analiza nalaza istraživanja po varijablama i usporedba povezanosti straha od jezika u razrednoj situaciji i učinka u učenju engleskog kao stranog jezika u obje skupine.

Romska nacionalna manjina u Hrvatskoj

Prema rezultatima popisa stanovništva iz 2021.[1] godine u Hrvatskoj živi 17.980 pripadnika romske nacionalne skupine, odnosno 0,46% ukupnog stanovništva. Oni su treća najveća nacionalna manjinska skupina od 22 koje su priznate u zemlji. Zbog visokog nataliteta njihov udio stalno raste. 2011. bili su peta manjina. U međuvremenu su prestigli Talijane i Albance. Veće manjine u Hrvatskoj su Srbi (123.892 ili 3.2%), Bošnjaci (24.131 ili 0.62%, Albanci (13811 ili 0.36%) i Talijani (13.763 ili 0.36%). Udio Hrvata u nacionalnoj strukturi stanovništva iznosi 91,63%. Već spomenuti izvor Državnog zavoda za statistiku otkriva nam i podatke o rasprostranjenosti Roma i njihovoj vjeroispovijesti. Tako saznajemo da većina Roma živi u sjevernom dijelu zemlje (Međimurje, Podravina i Baranja) te da su pripadnici različitih vjerskih zajednica. Tri su veće vjerske skupine. Najveći broj Roma su rimokatolici – 10.093 ili 56%, potom slijede muslimani – njih 3287 (18%), dok treću glavnu skupinu čine 2496 pravoslavnih Roma, što predstavlja skoro 14% od ukupnog broja romske populacije u popisu iz 2021. godine. Među

[1] Državni zavod za statistiku. 2021. https://podaci.dzs.hr/media/td3jvrbu/popis_2021-stanovnistvo_po_gradovima_opcinama.xlsx [26/02/2025]

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Romima u Hrvatskoj nalazimo i malo protestanata (51). Veći je udio Roma koji se izjašnjavaju kao pripadnici ostalih kršćanskih zajednica (811). Postoji i 245 ateista, 20 agnostika, ali i 90 pripadnih ostalih vjera, pokreta i svjetonazora. Romi su etnička manjina koja je najmanje integrirana u moderno hrvatsko društvo od svih nacionalnih manjina. Dva su glavna razloga za to. Prvi se odnosi na izrazito visoku razinu predrasuda i stereotipa većinskog stanovništva. Posljedica toga je velika socijalna distanca,[2] te problem socijalne i prostorne segregacije romske zajednice.[3] Drugi veliki problem je nedostatak kompetencija romske djece u vlastitom jeziku. To znači da romska djeca ne uče samo hrvatske lekseme, već pojmove iza tih leksema.[4] Mnogi istraživači[5,6,7] koji se bave problematikom Roma u Hrvatskoj slažu se da je obrazovanje najbolji način za integraciju romske zajednice u hrvatsko društvo. Autor ovog rada želi istaći kako se slaže sa Štambukovom[8] koja ističe da su inzistiranje na obrazovanju i napredak na tom plan dugotrajan, skup i težak put, ali uistinu jedini koji će proizvesti rezultate u budućnosti ali i jedini racionalan u tom smislu. Napredak u učenju romskih učenika uvelike je određen specifičnostima i karakterom romske zajednice. Romske zajednice predstavljaju sredinu koja nedovoljno cijeni obrazovanje[9].

Romska nacionalna manjina u Međimurskoj županiji

Od ukupno 20 županija u Hrvatskoj, Međimurka županija je najmanja. Granice joj čine rijeke Mura i Drava i prostire se na 729,5 četvornih kilometara. Prema podatcima Državnog zavoda za statistiku[10] na tom teritoriju živjelo je 2021. 105.250 stanovnika, pa je prosječna gustoća 144,38. Glavni je grad županije Čakovec. Postoje još dva grada: Prelog i Mursko Središće. Ostatak županije čine 22 općine. Prema već spomenutom popisu Državnog zavoda za statistu, Romi su sa svojih 6954 pripadnika činili 6,61 % ukupnog stanovništva te županije, dok je 2011, njihov udio bio 4,9% (ukupan broj Rom tada je bio 5107). Romi su najveća nacionalna manjina u Međimurju. Najveća koncentracija romskog stanovništva u prostoru Republike Hrvatske jest upravo u Međimurskoj županiji. Romi i u Međimurju žive u svojim romskim naseljima koja su segregirana od ostalog

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[8] Marija ŠTAMBUK, *Romi u društvenom prostoru Hrvatske*. Društvena istraživanja, 2000/2–3. 197–210. https://hrcak.srce.hr/20261
[9] Goran LAPAT–Hrvoje ŠLEZAK: *Percepcija učenika Roma o važnosti obrazovanja*. *Metodički obzori*. 2011/6. 81–93.
[10] Državni zavod za statistiku: Zagreb, 2021. https://podaci.dzs.hr/media/td3jvrbu/popis_2021-stanovnistvo_po_gradovima_opcinama.xlsx [05/02/2025]

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pučanstva. Na teritoriju županije takvih je naselja 13. To su Piškorovec, Trnovec, Pribislavec, Podturen, Orehovica, Sitnice, Kršanec, Gornji Kuršanec, Donja Dubrava, Domašinec, Goričan, Hlapičina i Kotoriba. Republika Hrvatska ulaže velika sredstva i napore kako bi se Romi integrirali u suvremeno hrvatsko društvo. Međutim, u tim naporima, vrlo se malo uzima u obrzi prostorni aspekt njihove odijeljenosti. Prema Šlezaku,[11] distribucija i koncentracija Roma u vrlo malim i ograničenim arealima istovremeno je i posljedica i uzrok njihove socijalne segregacije od ostatka hrvatskog društva. Šlezak razloge za konstantni porast broja Roma prema nekoliko zadnjih popisa stanovništva ne vidi samo u visokom natalitetu nego i u još dva razloga. Prema prvom od njih neki od Roma nisu uopće bili popisani na prošlim popisama. Dokaz da dio Roma uopće nije bio obuhvaćen jednim ranijim popisom vidi u podatku da u mjestu Donja Dubrava nije bio zabilježen niti jedan Rom, iako je u vrijeme dotičnog popisa u dotičnom mjestu postojalo romsko naselje s oko 70 stanovnika. Drugi mogući razlog Šlezak vidi u mogućnosti da se nitko u tom naselju nije izjasnio kao Rom. To je naselje kasnije nestalo. Bilo je smješteno u naplavnoj zoni rijeke Drave, pa su zbog toga lokalne vlasti potaknule preseljenje mještana u druga naselja, pa je većina Roma vjerojatno preselila u Podravinu. Isti autor navodi da su i u novoj sredini Romi ostali segregirani.

Romi u Međimurju pripadaju skupini *Roma Koritara* i govore *ljimba d bajaš* što je jedan od rumunjskih dijalekata romskog jezika.[12] Ime Koritari dobili su po osnovnom zanatu kojim su se bavili, a to je bila izrada predmeta od iz jednog komada drveta među kojima su najvažnija bila korita a ostali proizvodi su bili pribor za jelo i zdjele. Danas Romi u Međimurju za sebe rabe isključivo naziv Bajaši pa im je jezik glavno počelo njihova identiteta. I sami sebe identificiraju prema jeziku koji govore a ne više kao Koritari prema svom iskonskom zanatu. Osim u Međimurju Romi Bajaši još žive u Podravini i Baranji i sporadično u nekim drugim dijelovima Hrvatske. Vezano uz jezik Bajaša, valja istaći da prema nekim drugim autorima[13][14] nije riječ o rumunjskom već o starorumunjskom dijalektu koji su Romi preuzeli tijekom njihova boravka na tlu današnje Rumunjske. Ova ista romska skupina živi i u Mađarskoj i pretpostavlja se da su od tamo došli na područje današnjeg Međimurja.

Učenje stranih jezika, dvojezičnost i specifičnost međimurskih Roma

Od sredine prošlog stoljeća općenito je prihvaćeno da dijete može imati koristi od odrastanja uz dva jezika. Prekretnica u priznavanju te mogućnosti dogodila se pojavom studije Peala i Lamberta koja je pokazala da dvojezičnost može

[11] Hrvoja ŠLEZAK: *Prostorna segregacija romskog stanovništva u Međimurskoj županiji*. Hrvatski geografski glasnik, 2009/2. 65–81.
[12] Neven HRVATIĆ: Tko su Romi u Hrvatskoj, *Romani akharipe – Glas Roma*, Virovitica 1995/4. 6–7.
[13] István KEMÉNY: *The Structure of Hungarian Roma Groups in Light of Linguistic Changes*. Regio, 1999/1. 3–14.
[14] RÁTKAI A.– SÜMEGHY Z.: *Conditions of Ethnic Minorities in the South Plain Region*. Acta Climatologica et Chorologica Universitatis Szegediensis, 2001/34–35. 93–107.

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rezultirati višom verbalnom i neverbalnom inteligencijom.[15] Prema Hamersu i Blancu[16] dvojezična djeca pokazuju naprednu metalingvističku svijest u kontroli jezične obrade. Kognitivni učinci dvojezičnosti pojavljuju se rano u procesu dvojezičnosti i ne zahtijevaju visoku razinu dvojezičnog znanja ili uravnoteženu kompetenciju. Bialystok[17] napominje da su dvojezična djeca u ranijoj fazi svjesna proizvoljnosti jezičnog znaka te da mogu intenzivnije usmjeriti svoju pozornost na određeni, važniji segment informacije kako bi lakše isključili suvišne informacije. To omogućuje radnoj memoriji da obradi više informacija. Jessner[18,19] je istaknula da je ova metalingvistička svijest ključni element koji dvojezičnim učenicima omogućuje lakše učenje novog stranog jezika od njihovih jednojezičnih kolega. Ipak, treba napomenuti da neki autori[20,21] upozoravaju da nepravilan i neprimjeren tretman djece u njihovom odrastanju uz dva jezika tijekom odgojno-obrazovnog razvoja ponekad može imati čak i negativne učinke. Ova dva autora upozoravaju da pogrešan odgojno-obrazovni razvoj može završiti potencijalnom polujezičnošću djece. Legac, Kiš-Novak i Lapat[22] ukazili su na naznake te pojave upravo u romske djece u Međimurju. Ta djeca odrastaju u svojim romskim naseljima kao monolingvalna bajaška djeca i postaju dvojezičnima i višejezičnima dolaskom u prvi razred osnovne škole. Tada dolaze u dodir čak s dva nova jezika: hrvatskim jezikom u dva pojavna oblika: međimurskom kajkavskom dijalektu kojeg u svakodnevnoj uporabi rabe ostala neromska djeca u istim školama i standardnim hrvatskim jezikom kao službenim jezikom u Republici Hrvatskoj, te s engleskim ili njemačkim jezikom kojeg se u prvom razredu započinje učiti kao obavezan školski predmet. Nalaz istraživanja u spomenutom radu ove trojice autora pokazao je da romska djeca zaostaju u poznavanju prirodnoznanstvenih pojmova i u hrvatskom i engleskom jeziku za razliku od ostale dvojezične djece (Talijana ili Čeha) koji su pokazali veći uspjeh u učenju engleskog kao stranog jezika što je pripisivano već ranije spominjanim prednostima te djece kao dvojezične.[23]

[15] Elizabeth PEAL–Wallece LAMBERT: *Relation of Bilingualism to Intelligence*. Psychological Monograph: General and Applieds, 1962/76. 1–23.
[16] Josiane F. HAMERS–Michael H. A. BLANC: *Bilinguality and Bilingualism*. Cambridge Cambridge University Press, Cambridge, 2000.
[17] Ellen BIALYSTOK: *Bilingualism in development: Langauge, literacy and cognition*. Cambridge University Press, Cambridge, 2001.
[18] Ulrike JESSNER: *Linguistic Awareness in Multilinguals*. Edinburgh University Press, Edinburgh, 2006.
[19] Ulrike JESSNER: *A DST Model of Multilingualism and the Role of Metalinguistic Awareness*, Modern Language Journal, 2008/92. 270–283.
[20] Jim CUMMINS: Linguistic Interdependence and the Educational Development of Bilingual Children, *Review of Educational Research,* Pennsylvania State University, 1979/49. 221–51.
[21] Ludo T. VERHOEVEN: *Predicting Minority Children's Bilingual Proficiency*. Child, Family, and Institutional Factors, Language Learning, 1991/41. 205–233.
[22] Vladimir LEGAC–Darinka KIŠ-NOVAK–Goran LAPAT: *Comparison of the Familiarity of Grade 4 Roma and Non-Roma School Children with Some Biological Terms in English as a Foreign Language*. Különleges Bánásmód, 2020/1. 47–60.
[23] Vladimir LEGAC: *Comparison of Listening Anxiety and Listening Comprehension between Monolingual and Bilingual Learners of English as a Foreign Language in Croatia*. U Barbara STEIN (ur.): *Wege zu anderen Sprachen und Kulturen*. Verlag Dr. Kovač, Hamburg, 2007. 159–178.

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Važnost istraživanja straha od engleskog kao stranog jezika

Mogućnost važnosti uloge afektivnih čimbenika za uspješno učenje stranog jezika bila je dugo zanemarivana. Literatura o usvajanju drugog i stranog jezika dugo je vremena prepoznavala samo važnost kognitivnih čimbenika. Tek su se 1980-ih afektivni čimbenici počeli uključivati u istraživanja učenja stranog jezika. Aktivacija učenikovih afektivnih karakteristika u procesu učenja novog stranog jezika uz njegove kognitivne sposobnosti opće je prihvaćena od posljednje četvrtine 20. stoljeća.[24] Objašnjenje uloge afektivnih čimbenika došlo je s pojavom Gardnerovog[25] socioedukacijskog modela učenja stranih jezika. Redefinirani model[26] po prvi je put u povijesti spomenuo ulogu straha od stranog jezika uz ranije navedene ostale individualne razlike: inteligenciju, sposobnosti, strategije, stavove i motivaciju.

MacIntyre i Gardner u gore spomenutom radu nisu zanijekali da strah od stranog jezika dijeli neke slične karakteristike kao opća anksioznost, ali su naglasili njezinu značajku kao situacijsko-specifičnu vrstu anksioznosti. Definirali su ga kao "osjećaj napetosti i strepnje posebno povezan s kontekstom drugog jezika, uključujući govor, slušanje i učenje".[27] Od sredine 1980-ih strah od stranog jezika smatra se konstruktom.[28] Njihova su istraživanja provedena u situacijama u razredu gdje se uči strani jezik. Prema njima, strah od jezika ima negativan učinak na jezičnu izvedbu učenika jer povećava negativan utjecaj na tri vrste izvedbe: strah od komunikacije, strah od ispitivanja ispitu i strah od negativne evaluacije. Horwitz i suradnici[29] kao pioniri u istraživanju straha od jezika ukazali su na činjenicu da je ova vrsta straha od jezika specifična za određenu situaciju i da nije jednostavna kombinacija triju strahova primijenjenih na učenje stranih jezika. Nekoliko godina kasnije, oni definirali su ga „kao poseban kompleks samopercepcija, uvjerenja, osjećaja i ponašanja povezanih s učenjem jezika u učionici koji proizlaze iz jedinstvenosti procesa učenja jezika."[30]

Manifestacije straha od stranog jezika mogu se vidjeti kroz četiri različite komponente straha od jezika: kognitivne, emocionalne, bihevioralne i fiziološke komponente. Kognitivne se prvenstveno odnose na samoprocjenu, emocionalna je povezana s osjećajem nelagode i napetosti, bihevioralne komponente uključuje nespretnost u govoru i gestama, a fiziološke uključuju različite simptome poput znojenja, lupanja srca, drhtavog glasa, drhtanja i vrpoljenja. Prema Zsuzsi Tóth,[31]

[24] Hans Heinrich STERN: *Fundamental Concepts of Language Teaching*. Oxford: Oxford University Press, 1983.
[25] Rober, C. GARDNER: *Social Psychology and Second Language Learning: The Role of Attitudes and Motivation*. Edward Arnold Publishers, London, 1985.
[26] Robert, C. GARDNER–Peter D. MacINTYRE: *A Learner's Contribution to Second-language Learning Part II. Affective Variables*. Language Teaching, 1993/26. 1–11.
[27] Peter, D. MacINTYRE–Robert, C. GARDNER: *The Subtle Effects of Language Anxiety on Cognitive Processing in the Second Language*. Language Learning, 1994/2. 283–305, stranica 284.
[28] Elaine K. HORWITZ–Michael B. HORWITZ–Joann COPE: *Foreign Language Classroom Anxiety*. Modern Language Journal, 1986/2. 125–132.
[29] Michael B. HORWITZ–Eleaine K. HORWITZ–Joann COPE: F*oreign Language Classroom Anxiety*. U: Horwitz, Eleaine K. HORWITZ–Dolly YOUNG (ur.): *Language Anxiety. From Theory and Research to Classroom Implications*. Prentice Hall, 1991, Englewood Cliffs, NJ, 27–39.
[30] Isto, 31.
[31] TÓTH Zsuzsa: *Foreign Language Anxiety and the Advanced Language Learner: A Study of Hungarian Students of English as a Foreign Language*. Cambridge Scholars Publishing, 2010.

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što se učenici stranog jezika više brinu da će doživjeti te simptome u razrednoj situaciji, to je veća mogućnost da će identificirati te simptome sa svojim iskustvom u učionici.

Istraživači[32] su otkrili negativan učinak straha od stranog jezika na uspjeh u svladavanju svih četiriju jezičnih vještina, tj. čitanja, slušanja, pisanja i govora, no govor u učionici smatra se izuzetno pogodnim za pojavu straha od stranog jezika u usporedbi s ostale tri jezične vještine. Woodrow[33] je bila prva znanstvenica koja je prepoznala potrebu za analizom straha od stranog jezika u situacijama izvan učionice, a Legac[34] je razvio instrument, odnosno skalu za mjerenje straha od stranog jezika u situacijama izvan učionice za engleski kao strani jezik.

Sve do početka 21. stoljeća općenito se pretpostavljalo da će se razina straha od stranog jezika smanjiti s višim razinama poznavanja stranog jezika. Međutim, rezultati nekoliko kasnijih studija pokazali su da učenici s visokim uspjehom u engleskom jeziku imaju veća očekivanja i kritičniji su prema svom učinku, što je sve rezultiralo višim razinama straha od stranog jezika.[35,36] Strah od jezika u Hrvatskoj prva je istraživala Jelena Mihaljević Djugunović s Katedre za metodiku Odsjeka za anglistiku Filozofskog fakulteta Sveučilišta u Zagrebu.

Cilj istraživanja

Glavni cilj ove studije bio je istražiti strah od jezika u engleskom kao stranom jeziku kod romskih i neromskih učenika 8. razreda osnovne škole i usporediti ga te vidjeti razlike u školskim ocjenama između ove dvije istraživane skupine.
Ispitane su sljedeće 4 polazne hipoteze:

- H1 – Učenici romske nacionalnosti imat će niži prosjek ocjena iz svih školskih predmeta od učenika neromske nacionalnosti
- H2 – Romski učenici imat će niže ocjene iz engleskog kao stranog jezika od neromskih učenika
- H3: Romski učenici imat će viši strah od engleskog kao stranog jezika od neromskih učenika
- H4: Postojat će negativan odnos između straha od stranog jezika i ocjena iz engleskog kao stranog jezika u obje grupe

Sve su polazne hipoteze utemeljene na rezultatima ranijih istraživanja s romskim i neromskim učenicima. U ranijim istraživačkim studijama[37] u kojima se uspoređivalo postignuće u učenju stranog jezika između romskih i neromskih učenika, romski su učenici imali niže ocjene i veći strah od stranog jezika, niži pojam o sebi

[32] Tóth, 2010.
[33] Lindy WOODROW: *Anxiety and Speaking English as a Second Language*. Regional Language Centre (RELC) Journal, 2006/3. 308–328.
[34] Vladimir LEGAC: *Outside-Classroom Foreign Language Anxiety and Speaking Skill in Monolingual and Bilingual Learners of English as a Foreign Language*. U: Jürg STRÄSSLER (ur.): *Sprache(n) für Europa. Mehrsprachigkeit als Chance. Berlin et al*., Peter Lang, 2019. 55–66.
[35] Jelena MIHALJEVIĆ DJIGUNOVIĆ: *Beyond language anxiety*. Studia Romanica Et Anglica Zagrabiensia, 2004/49. 201–212.
[36] TÓTH, 2010.
[37] Vladimir LEGAC–Krunoslav MIKULAN–Dunja SIROČIĆ: *Strah od jezika i uspjeh u učenju stranih jezika u monolingvalne i bilingvalne djece u Međimurju*. U: Irena Vodopija (ur.): *Dijete i jezik danas*. Dijete i višejezičnost, Osijek, 2006. 151–168.

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u učenju stranog jezika[38] i slabije su poznavali biološke pojmove u engleskom kao stranome jeziku.[39]

Uzorak

Naše istraživanje provedeno je na ukupnom uzorku od 54 učenika (N=54). Isti je bio broj djevojčica i dječaka, odnosno po 27 pripadnika oba spola. Ispitanici su bili podijeljeni u dvije skupine: romsku i neromsku. Romsku skupinu sačinjavale su 15 djevojčica i 14 dječaka, a neromska se sastojala od 12 dječaka i 13 djevojčica. U vrijeme ispitivanja djeca su kao učenici 8. razreda osnovne škole bila stara otprilike 14 godina. Dolazila su iz triju škola.

Postupak

U sve tri škole podatci su prikupljeni tijekom 1. polugodišta s učenicima čiji su roditelji pristali da njihova djeca mogu sudjelovati u istraživanju. Istraživač je upoznao roditelje i učenike s ciljem istraživanja i zamolio učenike za suradnju. Ispitanicima je zajamčena anonimnost.

Varijable, instrument i bodovanje

Ispitivane su tri varijable: prosječna ocjena iz svih predmeta na kraju sedmog razreda, završna ocjena iz engleskog kao stranog jezika na kraju sedmog razreda i strah od stranog jezika u razrednoj situaciji. Kao instrument za mjerenje najvažnije varijable u ovome istraživanju rabljen je instrument u Hrvatskoj poznat kao Skala za mjerenje straha od stranoga jezika u razrednoj situaciji. Originalni naziv skale je Foreign Language Classroom Anxiety Scale[40] (Horwitz 1983). Riječ je o strukturiranom uputniku koji se sastoji od 33 stavki na koje se odgovara Likertovom skalom od pet stupnjeva. Prema autorima skale postoje tri raspona intenziteta:

1. nizak: 33 – 75
2. srednji: 76 – 119
3. visok: 120 – 165

Analiza i rasprava nalaza istraživanja

Dajemo kvantitativnu analizu nalaza istraživanja po varijablama: ukupan uspjeh (prosječna ocjena za opći uspjeh iz svih školskih predmeta na kraju 7. razreda), ocjena iz engleskog kao stranog jezika na kraju 7. razreda i strah od engleskog kao stranog jezika i rezultate za povezanost varijabli uspjeha iz engleskog i straha od engleskog kao stranog jezika.

[38] Vladimir LEGAC–Blaženka FILIPAN-ŽIGNIĆ: *Pojam o sebi u učenju stranoga jezika u monolingvalnih i bilingvalnih učenika*. Učitelj, 2004/4. 185–201.
[39] Vladimir LEGAC–Darinka KIŠ-NOVAK–Goran LAPAT: *Comparison of the Familiarity of Grade 4 Roma and Non-Roma School Children with Some Biological Terms in English as a Foreign Language*. Különleges Bánásmód, 2020/1. 47–60.
[40] HORWITZ–HORWITZ-COPE, 1986.

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Ukupan uspjeh u školi

Iz *Tablice 1* razvidno je da su neromska djeca postigla bolji opći uspjeh na kraju prethodno završene školske godine, odnosno na kraju 7. razreda osnovne škole. Najvažniji pokazatelj boljeg uspjeha neromske djece vidljiv je iz vrijednosti aritmetičke sredine. U Roma ona iznosi 3,41 uz vrijednost standardne devijacije 0,69. Prema tome Romi su postigli uspjeh ocjene dobar. U neromske djece prosječna ocjena iz svih školskih predmeta jest za jednu ocjenu viša i iznosi 4,44 uz standardnu devijaciju od 0,77 i s tom vrijednošću ova ispitivana grupa učenika je postigla vrlo dobar uspjeh. U neromskoj skupini ne postoji niti jedan učenik s dovoljnim općim uspjehom. U njih je zabilježen dobar kao najniži uspjeh. Centralna vrijednost 2 odaje da je u romske djece najviše učenika s dovoljnim uspjehom a u neromske s odličnim.

	Romi	**Neromi**
Aritmetička sredina	3,41	4,44
St. devijacija	0,69	0,77
Cent. vrijed.	2	5
Dom. vrijed.	5	5
Najm. vrijed.	2	3
Najv. vrijed.	5	5

Mjere centralne tendencije i varijabilnosti – prosječna ocjena za opći uspjeh za sve školske predmete na kraju 7. razreda (N - 54) (Tablica 1)

Statističku značajnost razlike između dviju aritmetičkih sredina dokazali smo *t*-testom ($t = 5{,}2$, $p<0.01$) čiji je sažetak prikazan u dolje prikazanoj *Tablici 2*. Iz analiziranih podataka prikazanih u *Tablicama 1* i *2* možemo zaključiti da je potvrđena prva polazna hipoteza H1, odnosno da učenici romske nacionalnosti imaju niži prosjek ocjena iz svih školskih predmeta.

	N	**Aritmetička sredina**	**St. dev.**	***t***	***p***
Romi	20	3,41	0,69	5.2	0,001
Neromi	25	4,44	0,77		

t-test za prosječnu ocjenu iz općeg uspjeha – svi školski predmeti)) (Tablica 2)

Uspjeh u engleskom kao stranom jeziku

Tablica 3 pokazuje kako su neromski učenici zabilježili bolji uspjeh i u svladavanju engleskog kao stranog jezika koji je mjeren zaključnom ocjenom iz engleskog na kraju završenog sedmog razreda osnovne škole. U Roma prosječna je vrijednost ocjene iz dotičnog školskog predmeta iznosila 3,14 uz standardnu devijaciju 1,03, a u međimurske neromske djece istog uzrasta ona je iznosila skoro jednu ocjenu više, odnosno 4,04 uz vrijednost standardne devijacije 1,14. Prvi su ispitanici zabilježili tako prosječnu ocjenu dobar a ispitanici iz paralelne skupine prosječnu ocjenu vrlo dobar. Zanimljiv je podatak o dominantnoj vrijednosti iz kojeg je razvidno da je u Roma najčešća ocjena dovoljan, dok su ostala međimurska djeca najčešće zabilježila ocjenu vrlo dobar. Pozitivno je što i u romskoj skupini imamo učenike s najvišom ocjenom odličan.

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	Romi	Neromi
Aritmetička sredina	3,14	4,04
St. devijacija	1,03	1,14
Cent. vrijed.	3	5
Dom. vrijed.	2	4
Najm. vrijed.	2	2
Najv. vrijed.	5	5

Mjere centralne tendencije i varijabilnosti – ocjena iz engleskog na kraju 7. razreda (N - 54) (Tablica 3)

Tablica 4 prikazuje sažetak analize *t*-postupka iz kojeg je razvidno da je razlika između dviju ispitivanih skupina statistički značajna (t=3,07, p<0,01). Možemo zaključiti da je nalazom rezultata našeg istraživanja i u ovoj varijabli potvrđena naša polazna hipoteza H2, odnosno konstatiramo da su romski učenici zabilježili niže ocjene iz engleskog kao stranog jezika od neromskih učenika.

	N	Arit. sredina	St. dev.	*t*	*p*
Romi	29	3,14	1,03	3,07	0,01
Neromi	25	4.04	1,14		

t-test (ocjene iz engleskog na kraju 7. razreda) (Tablica 4)

Strah od engleskog kao stranog jezika

Najvažnija varijabla u ovoj istraživačkoj studiji je strah od engleskog kao stranog jezika. Svi podatci u dolje prikazanoj *Tablici 5* pokazuju da romski učenici osjećaju viši strah od engleskog kao stranog jezika. U romskih učenika aritmetička sredina je 102,52 uz standardnu devijaciju od 18,32, a u neromskih 82,12 uz standardnu devijaciju 19,09. Iako su te obje vrijednosti unutar srednjeg intenziteta, razlika je velika. Dokaz tome je centralna vrijednost koja je 120 i tako odaje da većina romske djece osjeća visok strah od engleskog jezika, za razliku od neromske, gdje je granica između gornje i donje polovice rezultata na 80, što se primiče donjoj granici straha srednjeg intenziteta. U neromskih učenika bilježimo i mnogo nižu minimalnu vrijednost (57), u Roma je ona 70, u Roma bilježimo višu maksimalnu vrijednost (134) dok je ona u kontrolnoj grupi na 120.

	Romski učenici	Neromski hrvatski učenici
Arit. sredina	102,52	82,12
St. devijacija	18,32	19,09
Dom. vrijed.	105	--
Cent. vrijed.	120	80
Minim. vrijed.	70	57
Maks. vrijed.	134	120
Raspon	64	63

Mjere centralne tendencije i varijabilnosti – Strah od stranoga jezika u engleskom kao stranom jeziku (N – 54) (Tablica 5)

Da neromska djeca osjećaju niži strah od stranog jezika najlakše je uočiti iz postotaka zastupljenosti triju različitih intenziteta straha od jezika (niskog, srednjeg i visokog) koji su prikazani u dolje priloženom Grafikonu 1. Nepoželjan visoki strah od engleskog kao stranog jezika zabilježen je u svega 8% neromskih učenika, a u romskih 31%.

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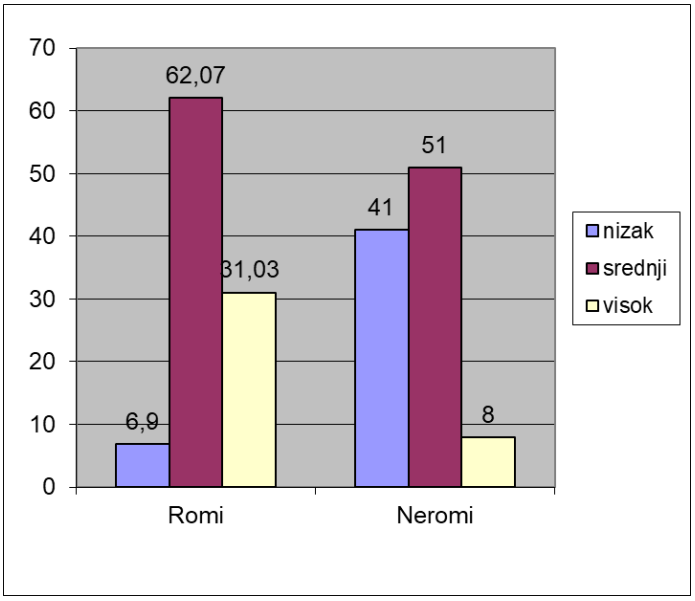
Poželjan nizak intenzitet zabilježen je u puno većem postotku neromske djece (41%), a u svega 6,9% romske djece. Razlika je i u zastupljenosti straha srednjeg intenziteta u korist neromske djece (51%), a u Roma 62,07.



Zastupljenost niskog, srednjeg i visokog intenziteta straha od engleskog jezika kao stranog u romskih i neromskih učenika (Grafikon 1)

Tablica 6 pokazuje da je razlika između dviju aritmetičkih sredina statistički značajna (t=4,02, p<0,01) i u ovoj varijabli. Time je potvrđena i treća polazna hipoteza H3, odnosno romski učenici osjećaju viši strah od engleskog kao stranog jezika od neromskih učenika.

	N	Arit. sredina	St. dev.	*t*	*p*
Romi	29	102,52	18,32	4,02	0,01
Neromi	25	82,12	19,09		

Razlika između aritmetičkih sredina za strah od engleskog kao stranog jezika u romske i neromske djece (Tablica 6)

Povezanost između varijabli: uspjeh u engleskom kao stranom jeziku u vidu ocjene i visine straha od engleskog kao stranog jezika.

Kako bismo vidjeli kolika je povezanost između straha od jezika u engleskom kao stranom jeziku i uspjeha u svladavanju engleskog kao stranog jezika u vidu ocjene izračunali smo korelacije između tih dviju varijabli. Njih prikazujemo u *Tablici 7*. Iz vrijednosti koeficijenata korelacija vidimo da strah od engleskog kao stranog jezika ima gotovo istu negativnu povezanost s uspjehom u obje istraživane skupine. Njegov učinak je izrazito negativan. U neromske djece je ta povezanost i nešto viša (-.957, za razliku od Roma gdje je taj isti koeficijent -.909.)

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Zaključujemo da je potvrđena i naša četvrta polazna hipoteza, odnosno da postoji negativan odnos između straha od stranog jezika i ocjena iz engleskog kao stranog jezika u obje grupe.

	Ocjene u engleskom kao stranom jeziku	
	Romi	**Neromi**
Strah od engleskog kao stranog jezika	-.909*	-.957*
***p<0.01**		

Korelacije između straha od engleskog kao stranog jezika i ocjene u engleskom kao stranom jeziku (Tablica 7)

Zaključak i implikacije za buduća istraživanja

Glavni cilj ove studije bio je istražiti strah od jezika u engleskom kao stranom jeziku kod romskih i neromskih učenika 8. razreda osnovne škole i usporediti ga te vidjeti razlike u školskim ocjenama između ove dvije istraživane skupine. Na kraju ovog istraživanja potrebno je zaključiti da su potvrđene sve četiri polazne hipoteze. Romski učenici imaju niže školske ocjene iz prosječnog ukupnog uspjeha i engleskog kao stranog jezika te osjećaju veći strah od engleskog kao stranog jezika. Potvrđena je i negativna povezanost između straha od engleskog kao stranog jezika i ocjene iz tog školskog predmeta. Nalaz nam sugerira da učitelji trebaju nastojati otkriti pojavu straha od engleskog jezika u razrednoj situaciji kod svojih učenika i trebaju raditi na njegovom smanjenju. Učitelji koji rade s romskom populacijom trebaju biti svjesni da je strah od engleskog jezika još jedan dodatni negativni čimbenik. Podatak o tome da u obje skupine imamo znatan broj učenika s odličnim uspjehom iz engleskog dokaz nam je da je visok uspjeh moguć. To nam treba biti i poticaj za daljnje povećanje naših očekivanja. Istraživanja se trebaju nastaviti. Držimo da bismo trebali provesti slična istraživanja s romskim i neromskim učenicima u drugim afektivnim čimbenicima (strah od stranog jezika u izvanrazrednoj situaciji, intenzitet motivacije, spremnost na komunikaciju, sramežljivost, itd., ali i izmjeriti strah od stranog jezika u razrednoj situaciji u različitima fazama učenja i uporabe stranoga jezika (faza ulaza, faza obrade informacije i faza izlaza). Do tada svim učiteljima engleskog i njihovim učenicima jezika želimo puno uspjeha.

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Abstract

WHAT ARE THE DIFFERENCES IN LANGUAGE ANXIETY DURING ENGLISH AS A FOREIGN LANGUAGE CLASS IN CLASSROOM SITUATIONS BETWEEN ROMA AND NON-ROMA PRIMARY SCHOOL STUDENTS IN MEĐIMURJE?

The paper presents the results of a study with Roma and non-Roma primary school children in Međimurje County (Republic of Croatia) in the final grade. In Croatia, English as a foreign language is a compulsory school subject. Međimurje County is the county with the highest proportion of Roma in the total population of Croatia. The study findings showed that Roma students have lower average grades and lower grades in English as a foreign language than non-Roma students. Roma children are more susceptible than non-Roma to higher intensities of foreign language anxiety in classroom situations measured by the FLACS (Horwitz et al, 1986). In both groups, anxiety during English as a foreign language class negatively correlates with achievement in English as a final school grade. Suggestions for improving achievement for both tested groups are also provided, as well as implications for further research

Keywords: anxiety in English as a foreign language in classroom situations, Roma in Međimurje and in Croatia, horizontal bilingualism, achievement in English as a foreign language i primary school

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Krisztina Szőcs

NOVICE LANGUAGE TEACHERS' EXPERIENCES AND CHALLENGES IN THEIR FIRST YEARS OF TEACHING

1. Introduction

Transitioning from teacher education programs to actual classroom teaching contexts can be rather challenging for new language teachers. Even with comprehensive training in pedagogy and language acquisition theories, the realities of teaching often present unexpected difficulties that require more than just theoretical knowledge to navigate through.[1] These early experiences are vital, as they contribute to their professional identity formation and will have an impact on their career path.[2]

The present study reviews previous research on novice language teachers' experiences in their first years of practice, focusing on key challenges such as classroom management, curriculum development and professional identity formation. It also looks into coping strategies, like mentoring, reflective practice, peer collaboration, and also explores the role of professional development in helping novice teachers during this transitional period.

2. Challenges faced by novice language teachers

Is teaching a "profession that eats its young"?[3] Beginner language teachers encounter a wide range of challenges as they start their careers, among the most significant are managing the classroom, creating effective curricula, and the complex process of establishing a professional identity. These challenges can be made more difficult by factors like institutional expectations, the diversity of students, and the shift from theoretical concepts to their practical application in real classroom settings. Although teacher education programs provide vital foundational knowledge, the teaching experience often uncovers unforeseen difficulties that require adaptable strategies and ongoing professional growth.

2.1 Classroom management

Classroom management is consistently identified as a major challenge for novice teachers. Although most of them are theoretically prepared to handle classroom behavior, the unpredictability of student interactions and the need to maintain an

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effective learning environment often present hardship.[4] Adequate classroom management is critical in creating a productive learning atmosphere; however, it is considered one of the most difficult aspects of teaching for beginners.

A key issue in managing the language class is establishing authority: novice teachers struggle with asserting their role as a leader or controller, particularly when dealing with students who test boundaries. Without clear and consistent classroom rules, teachers may find themselves facing frequent disruptions that might lead to frustration and reduced instructional time. Proactive classroom management strategies, such as establishing routines and clear expectations at the beginning of the teaching process were found to be essential,[5] as these might minimize behavioral issues and maintain a positive and productive classroom atmosphere.

Classroom management issues are particularly evident in classrooms where students come from various cultural and linguistic backgrounds, and the teacher must balance the needs of individuals with the class as a whole.[6] Teachers at the beginning of their career may struggle with maintaining motivation and task engagement among students with differing proficiency levels, learning preferences and behavioral norms. In addition, students with special learning needs may require special treatment and extra attention, further complicating classroom dynamics for which novice teachers might not be ready.

Student motivation, therefore, participation is also closely linked to classroom management issues: teachers must apply a range of strategies, including differentiated instruction, positive reinforcement, and culturally responsive teaching, to create and maintain students' motivation and engagement. However, new teachers frequently lack the experience to apply these techniques effectively, resulting in frustration and self-doubt. Continuous mentorship and professional development opportunities can help bridge this gap, empowering novice teachers to build confidence and enhance their classroom management skills.

2.2 Curriculum design

Another area of difficulty is creating lesson plans that are in line with curricular standards and address students' different learning needs. Novice teachers often struggle with differentiation to meet the needs of students with varying proficiency levels and learning preferences. Furthermore, they are often required to adapt already existing curricula or create their own from scratch, a task for which many feel un- or underprepared.[7] The pressure to create engaging and effective lessons can contribute to feelings of inadequacy and anxiety.

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Finding the right balance between curriculum requirements and student-centered teaching also was found to be challenging. Although many language teaching methodologies focus on communicative competence and engaging students, strict curricular frameworks can restrict creative and interactive methods. New teachers frequently feel caught between the need to meet institutional expectations, like standardized tests and language proficiency standards, and addressing the unique needs of their students.[8]

Textbooks provide a structured method for teaching and learning languages, but they often fail to align with students' age, interests, or skill levels. This misalignment can lead to difficulties for many new teachers in choosing the right materials. To address this, teachers often adapt or enhance these resources with authentic materials such as news articles, videos, and online content, creating a more dynamic learning experience.[9] However, the process of selecting and adapting materials demands time, expertise, and an understanding of students' backgrounds, which can be overwhelming for those who are just starting their teaching careers.

Another important aspect of curriculum design is time management. For novice teachers, the task of planning and preparing lessons can be very time-consuming, particularly as they are still refining their teaching strategies. Many new teachers report that they spend a significant amount of time outside of class perfecting their lesson plans, which can contribute to stress and burnout.[10] As they become more experienced, teachers usually find more effective ways for lesson planning, such as using templates, collaborating with colleagues, and using student feedback to improve their teaching methods over time.

2.3 Professional identity formation

The development of a professional identity is an ongoing process for novice teachers. Farrell[11] refers to the concept of "practice shock," which describes the disillusionment many new teachers experience when the reality of teaching does not align with their expectations. This phenomenon is especially prevalent among language teachers, who must navigate between linguistic competence, pedagogical expertise, and cultural awareness in their teaching practice.

Novice teachers frequently encounter conflicting expectations from students, colleagues, and school administrations, which can challenge their beliefs and lead them to doubt their competences and fit for the profession.[12] For instance, institutional demands might require teachers to follow strict curriculum guidelines, while their personal teaching philosophy may prioritize student-centered learning and adaptability. Balancing these tensions can be both emotionally and professionally exhausting. New teachers often receive feedback about their

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work from mentors, administrators, and students, which can significantly affect how they view their own effectiveness. While constructive feedback is vital for development, overly critical evaluations can damage confidence and increase self-doubt. Additionally, many novice teachers experience imposter syndrome, feeling unqualified or lacking the necessary skills to be effective educators.[13] The support and guidance from colleagues and mentors is essential in shaping a teacher's professional identity: collaborative teaching environments, professional learning communities, and mentorship programs offer novice teachers opportunity to share experiences, seek advice, and gradually develop their teaching philosophy over time.[14] Unfortunately, not all teachers have access to such support systems, which can intensify feelings of isolation and uncertainty. The transition from pre-service teacher education to in-service teaching represents a crucial change in identity.

Teacher training programs typically focus on pedagogical theories and best practices, but the realities of classroom teaching often call for a degree of flexibility and adaptability. Novice teachers often realize that they need to adjust their teaching beliefs as they gain practical experience, resulting in a professional identity that evolves through the challenges and successes they encounter in the language classroom.[15]

3. Coping mechanisms and support systems

Although novice language teachers face numerous challenges, there are several support systems that have been recognized as effective in helping them evolve from student teachers into confident professionals. These mechanisms include structured mentoring, reflective practice, peer collaboration, and continuous professional development.

3.1 Mentoring

Mentoring is often seen as one of the best ways to assist new teachers in their early years. Typically, mentoring programs pair novice teachers with experienced colleagues who offer guidance, constructive feedback, and emotional support[16]. Research has shown that formal mentoring programs can enhance teacher retention rates and help novice teachers cultivate essential classroom management and instructional skills.[17] However, the effectiveness of these programs relies on their structure; simply assigning a mentor is not enough. Consistent and purposeful interactions are crucial to enable new teachers to manage the real-world

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challenges they encounter. Successful mentoring programs include structured meetings, goal-setting exercises, and opportunities for co-teaching. Schools that implement mentorship initiatives often see increased teacher confidence and effectiveness.[18] Additionally, online mentoring platforms can extend support beyond geographical boundaries, making it possible for novice teachers to connect with experienced educators worldwide. Mentoring offers essential emotional and psychological support, especially for new teachers who might face self-doubt and stress. A strong mentoring relationship helps build resilience by equipping teachers with problem-solving skills and expanding their professional networks.[19] Additionally, mentors themselves often benefit from these relationships, as they gain fresh perspectives and refine their leadership skills.

3.2 Reflective practice

Observation as part of reflective practice helps novice teachers see both what they are doing well and what may still need some work. According to Schön,[20] reflective practice in teachers leads to alteration and evolution of their teaching habits. This can include the use of reflective tools, such as teaching journals or peer observations, which provide teachers an opportunity to process their experiences and know their teaching practices better. Thus, reflective practice is conducive to continuous learning and modification of their practice.[21]

Reflective practice can be further enhanced through participation in action research or teacher study group projects. These interventions allow teachers to document their experiences, methodically examine classroom issues, and make data-driven adjustments. Integrating reflection into teacher preparation programs also can enable teachers to adopt this practice early in their teaching career.[22] Self-reflection could be in the form of audio or video recordings of classes, feedback from colleagues, and formal self-assessments. Guided reflection in the form of workshops or coaching sessions also has promise for helping teachers gain more insight into their teaching decisions and interactions with students.[23]

3.3 Peer collaboration

Peer support is a further significant element in encouraging new teachers. Professional learning communities enable teachers to learn from one another,

[18] WANG, Jian–ODELL, Sandra J.: *Mentored learning to teach according to standards-based reform: A critical review*. Review of Educational Research, 2002/3. 481–546.
[19] HUDSON, Peter: *Mentoring as professional development: 'Growth for both' mentor and mentee*. Professional Development in Education, 2012/5. 771–783.
[20] SCHÖN, Donald A.: *The reflective practitioner: How professionals think in action*. Basic Books, New York, 1983.
[21] FARRELL, Thomas S. C.: The practice of reflective teaching in second language teaching. TESOL Press, Alexandria, VA, 2016.
[22] LARRIVEE, Barbara: *Transforming teaching practice: Becoming the critically reflective teacher*. Reflective Practice, 2000/3. 293–307.
[23] ZEICHNER, Kenneth M.–LISTON, Daniel P.: *Reflective Teaching: An Introduction*. Lawrence Erlbaum Associates, Mahwah, NJ, 1996.

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exchange experiences, and seek advice in a secure setting.[24] Beginner teachers who participate in professional learning communities feel less isolated and more confident in solving issues.[25] Professional learning communities also promote collaborative problem-solving, which can lead to more innovative and effective teaching strategies.[26]

Apart from professional learning communities, novice teachers can learn through collaborative lesson planning, peer coaching, and team teaching. School leaders should foster collaboration culture by organizing frequent professional development meetings and building a sense of community among teachers. Online forums and social media groups are also effective platforms where teachers can exchange ideas, resources, and receive feedback.[27] Furthermore, peer collaboration also serves to reduce teacher burnout by fostering a sense of belonging and support.[28] Joint problem-solving and idea-generation meetings provide novice teachers' varied perspectives and practical solutions for addressing chronic problems. When novice teachers engage in meaningful professional dialogue, they feel more confident in their own instructional practices and experience heightened feelings of professional identity.

4. Professional development

Ongoing professional development is critical for new teachers to become confident and competent classroom practitioners. Workshops and training sessions that focus on practical skills, for instance, on differentiated instruction, integration of technology, and classroom management, can help new teachers bridge the gap between theory and practice.[29] Professional development allows teachers to remain current with educational trends and learn new strategies that address the particular problems of language teaching.

Structured professional development programs provide opportunities for experiential learning, mentorship, and peer-to-peer collaboration. Schools that specialize in particular professional development programs provide a platform where novice teachers can continually refine their pedagogy.[30] Additionally, professional organization membership and conference attendance allow teachers to expand their knowledge base, learn from experts, and adopt new pedagogical

[24] STOLL, Louise–BOLAM, Ray–McMAHON, Agnes–WALLACE, Michelle–THOMAS, Sally: *Professional learning communities: A review of the literature*. Journal of Educational Change, 2006/4. 221–258.
[25] WENGER, Etienne: *Communities of practice: Learning, meaning, and identity*. Cambridge University Press, Cambridge, 1998.
[26] HORD, Shirley M.: *Professional learning communities: An overview*. In: HORD, Shirley M. (Ed.): *Learning together, leading together: Changing schools through professional learning communities*. Teachers College Press, New York, 2004. 5–14.
[27] TRUST, Torrey–KRUTKA, Daniel G.–CARPENTER, Jeffrey P.: *"Together we are better": Professional learning networks for teachers*. Computers & Education, 2016/102. 15–34.
[28] LITTLE, Judith W.: *The Persistence of Privacy: Autonomy and Initiative in Teachers' Professional Relations*. Teachers College Record, 1990/4, 509–536.
[29] RICHARDS, Jack C.–FARRELL, Thomas S. C.: *Professional development for language teachers: Strategies for teacher learning*. Cambridge University Press, Cambridge, 2005.
[30] BORG, Simon: *Teacher cognition and language education: Research and practice*. Continuum, 2006.

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strategies.[31] Moreover, research shows that continuously supported novice teachers who are nurtured through professional development are more likely to stay in the profession.[32] Schools that care about their professional development will benefit from individual teachers as well as educational quality and motivate teachers to pursue lifelong learning.[33]

5. Building resilience

Resilience is an important quality for new teachers, particularly as they navigate the storms of their initial years in the classroom. Growth mindset – the recognition that ability can be developed through practice and persistence – has been shown to enable teachers to more successfully endure difficult situations.[34] Availability of mental health resources and work-life balance initiatives can also safeguard teachers from the emotional strain that contributes to burnout.[35] Strategies such as stress management training sessions, mindfulness education, and peer support groups have been successful at fostering resilience in teachers.[36] Schools that are aware of the importance of teacher wellbeing have a more resilient teaching staff.

Furthermore, establishing positive working relationships with students and colleagues can provide emotional support and increase a teacher's sense of purpose.[37] To sum up, resilience is not just an individual trait but also a quality that can be developed through supportive policy, professional growth, and a positive school climate. Schools that recognize and address the challenges novice teachers face have a key role to play in guaranteeing their long-term success as professionals.

6. Conclusions

The challenges faced by novice language teachers are interrelated and inseparably connected to their professional and personal development. Research revealed that classroom management, curriculum planning, and professional identity formation are among the most vital issues that novice teachers must confront. These issues need to be resolved through a synergy of technical strategies, organizational support, and ongoing professional development practices. Schools can help novice teachers adjust more smoothly into their professional roles and ensure

[31] GARTON, Sue–RICHARDS, Jack C.: *Professional Encounters in TESOL*: Discourses of Teachers in Teaching. Palgrave Macmillan, 2018.
[32] DARLING-HAMMOND, Linda–RICHARDSON, Nikole: *Teacher learning: What matters?* Educational Leadership, 2009/5. 46–53.
[33] GUSKEY, Thomas R.: *Professional Development and Teacher Change*. Teachers and Teaching: Theory and Practice, 2002/3–4. 381–391.
[34] DWECK, Carol S.: *Mindset: The new psychology of success*, Random House, New York, 2006.
[35] GU, Qing–DAY, Christopher: Challenges to teacher resilience: Conditions count. British Educational Research Journal, 2013/1. 22–44.
[36] JENNINGS, Patricia A.–GREENBERG, Mark T.: *The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes*. Review of Educational Research, 2009/1. 491–525.
[37] DAY, Christopher–GU, Qing*: Resilient Teachers, Resilient Schools: Building and Sustaining Quality in Testing Times*. Routledge, 2014.

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long-term career sustainability by recognizing these challenges and providing targeted support and teacher training programs. Therefore, institutions will have the potential not only to ensure greater teacher retention but also bring greater quality of education by investing young teachers, thus laying the foundation of the next generation of educators, who are capable, resilient, and prepared to inspire their students.

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Abstract

A KEZDŐ NYELVTANÁROK TAPASZTALATAI ÉS KIHÍVÁSAI A TANÍTÁS ELSŐ ÉVEIBEN

Ez a cikk a kezdő nyelvtanároknak a szakmában töltött első éveik során szerzett tapasztalatairól szóló legújabb kutatásokat vizsgálja. A tanulmány rávilágít a fő kihívásokra, amelyekkel e tanároknak szembe kell nézniük, beleértve az osztálytermi irányítást, az óratervezést és a szakmai identitás kialakulását. Ezen túlmenően foglalkozik a kezdő tanárokat segítő strukturális és intézményi támogatási rendszerekkel is. A szakirodalom áttekintésével a cikk hangsúlyozza a mentorálás, a kortársakkal való együttműködés és a szakmai fejlődés fontosságát, mint a kezdő tanárok fejlődését és megtartását segítő kulcsfontosságú mechanizmusokat. Az eredmények azt mutatják, hogy bár a kezdő tanárok különböző jelentős kihívásokkal szembesülnek, a hatékony támogatási rendszerek létfontosságú szerepet játszanak a rugalmasság és a hosszú távú siker előmozdításában tanári pályafutásuk során.

Kulcsszavak: kezdő tanárok, nyelvoktatás, mentorálás, szakmai fejlődés, osztályterem-menedzsment, tanári rugalmasság, tanári reziliencia.

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THE SIGNIFICANCE OF DIGITAL EDUCATIONAL CONTENTS IN WORKING WITH STUDENTS WITH DISABILITIES FROM THE TEACHER'S PERSPECTIVE

Introduction

Inclusive education within the framework of Universal Design for Learning prepares students for the challenges and opportunities awaiting them in the 21st century. Through a differentiated approach to teaching, the aim is to create an inclusive learning environment where every student can succeed and progress according to their abilities and capacities. For students to be successful and motivated in class, traditional methods of learning and teaching – solely relying on lectures by teachers, textbooks, and other supporting written assignments – are insufficient to adequately motivate and engage students or prepare them for the evolving and future world.[1]

The *Recommendation of the European Parliament and of the Council on Key Competences for Lifelong Learning* identifies eight fundamental competences crucial for lifelong learning: communication in the mother tongue, communication in foreign languages, mathematical competence and basic competences in science and technology, learning to learn, social and civic competences, cultural awareness and expression, and digital competence. To develop communication, critical thinking, and problemsolving skills, students' digital competences focus on the ability to use information and communication technology (hereafter ICT) safely and critically in their personal and social lives, as well as in communication.[2]

The European Framework for Digitally Competent Educational Organizations (*DigCompOrg*) identifies the key elements of digitally competent educational institutions and emphasizes the importance of adapting to the specific needs of each educational context.[3] According to the *DigCompOrg* framework for digitally mature educational institutions, the adoption and integration of ICT into school systems are considered an educational innovation, entailing changes in three core dimensions: pedagogical, technological, and organizational. This includes the level and quality of ICT application in teaching and learning, the digital maturity of educational staff and students, awareness of the benefits and various levels of ICT use, planning and achieving educational goals, and designing

[1] Timothy W SIMPSON–Christopher B WILLIAMS–Michael HRIPKO: *Preparing industry for additive manufacturing and its applications: Summary & recommendations from a National Science Foundation workshop*. Additive manufacturing, 2017/13. 166–178.
[2] European Commission. *"Directorate-General for Education, Youth, Sport and Culture". Key competences for lifelong learning*. Publications Office, 2019.
[3] Panagiotis KAMPYLIS–Yves PUNIE–Jim DEVINE: *Promoting Effective Digital-Age Learning – A European Framework for Digitally-Competent Educational Organisations*. EUR 27599 EN, Publications Office of the European Union, Luxembourg, 2015.

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studentcentred lessons. Digital learning has proven to be a sustainable approach in education, enabling students to learn in an innovative and comprehensive way.[4,5]

Learning how to use technology in education prepares students for future life and work, where technology will play a significant role. Therefore, e-learning skills are of great importance. There are many definitions of e-learning. E-learning, or electronic learning (hereafter referred to as e-learning), is a type of learning that utilizes any form of computer technology and electronic media to enhance the quality of learning. E-learning is an interactive relationship between teachers and students supported by the use of various technologies, and it can also be a self-directed learning process. E-learning is part of the e-Europe initiative and action plan.[6] Some key elements for developing basic information and communication skills and competencies include assessing, storing, creating, presenting, and sharing information.[7]

Within the framework of e-learning, digital educational contents refer to materials designed for use in education, teaching, and learning. These contents are developed with modern educational design that focuses on selecting technologies that combine complex media, utilizing the features of multiple technologies to create effective tools.[8] They are categorized as e-contents, as they can take the form of interactive video lessons that cover educational topics using a correlation-integrative approach. Interactivity is the main advantage of e-learning in general, as it enables students to interact with the contents, teachers, and fellow students.[9] Digital educational contents can be used both online and offline, on mobile and desktop devices. It fosters active learning in an innovative, effective, motivating, and personalized manner, especially for students who find it easier to follow the curriculum in this way. These materials are prepared for teachers to use in the classroom and for students to engage in e-learning innovatively, including self-assessment, independent study, homework, and classroom activities.[10] Digital educational contents come in various forms and features. Tools like simulation software can be adapted to the time a student needs to absorb and understand the material. These tools can slow down the reproduction process and allow active

[4] José BIDARRA–Ellen RUSMAN: *Towards a pedagogical model for science education: Bridging educational contexts through a blended learning approach*. Open Learning: The Journal of Open, Distance and E-Learning, 2017/1. 6–20.

[5] Chrysi RAPANTA–Luca BOTTURI–Peter GOODYEAR–Lourdes GUÀRDIA–Marguerite KOOLE: *Balancing technology, pedagogy and the new normal: Post-pandemic challenges for higher education*. Postdigital Science & Education, 2021/3. 715–742.

[6] Irena VUKSANOVIĆ: *Mogućnosti za e-učenje u hrvatskom obrazovnom sustavu*. Napredak, 2009/3–4. 451–466.

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[8] Matt BOWER: *Affordance analysis – Matching learning tasks with learning technologies*. Educational Media International, 2008/1. 3–15.

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[10] Nina BEGIČEVIĆ REĐEPI–Igor BALABAN–Marina KLAČMER ČALOPA–Bojan ŽUGEC: *Okvir za digitalnu zrelost osnovnih i srednjih škola u Republici Hrvatskoj s pripadajućim instrumentom*. Carnet – Hrvatska akademska i istraživačka mreža, Zagreb, 2018.

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student participation. Therefore, digital educational contents are highly significant in online learning.[11]

In the context of using digital educational content and technology, some studies examine the importance of creative thinking in the digital educational environment and its connection to other cognitive skills, such as logical reasoning and analytical abilities.[12] These interrelations complement and enrich the educational process, contributing to the development of complex thinking in students. The use of digital educational contents in teaching students with disabilities have a significant positive impact on the quality of learning and educational inclusion. A specific application of digital educational contents in teaching might involve an activity where students create a webpage to present their work (e.g., term papers, homework, or research projects). Teachers and other students can comment on these works, providing feedback and guidance. This activity can be individual or conducted in groups through collaborative learning.

Digital educational contents allow for material adaptation according to the specific needs of students with disabilities. Teachers can use tools that offer personalized tasks, customized learning paces, and various formats for presenting information, making it easier for students with diverse challenges (e.g., dyslexia, attention disorders, intellectual disabilities, sensory impairments, etc.) to acquire knowledge. Teachers and students can use these contents comprehensively for entire subjects and classes or in smaller standalone units or modules. The also support the planning of differentiated and individualized approaches for students with disabilities. By using digital educational contents, students with disabilities benefit from access to materials outside the classroom. They can work at their own pace and review the material as often as needed, reducing pressure and increasing learning autonomy. The use of digital educational contents provides teachers and students with disabilities a powerful tool for enhancing learning, adapting materials and activities to educational needs, and achieving better learning outcomes, making it an essential resource in inclusive education.

The Purpose of the Research, Aim and Hypothesis

We cannot ignore the fact that children today live in a digital age. Traditional toys, books, and albums have been replaced by tablets, smartphones and computers. While we cannot stop this trend, we can harness it for the benefit of current and future generations. One of the teacher's roles is to guide children toward positive possibilities and concepts of digital citizenship. Digital educational contents can also be created in digital formats, utilizing the educational needs of students to express themselves and learn in the virtual world, thus merging all the positive aspects of digital technology usage.

In the Republic of Croatia, as part of the e-Schools program, *Comprehensive Informatization of School Business and Teaching Processes for the Creation*

[11] Shieh MENG-DAR–Hsie HSIN-YIN: *Study of Influence of Different Models of E-Learning Content Product Design on Students' Learning Motivation and Effectiveness*. Frontiers in Psychology, 2021/12. 1–4.

[12] Alina MOTUKEEVA–Ainura AZHIBAEVA–Daniar KULBACHAEV–Zhyldyz ABDYRAKUNOVA–Maksatbek TOLOEV: *Formation of creative thinking among students in the digital educational environment*. E-Learning and Digital Media, 2024.

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of Digitally Mature Schools for the 21st Century, digital educational contents were developed, representing a significant step forward and innovation at the time of its creation.[13] These materials are tailored to the Croatian educational system and are based on subject curricula. They emphasize interactivity, multimedia, accessibility, and adaptability for students with special educational needs. The interaction between digital educational contents and students positively influences their motivation to learn.[14] Since students with disabilities have diverse educational needs and learning styles, digital educational contents can include audio materials, video content, interactive simulations, images, and text, enabling multiple modes of presenting information. For example, a student with reading difficulties can use audiobooks, while visual learners benefit from graphical representations. Simple images, animations, text, and language in digital educational content can enhance students' attention and motivation to learn, allowing them to build upon prior knowledge.[15]

Modernizing and making teaching content accessible is crucial for assessing the digital maturity of schools, monitoring the potential progress of inclusive education, and ensuring effective use of ICT. Digital educational contents provide teachers and students with disabilities a powerful tool for improving learning and achieving better educational outcomes, making it an essential resource in inclusive education. Computer-supported approaches and content in teaching offer students an adaptable learning platform. For example, students with intellectual disabilities can experience real-life scenarios through interactions in simulated settings. Students with dyslexia and dysgraphia benefit from text tailored for readability, enabling greater societal inclusion.

The use of digital educational contents in teaching involve planning and selecting materials appropriate for the context of the subject and activities, aiming to maximize student engagement and independence. Challenges in using these tools include the need for a reliable internet connection. In such cases, it is often most practical for teachers to create their digital content or adapt pre-existing materials to suit their specific context and teaching activities.

During student evaluation, it is essential to combine simple online tests with more complex forms of assessment while maintaining continuous feedback on student progress. The way students independently use digital content to support their learning enhances the learning process and reflects their level of digital maturity. For instance, just as a portfolio represents a collection of work accumulated over time to showcase progress, development, and achievements, its application in teaching offers teachers a method for ongoing monitoring and evaluation of student outcomes. Portfolios also help students become more aware of their work and progress in a specific area. Creating portfolios and digital contents requires systematic and consistent work from teachers, as it reflects the chronological development and progress of students. Accessibility can be a challenge, as

[13] Carnet „e-Škole": *Razvoj sustava digitalno zrelih škola (II. faza)*. 2019.
[14] Özden DEMIRKAN: *Pre-Service Teachers' Views about Digital Teaching Materials*. Educational Policy Analysis and Strategic Research, 2019/1. 40–60.
[15] Shieh MENG-DAR–Hsie HSIN-YIN: *Study of Influence of Different Models of E-Learning Content Product Design on Students' Learning Motivation and Effectiveness*. Frontiers in Psychology, 2021/12. 1–4.

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some tools include features that are not free, limiting their full use. Additionally, some tools are complex and require additional skills for effective use.[16]

In line with these points and the conducted research, this paper focuses on teachers' opinions about e-learning and the use of e-content or digital educational materials. Accordingly, the *goal* of this paper is to examine the extent to which teachers consider digital educational contents significant in the teaching and learning process for students with disabilities.

The *hypothesis* is that there is a statistically significant difference in the opinions of class and subject teachers regarding the importance of applying digital educational contents in the teaching and learning process for students with disabilities, as well as a correlation with years of their work experience.

Methods

The research was conducted in regular primary schools in the Republic of Croatia on a sample of 183 teachers from first to eighth grade (*class teachers*: 59.56% and *subject teachers*: 40.44%). The majority of participants (29%) have up to five years of work experience, while the smallest proportion (7.7%) have between 26 and 30 years of experience. Additionally, 13.7% of participants have 6 to 10 years of experience, 10.9% have 11 to 15 years, 15.8% have 16 to 20 years, 10.9% have 21 to 25 years, and 12% have more than 30 years of work experience.

For the purpose of the research, a questionnaire was developed to gather teachers' opinions on the importance of applying digital educational contents in teaching students with disabilities. The first part of the questionnaire collects demographic data about the participants (gender, position–*class* or *subject teacher*, years of work experience). The second part focuses on statements related to the use of digital educational contents in teaching and its application in working with students with disabilities. For this study, eight variables were selected that reflect teachers' opinions on the importance of using digital educational contents with students with disabilities. For each statement, teachers rated their level of agreement on a Likert scale (1–strongly disagree, 2–disagree, 3–agree, 4–strongly agree). The statements addressed topics such as the use of digital educational contents, its perceived impact on facilitating teacher-student communication, whether its use increases the engagement and motivation of students with disabilities, and whether it encourages students to actively participate in the learning process instead of remaining passive observers. The selected variables also examine monitoring and evaluating improvements in teaching quality. Digital educational contents were also identified as a tool for adapting to different learning styles, which can enhance the achievement of educational goals and outcomes and simplify the handling of large volumes of relevant information.

Before the research was conducted, teachers were informed about the purpose of the study, their guaranteed autonomy, and their right to skip questions or withdraw from completing the questionnaire at any time. They were also asked to

[16] Özden DEMIRKAN: *Pre-Service Teachers' Views about Digital Teaching Materials*. Educational Policy Analysis and Strategic Research, 2019/1. 40–60.

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complete the questionnaire in the context of researching inclusive practices. Therefore, all ethical principles of research conduct were upheld.

In addition to descriptive statistics (mean, standard deviation, minimum, maximum) (Table 1), a t-test was used to calculate statistically significant differences in the opinions of *class* and *subject teachers* regarding the importance of using digital educational contents in the teaching and learning process for students with disabilities. Additionally, Spearman's rank correlation coefficient was employed to examine statistically significant correlations between teachers' years of work experience and their opinions on the statements.

Results and Discussion

Variables **The significance of applying digital educational content for students with disabilities lies in:**	**Mean**	**Standard Deviation**
Enabling them to progress at the same pace as their peers	**2.80**	0.869
Improving task performance in class	3.13	0.799
Serving as support during lessons	**3.59**	0.603
Providing an alternative for interaction between students and teachers	2.92	0.864
Increasing students' motivation to work	**3.40**	0.770
Achieving greater creativity	**2.79**	0.814
Offering opportunities to create individualized and customized content	3.19	0.790
Acquiring new competencies, especially in the field of ICT	3.27	0.825
Total – minimum	2.79	
Total – maximum	3.59	

Descriptive values (Table 1)

The results show that the average score on the Likert scale is 3, meaning *agree*. Teachers most frequently selected their agreement with statements on the scale of *agree* and *strongly agree*, indicating an overall positive attitude among participants regarding the importance of using digital educational contents in the teaching and learning process for students with disabilities. The results show the lowest values in the variables related to achieving greater creativity and enabling students to progress at the same rate as their peers. Teachers also consider the importance of digital educational contents most in terms of their use as support during lessons and in increasing student motivation, as indicated by the mean values.

To find statistically significant differences in teachers' views on the importance of applying digital educational contents in the teaching and learning process for students with disabilities, a t-test was used. The results from the t-test show that there are no statistically significant differences in teachers' views on the importance of using digital educational content in this process. Since the results show that class and subject teachers perceive the importance of digital educational contents equally in the teaching and learning process for students with disabilities.

To find the correlation between teachers' views on the importance of applying digital educational contents in the teaching and learning process for students with disabilities and their years of experience, Spearman's rank correlation coefficient revealed a statistically significant correlation (ρ=-0.267). Specifically, the results show that teachers with more years of experience consider the

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application of digital educational contents less important in the teaching and learning process for students with disabilities than teachers with fewer years of experience. Teachers with less work experience have more positive views on the importance of digital educational contents in the teaching and learning process for students with disabilities. According to the overall results, it can be concluded that the hypothesis, suggesting a statistically significant difference in the views of class and subject teachers on the importance of applying digital educational contents in the teaching and learning process for students with disabilities, as well as its correlation with years of experience, is partially supported. It can be concluded that younger teachers, with fewer years of experience, perceive digital educational contents as more important in enabling students with disabilities to participate equally in the educational process with other students.

Since digital educational contents and tools allow teachers to monitor student progress, for example through quizzes, tasks of varying difficulty, and data analysis, they provide more detailed insights into the educational needs of students with disabilities. This allows teachers to adapt their teaching methods and support. This is particularly important for students with disabilities as it helps them develop self-confidence and a sense of accomplishment. In virtual environments, it is easier to organize collaborative activities, and students with disabilities can participate without fear of stigmatization or isolation. Furthermore, many digital educational contents and tools offer features that facilitate access for students with disabilities, such as font enlargement, colour adjustments, text-to-speech functions, subtitles, or customized interfaces for students with motor disabilities, enabling a higher quality of the inclusive learning and teaching process.

Conclusion

Since one of the most important features of digital educational contents is placing the student at the centre of the learning process, which represents a step towards lifelong learning, the goal of this paper was to examine to what extent teachers consider digital educational contents significant in the teaching and learning process for students with disabilities. The results showed that class and subject teachers equally perceive the importance of applying digital educational contents in the teaching and learning process for students with disabilities. Additionally, teachers with more years of work experience consider the application of digital educational content less important in the teaching and learning process for students with disabilities than teachers with fewer years of experience.

Due to the rapid development and increasing importance of information and communication technologies in education, the advantages of analysing the results of this study are evident through the potential, which is one of the main catalysts for quality education in line with the vision and strategic guidelines for the development of the school system. These results must also be considered with caution, as, alongside part of the analysis of the research, which this paper addresses, there is also a small sample size. The paper emphasizes the need for systematic and regular planning, preparation, and use of the latest technology in learning and teaching, adequate infrastructure and computer equipment in all schools in Croatia, as well as the need for the development of digital educational contents and e-learning, alongside professional development programs for teachers' digital competencies.

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Absztrakt

A DIGITÁLIS OKTATÁSI TARTALOM JELENTŐSÉGE A FOGYATÉKKAL ÉLŐ TANULÓKKAL VALÓ MUNKÁBAN A TANÁROK SZEMSZÖGÉBŐL

A digitális oktatási tartalom célja, hogy támogassa a tanárokat az oktatásban, és elősegítse a tanulók aktív tanulását innovatív, hatékony, motiváló és személyre szabott módon. Mivel a digitális médián keresztüli tanulás lehetővé teszi a fogyatékkal élő tanulók számára, hogy fejlesszék a modern világban nélkülözhetetlen készségeiket és kompetenciáikat, miközben az adaptált és egyénre szabott tanítási megközelítések révén követik a tantervi tantárgyakat, a kutatás célja annak vizsgálata, hogy a tanárok milyen mértékben tartják jelentősnek a digitális oktatási tartalmat a fogyatékkal élő tanulók oktatási és tanulási folyamatában. Az eredmények azt mutatják, hogy a tanárok pozitív véleménnyel vannak a digitális oktatási tartalomnak a fogyatékkal élő tanulókkal való munkában történő alkalmazásáról. A fiatalabb tanárok nagyobb hangsúlyt helyeznek a digitális oktatásra, mint azok, akik hosszabb tanári tapasztalattal rendelkeznek. Az eredmények rámutatnak a tanárok által a digitális oktatási tartalomnak tulajdonított jelentőségre, amely lehetővé teszi a fogyatékkal élő tanulók számára, hogy egyenlőbb módon vegyenek részt az oktatási folyamatban társaikkal, valamint arra, hogy ez milyen szerepet játszik a modern világban nélkülözhetetlen készségek és kompetenciák fejlesztésében.

Kulcsszavak: digitális oktatási tartalom, egyénre szabott tanítási megközelítés, fogyatékkal élő tanulók, tanárok.

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Kuharić, Darija

MEDIA LITERACY FOR PRESCHOOLERS: ENGAGING WORKSHOPS AND PARENTAL INVOLVEMENT

Nowadays, preschool children are growing up in a world where media are present at every turn–television, computer games, applications on smart devices, and other digital platforms. Although technology has become an integral part of daily life, young children do not yet have well-developed skills for critical thinking and understanding media content. This can influence their emotional, social, and cognitive development.

Parents play a crucial role in guiding their children's first encounters with media. Their involvement in fostering healthy media habits, setting boundaries, and engaging in discussions about content is essential in helping children develop a critical and balanced approach to media consumption. However, many parents feel unprepared to navigate the digital landscape alongside their children, highlighting the need for accessible education and support in media literacy.

On the other hand, educators, who play a key role in shaping children's habits, often lack the tools and professional guidelines to teach children and parents about responsible media use. One reason for this is the rapid development of technology, which research sometimes struggles to keep up with.

Theoretical Framework

Recent Scientific and Professional Literature on Media Literacy in Late Preschool Education

In their recent article, the Slovenian authors Golob, Makarovič and Rek point out that "digital media have become a regular part of children's everyday lives. Even babies are often confronted with digital media for longer periods of time every day, although paediatricians and psychologists strongly discourage the use of such media by children under two years of age."[1] In this context, they further expand on the notion that, during the early years of a child's development, parents play a pivotal role in guiding and educating children on the responsible use of digital media, as well as in mitigating the potential harm caused by excessive screen exposure or inappropriate media content.[2] Moreover, parents profoundly shape a child's understanding and engagement with digital media through direct examples, discussions, and shared experiences. As primary role

[1] Tea GOLOB–Matej MAKAROVIČ–Mateja REK: *Parents' meta-reflexivity benefits media education of children*. Comunicar, 2023/76. 96. https://files.eric.ed.gov/fulltext/EJ1394971.pdf [19.02. 2025.]

[2] William G. CHRIST–Belinha S. DE ABREU (ed.): *Media literacy in a disruptive media environment*. *Routledge*, New York, 2020. 1–338.; Dafna LEMISH: *Children and media: A global perspective*. Polity Press, Cambridge, 2015. 1–304.

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models, they serve as figures whom children naturally observe and emulate.[3] Although the authors stress that "the process of media education is become a challenging and ever-changing task for parents to achieve,"[4] the role of early childhood educators in preschool education must not be overlooked under any circumstances.

In recent years, numerous significant scientific and professional papers on media literacy in late preschool education have been published. These studies provide additional insights and global perspectives on media literacy for preschool-aged children. For example, in 2021, the Erikson Institute published a comprehensive report on „Media Literacy in Early Childhood."[5] This report, developed in partnership with several national associations, provides an updated definition of media literacy in early childhood and explains developmentally appropriate media literacy education for children under age 8. The report is based on the importance of co-viewing and co-engagement with media for infants and toddlers, the role of interactive features in supporting young children's learning from screen media, and the last, but not least, the significance of contingent responses from devices for children under 3 years old.

A 2024 study conducted by a group of Thai scientists investigated digital media consumption patterns and their impact on preschool children's development. The research, which included 97 parent-child pairs, found that most parents use digital media for one to three hours per day. Additionally, there was no significant difference in media usage between children with typical development and those with developmental delays. The findings emphasized the critical role of parental media literacy in supporting children with developmental challenges, highlighting the need for informed and mindful media use within families.[6]

A 2024 report on media literacy education in the United States underscored several key findings. It highlighted the growing recognition of media literacy as a vital life skill and emphasized the need for more extensive training and professional development opportunities for educators. Notably, when asked about their sources of training in media literacy education, 77% of educators identified „self-taught" as their primary method of learning, indicating a significant gap in formal training programs.[7]

Although the importance of education for the media and the use of ICT[8] has already been socially recognized, it is only in the years that international organizations have highlighted the importance of media education and the use of

[3] Mateja REK–Andrej KOVAČIČ: *Media and Preschool Children: The Role of Parents as Role Models and Educators*. Medijske studije, 2018/18. 27–43.
[4] Ibid. 96.
[5] Jenna HERDZINA–Alexis R. LAURICELLA: *Media Literacy in Early Childhood: Report Framework, Child Development Guidelines, and Tips for Implementation,* TEC Center, Chicago, 2020. www.erikson.edu/wp-content/uploads/2021/06/TEC-MediaLiteracy-Report.pdf [19/02/2025]
[6] Kannika PERMPOONPUTTANA–Jongkon DOUNGSRI–Sarun KUNWITTAYA–Thirata KHAMNONG–Nonthasruang KLEEBPUNG: *Digital media consumption patterns and development of preschool children: Developing a manual to enhance media literacy in parents of children facing developmental challenges*. Natural and Life Sciences Communications, 2024/3.
[7] National Association for Media Literacy Education. Snapshot 2024: The State of Media Literacy Education in the U.S, 21, https://namle.org/state-of-media-literacy-report-2024/ [19/02/2025]
[8] Information and Communication Technology

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ICT for the development of young children between the ages of 3 and 6 years. The European Union has recognized the responsibilities of governments and international entities in improving the quality of ECE[9] and enhancing children's outcomes, which includes the development of media literacy at ECE, and the accompaniment of teachers trained to help children deal with their experiences in the media.[10]

Croatia is also following this path, significantly contributing to the established guidelines by publishing a handbook on media education in preschools. The handbook, *Media and Preschool Children*, published by the Society for Communication and Media Culture in 2021,[11] provides educators with valuable information, recommendations, and a variety of activity suggestions for working with children in preschool settings. It consists of eight sections and includes a total of 19 workshop proposals designed for implementation in kindergartens. To support educators in teaching children how to distinguish between positive and harmful media content and to use media safely and responsibly, the handbook highlights key aspects of educational content for preschoolers, the role of parents in media education, and strategies to help children become active media users who engage with media in a meaningful way. It also provides guidance on what to consider when it comes to cartoons and video games, how to assist children in navigating the virtual world and smart technology, ways to prevent media addiction, and how marketing specifically targets young audiences. The workshop proposals featured in the handbook offer creative ideas for introducing various media literacy topics in an age-appropriate manner. Through play, engaging examples, and, most importantly, open discussions, educators can help children explore media and learn how to use it safely and effectively.

Bridging the Gap: The Need for Media Literacy in Early Childhood

"Raising and educating children is a shared responsibility. The more effort we invest in media education during their early years, the sooner we will cultivate generations of responsible and discerning media users who engage with and evaluate media content critically in the increasingly media-saturated world we all inhabit today."[12]

By the end of 2023, the Croatian Council for Electronic Media[13] has announced a Public Call for Co-Financing Projects on the Promotion of Media

[9] Early Childhood Education

[10] Catarina L. ARAÚJO–Cecília AGUIAR–Lígia MONTEIRO*: Media literacy in early education: European policies and curricular differentiation*. Educational Media International, 2023/3–4. 243.

[11] Lana CIBOCI PERŠA–Igor KANIŽAJ–Danijel LABAŠ: *Mediji i i djeca predškolske dobi: Priručnik za odgojitelje u dječjim vrtićima*. Društvo za komunikacijsku i medijsku kulturu, Zagreb, 2021. https://djecamedija.org/wpcontent/uploads/2021/09/prirucnik_za_odgojitelje_u_djecjim_vrticima_e-izdanje5-2.pdf [19/02/2025]

[12] Ibid. 4.

[13] The Agency for Electronic Media (AEM) is an independent regulatory body that promotes public interest and media pluralism, justifies public trust through professional and transparent activities, encourages media literacy, creates conditions for the production of quality Croatian audiovisual content and ensures equal conditions for media development and media freedom. https://www.aem.hr/en/ [10/11/2024]

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Literacy for 2024. This annually published call for proposals aims to support projects that enhance media literacy, recognizing its growing importance in today's digital landscape. By providing financial assistance, the Council seeks to encourage innovative educational programs, research, and activities that help individuals – especially young audiences – develop critical thinking skills and a responsible approach to media consumption. This call represents a continued commitment to fostering media literacy as a key component of informed and engaged citizenship.

In this context, the project *Little Media Explorers* was designed to address these challenges with the aim to improve media literacy among preschool children. It was submitted to the competition, which resulted by the approval of the project documentation. Consequently, the funding in the amount of 1,250 euros was granted.[14]

Little Media Explorers Project: Educating Young Children About Media

The primary objective of the project was to enhance critical thinking skills in preschoolers regarding media content. It encouraged not only discussion sand creativity, but also parental and teacher involvement to create a comprehensive media literacy environment. Children, parents, and educators participated in a shared exploration of media through workshops, creative activities, and hands-on experiences.

It was carried out in collaboration with the Osijek Kindergarten,[15] specifically two local kindergartens, *Nevičica* and *Vedri Dani* (Picture 1). The implementation of the project took place during Media Literacy Month (April 2024) across five groups. The project involved around 100 preschool children, a relatively equal distribution of girls and boys, from five older and mixed-age kindergarten groups. A substantial and equally important contribution to the project was provided by HRT Radio Osijek and its staff, whose support played a key role in its successful execution. In addition to the children, educators and parents actively participated.

Workshop for Children *Super Spy Detectives*

The workshop *Super Spy Detectives* consisted of interactive sessions designed for five preschool groups, incorporating diverse activities that stimulate engagement. Children participated in discussions, play-based learning (guessing game), and creative expression (drawing), all aimed at fostering an understanding of media exposure and its influences. Playful learning strategies were integrated into each

[14] The Faculty of Education served as the project holder, with Darija Kuharić, PhD, assistant professor, as the project coordinator.

[15] The kindergartens of the City of Osijek have been part of the Center for Preschool Education since 1974. The network of kindergartens has expanded over the years and today it consists of 26 kindergartens and nurseries. Nearly 2,900 children attend the kindergartens and nurseries of the Osijek Kindergarten. https://vrticiosijek.hr/ [10/11/2024]

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step, allowing children to gain insights while having fun. In this way, preschoolers were engagaged in critical analyses of advertise-ments and media content.

Posters announcing the workshops in both kindergartens (Picture 1.)

Step 1. The first part of the workshop began with a warm-up discussion about the media the children are familiar with and use, as well as the advertise-ments that appear during their media consumption.

Step 2. The young participants were engaged in an interactive presentation designed in Canva (Picture 2), during which they identified and analyzed the advertisements presented through video clips.[16]

Preschoolers from Nevičica kindergarten during the workshop (Picture 2.)

[16] The selection of advertisements was not random but was carefully designed to integrate this segment into the preschool education curriculum. Advertisements were for food products that contain high amounts of sugar, which led to a discussion about the harmful effects of sugar and the importance of maintaining good dental hygiene.

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Step 3. In this step, children created their own advertisements using several techniques (drawing, collage, stickers). Their works demonstrated an impressive level of creativity and understanding of advertisements (Picture 3).

Advertisements created by the preschoolers (Picture 3.)

Step 4. Experiential learning through visits like HRT Radio Osijek enriched preschoolers' understanding of media content. The 'Super Spy Detectives' visited HRT Radio Osijek in May, where they were provided with a behind-the-scenes look at media production. This visit served as a practical example of how media is created and disseminated, enhancing their comprehension of advertisements and media messages. Engaging directly with media professionals helped preschoolers contextualize information they learn in workshops (Picture 4). Real-world experiences solidify learning.

Preschoolers visiting HRT Radio Osijek (Picture 4.)

Step 5. The influence on the children's comprehension was validated through a subsequent creative assignment. The preschoolers documented their visit and experiences through exceptionally inventive works (Picture 5).

Step 6. During a small ceremony at their kindergarten, the children were awarded certificates of participation in the project (Picture 6), earning them the title of „young media researchers and detectives."

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Step 7. A selection of the collected drawings has been chosen, which, along with the children's comments and an additional project commentary, will make up the picture book *Little Media Researchers*.

Impressions on visiting HRT Radio Osijek (Picture 5.)

Example of the certificate of participation for the preschool childen (Picture 6.)

Workshop for parents and educators

Involving parents in media literacy initiatives is crucial for fostering a comprehensive understanding of media among preschoolers. The parent workshop *Partnership in Media Literacy: Supporting Children in the Digital Society* (Picture 7) was designed to provide insights into media literacy concepts and practical strategies for engaging with children's media consumption. It was the session's tendency to try to encourage discussion surrounding appropriate media content.

Example of the certificate of participation for the preschool childen (Picture 7.)

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Furthermore, it is crucial to highlight that the workshop was attended by educators and staff from the respective kindergartens, whose observations and experiences enriched the discussion and provided valuable insights from their professional perspective. It was them who made a significant contribution to the entire project through their presence and active participation. The educators closely observed the children throughout the workshops, providing support in comprehending the advertising materials. Furthermore, they participated in a visit to HRT Radio Osijek to enhance their understanding of the functioning of modern media.

Key Insights and Conclusions of the Project

The project generated a range of questions and provided important insights. First of all, children exhibit considerable curiosity and receptiveness to media-related learning, yet they necessitate expert direction and adult support. Furter, creative tasks, such as drawing and hands-on experiences, proved to be highly effective in simplifying complex subjects for younger audiences. Eventually, the collaboration with institutions, including the Osijek Kindergarten and HRT Radio Osijek, was instrumental in the successful implementation of the project.

The implementation of the *Little Media Researchers* project proceeded smoothly thanks to the professionalism and warmth of all those involved. The children's smiles, their curiosity, and excitement are the best confirmation of the success of this project.

The project has inspired us to continue seeking creative ways to educate children about the media and promote responsible and critical use of technology. The *Little Media Researchers* are not just a project but a reminder of how important it is to invest in the education of the youngest for a better tomorrow.

A Look into the Future

The results of the *Little Media Researchers* project inspired us to continue the project. During its implementation, we recognized the artistic talent of a seven-year-old boy, Dorijan, whose drawings reflected a deeper understanding of media messages. This discovery led to a collaborative effort between the author, Dorijan, and his parents, with significant support from the educators. The author wrote the story, and the young artist created 20 illustrations for the picture book *Zlorekov tajni plan (Adbad's Secret Plan)*.[17] This picture book combines entertaining and educational content tailored to children.s perception, making it an ideal tool for fostering critical thinking about the media.

[17] *Zlorek* is a name created by combining the short forms of Croatian words „zločest" (bad) and „reklame" (advertisements). In English, the translation would be *Adbad's Secret Plan*. *Adbad* is a playful combination of the words „ad" (short for advertisement) and „bad." In both languages, the name captures the essence of the character, highlighting its connection to problematic or mischievous advertisements in a fun and memorable way, making it suitable for a children's book. The name strikes a balance between creativity and clarity, appealing to young readers while still conveying its intended meaning.

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As a result, we have chosen to apply for the Croatian Agency for Electronic Media's competition once more this year, with the goal of publishing and using the picture book to promote media literacy among lower elementary school students in the Osijek area and beyond.

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Absztrakt

MÉDIAMŰVELTSÉG AZ ÓVODÁSKORÚ GYERMEKEK SZÁMÁRA: VONZÓ WORKSHOPOK A SZÜLŐK BEVONÁSÁVAL

Ez az írás az óvodáskorú gyermekek médiaműveltségének oktatásával kapcsolatos legújabb kutatások és kezdeményezések áttekintését mutatja be a Horvátországban megvalósított Little Media Explorers projektre összpontosítva. A tanulmány kiemeli a médiaműveltség növekvő jelentőségét a kisgyermekkori nevelésben hangsúlyozva a szülők, a pedagógusok és az intézmények szerepét a kisgyermekek kritikai gondolkodási készségeinek előmozdításában. Az Eszéki Óvodával és a HRT Radio Osijekkel együttműködésben megvalósított projekt keretében a gyermekek, a szülők és a pedagógusok számára szervezett műhelyfoglalkozások célja a médiatartalmak és a reklámok jobb megértése volt. A legfontosabb eredmények azt mutatják, hogy az óvodások jelentős kíváncsiságot és fogékonyságot mutatnak a médiával kapcsolatos tanulás iránt, de szakértői útmutatásra van szükségük. A kreatív feladatok és a gyakorlati tapasztalatok hatékonynak bizonyultak az összetett médiakoncepciók egyszerűsítésében a fiatal közönség számára. A projekt sikere vezetett az *Adbad titkos terve* (*Adbad's Secret Plan*) című képeskönyv kidolgozásához, amelynek célja a médiaműveltség előmozdítása az általános iskola alsó tagozatosai körében. Ez a kutatás hozzájárul a kisgyermekkori médiaképzés egyre bővülő szakirodalmához, és gyakorlati meglátásokkal szolgál a médiaműveltségi programok óvodai környezetben történő megvalósításához.

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Kovács Elvira–Papp Zoltán

AZ ALSÓ TAGOZATOS TANULÓK MATEMATIKA TANULÁSÁNAK MOTIVÁCIÓS DIMENZIÓI

Bevezetés

A motiváció szerepe az oktatásban

A motiváció szorosan kapcsolódik azokhoz az indítékokhoz, amelyek az emberi cselekvéseket irányítják, és kulcsszerepet játszik az élet számos területén, különösen a tanulásban. A szó eredete a latin *movere* igéből származik, amely mozgást jelent, és ezzel jól tükrözi a motiváció lényegét: az egyént előre mozdító, cselekvésre késztető belső erőt. A motiváció régóta az emberi tevékenységek, így a munka, a tanítás és a tanulás egyik legfontosabb mozgatóerejeként ismert. Központi szerepe abban mutatkozik meg, hogy mennyire képes ösztönözni a tanulókat arra, hogy aktívan részt vegyenek a tanulási folyamatban, elköteleződjenek az új ismeretek elsajátítása mellett, bővítsék tudásukat és fejlesszék képességeiket. A motiváció szintje meghatározza, hogy a tanulók mennyire lesznek képesek önállóan és tartósan fenntartani a tanulás iránti érdeklődést.

Számos tényező befolyásolja a motivációt: a tanulók személyisége, társas és családi környezetük, az iskolai környezet, a siker iránti vágyuk, valamint különféle egyéni és külső körülmények. Életkoruk, nemük és iskolai tapasztalataik szintén jelentős hatással vannak a motivációjukra. E tényezők közül az egyik legjelentősebb a tanulás iránti belső elköteleződés, amely nagymértékben meghatározza a tanulók iskolai teljesítményét. Az iskolai tanulást támogató tényezők között kiemelt szerepet játszik a motiváció, amely az eredményesség és a folyamatos fejlődés alapját képezi. A motiváció nemcsak az azonnali eredményekre van hatással, hanem hosszú távon is meghatározza a tanulók hozzáállását, kitartását és a tanulás iránti elkötelezettségét. Az iskolai siker érdekében fontos a tanulók önbizalmának és önértékelésének erősítése is, hiszen ezek szorosan összefüggenek a motivációval. Az oktatási környezet minősége és a tanárok elhivatottsága szintén jelentős szerepet játszik a tanulók motivációjának fenntartásában és növelésében. Tehát, a motiváció az eredményesség[1] és a fejlődés alapját képezi.[2] A pedagógusok számára tehát nemcsak kihívás, hanem kiemelt feladat, hogy megértsék és támogassák a tanulók motivációját a tanulási folyamat során.

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[1] LUNGULOV, Biljana: *Motivacija učenika u nastavi – pretpostavka uspeha u učenju*. Pedagoška stvarnost, 2010/3–4. 294–305. (Továbbiakban LUNGULOV, 2010); SKAALVIK, Einar M.–FEDERICI, Roger A.–KLASSEN, Robert M.: *Mathematics achievement andself-efficacy: Relations with motivation for mathematics*. International Journal of Educational Research, 2015/72. 129–136. (Továbbiakban: SKAALVIK–FEDERICI–KLASSEN, 2015.); SZABÓ-THALMEINER Noémi: *Matematikai eredményességet befolyásoló tényezők*. PedActa, 2011/1–2. (Továbbiakban: SZABÓ-THALMEINER, 2011.)

[2] MIDDLETON, James A.–SPANIAS, Photini A: *Motivation for Achievement in Mathematics: Findings, Generalizations, and Criticisms of the Research*. Journal for Research in Mathematics Education, 1999/1. 65–88. (Továbbiakban: MIDDLETON–SPANIAS, 1999.)

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Tudományos értelemben a motivációt belső állapotként definiáljuk, amely kiváltja, fenntartja és a cél elérése felé irányítja az egyén cselekedeteit. Ennek köszönhetően a motiváció alapvető szerepet játszik a tanulási folyamatban, mivel befolyásolja, hogy a diákok milyen aktívan vesznek részt a tanulási feladatokban, hogyan küzdik le a felmerülő akadályokat, és mennyire kitartóak céljaik elérése érdekében.

A pszichológiában sokféleképp definiálják a motivációt. Bakar szerint a motiváció az emberi pszichológia és viselkedés egyik összetett területe,[3] amely meghatározza, hogy az egyének milyen feladatokat választanak, mennyi energiát és időt szánnak rájuk, hogyan viszonyulnak érzelmileg és gondolkodásmódjuk alapján ezekhez a feladatokhoz, valamint mennyire tartanak ki azok végrehajtása során. Ez a tanulók esetében megmutatkozik abban, hogy milyen tanulási feladatokat részesítenek előnyben, mennyi időt és erőfeszítést fektetnek ezekbe, mennyire kitartóak, és hogyan küzdenek meg a tanulási folyamat során felmerülő akadályokkal.[4] A motivációt egy olyan belső állapotként határozzuk meg, amely fenntartja és az egyén viselkedését egy meghatározott cél elérése felé irányítja, így alapvető szerepet játszik a tanulás folyamatában.[5]

Bár a motiváció fontosságát széles körben elismerik, az egyik legnehezebben mérhető tanulási tényezőként tartják számon. Ez részben annak köszönhető, hogy egyénileg eltérő formában jelenik meg, és különböző belső és külső tényezők összetett kölcsönhatása alakítja. Az oktatók és pedagógusok számára ezért nagy kihívást jelent a motiváció fenntartása és fokozása,[6] különösen a mai, folyamatosan változó tanulási környezetben. Azonban a motiváció megértése és célzott fejlesztése kulcsfontosságú az eredményes tanítási és tanulási folyamatok megvalósításában.

Az oktatási gyakorlatban számos olyan korlát létezik, amelyek irreális elvárásokat támasztanak azzal kapcsolatban, hogy minden diák minden tantárgyból motiváltan sajátítsa el a tananyagot. Ennek egyik oka, hogy a tantervben meghatározott oktatási tartalmak nem a tanulók választásán alapulnak, hanem az oktatási program előírásain.

Emellett a pedagógusoknak sincs lehetőségük arra, hogy minden egyes tanuló egyéni igényeihez igazítsák a tanítási folyamatot. Ennek eredményeként előfordulhat, hogy egyes tanulók unatkoznak, frusztráltak vagy összezavarodnak az órák során. Mindez gyakran gyenge tanulmányi eredményekhez, kudarcélményekhez, valamint személyes csalódáshoz és olykor nyilvános megszégyenüléshez vezet. A zavartól való védekezés érdekében a diákok sokszor csupán a minimumkövetelmények teljesítésére összpontosítanak, ahelyett, hogy a kompetenciák fejlesztésére helyeznék a hangsúlyt.[7]

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[3] BAKAR, Ramli: *The Effect of Learning Motivation on Student's Productive Competencies in Vocational High School*. West Sumatra. International Journal of Asian Social Science, 2014/6. 722–732. (Továbbiakban: BAKAR, 2014)

[4] Uo. 3.

[5] VIZEK VIDOVIĆ, Vlasta–RIJAVEC, Majda–VLAHOVIĆ ŠTETIĆ, Vesna–MILJKOVIĆ, Dubravka: Psihologija obrazovanja. Zagreb: IEP-VERN, 2003.

[6] FILGONA, Jacob–SAKIYO, John–GWANY, D. M.–OKORONKA, Augustine Ugwumba: *Motivation in Learning*. Asian Journal of Education and Social Studies, 2020/4. 16–37. (Továbbiakban: FILGONA–SAKIYO–GWANY–OKORONKA, 2020)

[7] PAJEVIĆ, Aleksandra D.–FEHRATOVIĆ, Mirsen H.: *Motivacija i učenje*. Zbornik radova Učiteljskog fakulteta Prizren-Leposavić, 2019/13. 169–84.

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A diákok ösztönzése arra, hogy sikeresek legyenek az iskolában, az oktatás egyik legkomolyabb és legösszetettebb kihívása.[8] Ahhoz, hogy a tanulókban kialakuljon az egész életen át tartó tanulás iránti elkötelezettség, és fejlesszék személyes kompetenciáikat, fontos, hogy ösztönözzük őket céljaik kitűzésére és elérésére. Ezáltal megtaníthatjuk számukra, hogyan szűkíthetik le a szakadékot a jelenlegi helyzetük és a jövőbeli céljaik között. Akár belső, akár külső motiváció hajtja őket, az oktatók feladata az, hogy támogassák a tanulókat abban, hogy reális, konkrét és elérhető célokat tűzzenek ki maguk elé. Az eredményesség érdekében a pedagógusoknak hitelesnek, őszintének, lelkesnek és támogató szemléletűnek kell lenniük, miközben hitet és bizalmat sugároznak a tanulók képességei iránt, bátorítva őket arra, hogy elérjék saját céljaikat.

A tanulók motivációjának növelése a matematikaórák során

A motivációt általában különböző tényezők befolyásolják, melyeket gyakran két csoportra osztanak: belső és külső tényezőkre. Belső tényezők közé tartozik például az önmegvalósítás, az elégedettség érzése, vagy a saját teljesítmény miatti büszkeség. Külső tényezők pedig olyan dolgokat jelenthetnek, mint a pénz, jutalom, elismerés vagy a magasabb társadalmi státusz, amelyet egy jobb munkahelyi pozíció biztosíthat.[9] A sikeres nevelő-oktató munka alapja a motivált tanulók jelenléte, amely nagyban múlik azon, hogy a pedagógus milyen nevelési eszközöket és munkamódszereket választ. A gyermekek motiválásában kulcsfontosságú szerepet játszik az egyensúly megtalálása a külső és belső motiváció között. A külső motiváció dicséretekben, jutalmakban és szükség esetén következetes visszajelzésekben nyilvánul meg, míg a belső motiváció a kíváncsiság felkeltésével, az érdeklődés folyamatos fenntartásával érhető el.

Motivált tanulónak tekinthetjük azt, aki képes a tanulásra összpontosítani, még akkor is, ha nem minden feladatot talál érdekesnek, izgalmasnak vagy kellemesnek. Azonban komolyan veszi a feladatait, és elkötelezetten dolgozik rajtuk. Emellett a tanulók motivációját növelheti a rendszeres visszajelzés és az elért eredmények elismerése is. Az ösztönző tanári megközelítés és a pozitív tanulási környezet kulcsfontosságú a tanulók folyamatos fejlődéséhez. A jól strukturált tanítási órák és a célok egyértelmű megfogalmazása tovább erősítheti a tanulók elkötelezettségét és motivációját. Az oktatási módszerek változatossága, valamint a tananyag relevanciája szintén jelentős hatással van a tanulási motivációra. Fontos, hogy figyelembe vegyük a tanár szerepét is, akinek feladata, hogy olyan támogató és ösztönző légkört alakítson ki, amely elősegíti a tanulási folyamat sikerét.

A jól strukturált tanítási órák és a célok egyértelmű megfogalmazása tovább erősítheti a tanulók elkötelezettségét és motivációját.[10]

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[8] FILGONA–SAKIYO–GWANY–OKORONKA, 2020

[9] SMITH, Edward E.–NOLEN-HOEKSEMA, Susan–FREDERICKSON, Barbara L.–LOFTUS, Geoffrey R.–BEM, Daryl J.–MAREN, Stephen: *Atkinson/Hilgard Uvod u psihologiju*. Jaster-barsko: Naklada Slap, 2007.

[10] LUNGULOV, 2010, 295.; MOLNÁR Adrienn–FODOR Szilvia–KURUCZ Győző: *A matematikai szorongás vizsgálata a célorientációs elmélet keretében*. Alkalmazott Pszichológia 2020/1. 31–55; SKINNER, Ellen–BELMONT, Michael J.: *Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year*. Journal of Educational

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A matematikatanárok kulcsszerepet töltenek be a diákok motivációjának kialakításában és pozitív irányú fejlesztésében.[11]

A kitűzött célok eléréséhez elengedhetetlen a kitartás és az állhatatosság. Pedagógusként alapvető feladatunk, hogy pozitív és inspiráló környezetet teremtsünk, ahol a gyermekek biztonságban érzik magukat, és bátorítást kapnak a fejlődéshez. Minden apró eredményüket érdemes figyelemmel kísérni, és kiemelni a fejlődési folyamat során elért előrelépéseket. A pozitív visszajelzés és a dicséret nemcsak önbizalmat ad, hanem motivációt is teremt, hogy tovább haladjanak a tanulási úton.

A pedagógusoknak érdemes dinamikát vinni az osztálytermi munkába, és változatos munkamódszereket alkalmazni ugyanazon tananyag bemutatására. Ez nemcsak a tanulók érdeklődését fokozza, hanem lehetőséget ad arra is, hogy a különböző tanulási stílusokat és képességeket figyelembe véve minden gyermek számára elérhetővé váljon a tananyag. Az elkötelezett és támogató pedagógus így alapozhatja meg a gyermekek sikeres tanulási folyamatát és fejlődését.

A matematika oktatását úgy kell formálni, hogy az minél érdekesebb és szórakoztatóbb legyen a diákok számára.[12] Minden egyes lecke megtervezésekor az a cél, hogy felkeltse a gyerekek kíváncsiságát, lekösse a figyelmüket, és örömmel vegyenek részt az órán. Ebben kiemelt szerep hárul a pedagógusokra, különösen a tanítókra, akik munkájukkal, elhivatottságukkal és kreativitásukkal meghatározzák a gyerekek matematikához való viszonyát.[13]

A tanítók azok, akik a tudás és az önbizalom alapjait rakják le a kisiskolásokban – ez az alap lesz a későbbi tanulmányok kiindulópontja. A matematikatanárok ezután erre építkeznek: fejlesztik, bővítik, formálják és, ha szükséges, korrigálják a korábban megszerzett tudást. Azonban az, hogy egy gyerek megszereti-e vagy éppen tartani fog a matematikától, leginkább a tanítók első, formáló éveiben dől el. Elengedhetetlen, hogy az oktató minden szükséges kompetenciával rendelkezzen a minőségi oktatáshoz.

Ha a pedagógus nincs megfelelően felkészülve az órára, vagy maga sem rendelkezik kellő magabiztossággal a matematika terén, akkor ezt a bizonytalanságot, félelmet vagy elutasítást – akár öntudatlanul is – továbbadja a diákoknak.

Minden matematikaórát úgy kell megtervezni, hogy friss, kreatív és inspiráló legyen. A cél, hogy a gyerekek örömmel vegyenek részt a tanulásban,

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Psychology, 1993/4. 571–581. (Továbbiakban: SKINNER–BELMONT, 1993); TAMBUNAN, Hardi: *The Dominant Factor of Teacher's Role as a Motivator of Students' Interest and Motivation in Mathematics Achievement*. International Education Studies, 2018/4. 144–151. (Továbbiakban: TAMBUNAN, 2018); TURNER, Julianne C.–MIDGLEY, Carol–MEYER, Debra K.–GHEEN, Margaret–ANDERMAN, Eric M.–KANG, Yongjin–PATRICK, Helen: *The Classroom Environment and Students' Reports of Avoidance Strategies in Mathematics: A Multimethod Study*. Journal of Educational Psychology, 2002/1. 88–106. (Továbbiakban: TURNER–MIDGLEY–MEYER–GHEEN–ANDERMAN–KANG–PATRICK, 2002.)

[11] PANTZIARA, Marilena–PHILIPPOU George, N.: *Students's motivation in the mathematics classroom. Revealing causes and consequences*. International Journal of Science and Mathematics Education, 2015/2. 385–411. (Továbbiakban: PANTZIARA–PHILIPPOU, 2015.)

[12] KENNEDY, Leonard–TIPPS, Steve–JOHNSON, Art: *Guiding Children's Learning of Mathematics*. USA: Thomson Wadsworth, 2008.; PAUNOVIĆ, Ljiljana R.–GAJTANOVIĆ, Zorica Lj.: Zbornik radova Učiteljskog fakulteta Prizren-Leposavić, 2020/14. 327–336. (Továbbiakban: PAUNOVIĆ–GAJTANOVIĆ: 2020.) SZABÓ–THALMEINER, 2011.

[13] LALOVIĆ, Zoran: *Naša škola - metode učenja/nastave u školi*. Zavod za školstvo, Podgorica, 2009. (Továbbiakban: LALOVIĆ, 2009.)

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kíváncsian figyeljenek, új ismeretekre tegyenek szert, és ami a legfontosabb: ez a tudás hosszú távon rögzüljön. Az oktatók feladata nem csupán a definíciók, képletek és tételek átadása, hiszen ezek idővel feledésbe merülhetnek. Sokkal fontosabb, hogy megtanítsák a gyerekeket gondolkodni, problémát megoldani és logikusan következtetni. Ha a diákok képesek lesznek ezeket az eszközöket használni a későbbiekben, a tanítók sikeresen elvégezték a munkájuk rájuk eső részét.[14]

Már kiskoruktól kezdve fontos, hogy a gyerekek a matematikával, mint izgalmas és kreatív tantárggyal találkozzanak. Mindent meg kell tenni annak érdekében, hogy megszeressék ezt a tantárgyat, hiszen a korai élmények meghatározóak. A tanítók vállán nyugszik a legnagyobb felelősség, mivel az ő hozzáállásuk, szakmai felkészültségük és kreativitásuk döntően befolyásolja a gyerekek viszonyát a matematikához. A tanítók azok, akik elsőként ismertetik és szerettetik meg a matematikát a diákokkal, ezzel megalapozva későbbi sikeres tanulmányaikat.[15]

A tanulókat meg kell tanítani az otthoni, önálló munkavégzésre úgy, hogy közben tiszteletben tartjuk egyéniségüket és saját tanulási tempójukat. Mivel az általános iskola középpontjában a gyermek áll, a differenciált pedagógiai szemlélet alkalmazásával lehetővé kell tenni, hogy minden tanuló sikerélményhez jusson. Emellett törekedni kell az osztályon belüli teljesítménybeli különbségek csökkentésére, miközben a diákok tudatosítják, hogy saját fejlődésükért ők maguk is felelősek, nem csupán a tanárok és az iskola.

Módszertani keret

Az általános iskola alsó tagozatán a tanulók tanuláshoz és a matematika tantárgyhoz való hozzáállása alapvető fontosságú a matematikai tanulásban elért haladásuk és eredményeik szempontjából. Kutatásunk célja annak feltárása volt, hogy milyen attitűdökkel viszonyulnak a diákok a matematikához. Három összetevőt vizsgáltunk: az érzelmi kapcsolatokat, az értelmi ösztönzést és az erkölcsi tényezőket. Ezek alapján képet kívántunk kapni a tanulók motivációjáról. Az alkalmazott kérdőív az Orosz által összeállított kérdésekre épült,[16] és az alsó tagozatos diákok számára lett átdolgozva. A kérdőív 22 kérdést tartalmazott, amelyeket a tanulóknak egy ötfokozatú skálán kellett megválaszolniuk. A kérdések három kiemelt területre irányultak, hasonlóan a tanulmányhoz:[17]

- Érzelmi-szociális dimenzió: A tanulás ezen területén a hangsúly az iskola empatikus, azonosulási és kapcsolódási motivációs rendszerein volt. Ebben a dimenzióban a következő tényezőket vizsgáltuk: a diákok érzelmi viszonyát a matematikához, a matematika tanulásához, a tanárhoz, valamint a teljesítményükhöz.
- Kognitív dimenzió: Az elemzés középpontjában a tanulók tanulás iránti érdeklődése, aktivitása, kitartása és önállósága állt.
- Erkölcsi dimenzió: Az önintegráció ezen területén a diákok kötelességtudatát és önértékelését vizsgáltuk.

[14] PAUNOVIĆ–GAJTANOVIĆ: 2020.
[15] PAUNOVIĆ–GAJTANOVIĆ: 2020
[16] OROSZ GYULÁNÉ Ludvig Erzsébet: *Students' attitudes towards learning mathematics*. Acta Academiae Paedagogicae Agriensis, Sectio Mathematicae, 1997/24. 123–129. (Továbbiakban: OROSZ GYULÁNÉ, 1997.)
[17] Uo. 16.

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Az adatokat tanítási órák alatt gyűjtöttük, a tanintézmény vezetőségének és a diákok tanárainak előzetes hozzájárulásával. A kutatásban való részvételt megelőzően a tanárokat, diákokat és – az iskola szabályzatától függően – a szülőket tájékoztattuk a vizsgálat tartalmáról és menetéről. Az adatgyűjtésre egyetlen tanórai foglalkozás során került sor, és a résztvevőket arra kértük, hogy a kérdőív kitöltése során őszintén válaszoljanak.

A felmérés eredményeit az egyes kérdésekre adott válaszok átlagértékei alapján számítottuk ki. A Likert-skálát intervallumskálaként kezeltük, hogy kihasználjuk a komplex statisztikai eljárások nyújtotta lehetőségeket; ennek megfelelően az értékek összegezhetők.[18] A diákok 5-fokozatú Likert-skálán válaszoltak a kérdésekre. Az 1-es érték („egyáltalán nem értek egyet") jelezte a legkevésbé pozitív hozzáállást a matematikához, míg az 5-ös érték („teljes mértékben egyetértek") a legpozitívabb hozzáállást tükrözte. Így a diákok minden tételnél minimum 1 és maximum 5 pontot érhettek el. A 3-as érték („nem eléggé – se nem értek vele egyet, se nem ellenzem") semleges hozzáállást jelölt. A 3-as érték feletti pontszámok pozitív, míg az alattiak negatív attitűdöt fejeztek ki az adott tétellel kapcsolatban.

A kutatás mintáját a Szerb Köztársaság területén található általános iskolák alsó tagozatos tanulói köréből választottuk ki. A minta véletlenszerűen került kiválasztásra, és összesen 364 tanulóból állt: az 1. táblázatban látható megoszlás szerint.

Nem szerinti megoszlás	Tanulók száma	Arány (%)
lányok	199	54,70%
fiúk	165	45,3%
összesen:	364	100%

A minta nem szerinti megoszlása (1. táblázat)

A kutatási mintába az általános iskola mind a négy évfolyamáról bevontunk tanulókat. A 2. táblázatban látható a minta évfolyam szerinti megoszlása.

Évfolyam szerinti megoszlás	Tanulók száma	Arány (%)
első osztályosok	91	25,00%
második osztályosok	96	26,4%
harmadik osztályosok	77	21,20%
negyedik osztályosok	100	27,50%
összesen:	364	100%

A minta évfolyam szerinti megoszlása (2. táblázat)

Kutatási eredmények

Elsődleges célunk az volt, hogy megvizsgáljuk, a tanulók milyen mértékben viszonyulnak pozitívan a matematikához. A kutatási eredmények alapján (3. táblázat) a diákok matematikához való viszonya több szempontból is pozitívnak tekinthető.

Azonban az egyes aspektusok között jelentős különbségek figyelhetők meg. Az adatok elemzése rámutatott, hogy a tanulók attitűdje szoros összefüggésben áll a tanulási folyamat során alkalmazott módszerekkel, a feladatok jellegével, valamint az elért sikerélménnyel.

[18] CSAPÓ Benő: *Literacy in schools*. Osiris Publishing House, Bp., 2002.

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Kérdés	átlag	szórás	válaszadók száma
Szereted a matematikát?	4,15	1,281	357
Nehéz tantárgynak tartod a matematikát?	2,56	1,574	359
Szereted a matematikai játékokat?	4,57	0,952	361
Szereted a szórakoztató matematikai feladatokat?	4,34	1,206	361
Szereted az új és szokatlan feladatokat?	3,94	1,381	364
Örülsz az osztályon belüli versenyhelyzeteknek?	4,01	1,421	364
Boldog vagy, amikor megoldasz egy feladatot?	4,43	1,009	363
Élvezed a matematikával való foglalkozást?	4,08	1,177	363

Matematika iránti attitűd (3. táblázat)

- Pozitív attitűdök fenntartása az alsó tagozatban: Az „Élvezed a matematikával való foglalkozást?" és a „Szereted a matematikát?" kérdésekre adott magas átlagok azt tükrözik, hogy az alsó tagozatos tanulók nagy része élvezettel vesz részt a matematikaórákon, és kedveli a tantárgyat. Ez valószínűleg a korosztály életkori sajátosságaiból is fakad, hiszen ebben az időszakban a tanulók még természetes kíváncsisággal fordulnak az új ismeretek felé. Az eredmények összhangban vannak más kutatásokkal, amelyek szerint az általános iskola alsó tagozatán a diákok pozitívan viszonyulnak a matemati-kához, azonban ez az attitűd az iskolai évek előrehaladtával csökken.[19] Az adatok azonban arra is figyelmeztetnek, hogy ez a pozitív hozzáállás a későbbi évfolyamokon fokozatosan csökkenhet, ahogyan a tananyag nehezebbé és absztraktabbá válik. Ezért kiemelten fontos, hogy a pedagógusok olyan tanítási módszereket alkalmazzanak, amelyek fenntartják a tanulók érdeklődését és motivációját, például játékos, interaktív, illetve kreatív feladatokkal.
- A játékos tanulás szerepe: A „Szereted a matematikai játékokat?" és a „Szereted a szórakoztató matematikai feladatokat?" kérdések kiugróan magas átlagai azt mutatják, hogy a játékos tanulási formák rendkívül népszerűek a tanulók körében. Ez nemcsak az élvezetes tanulás élményét nyújtja, hanem hozzájárulhat a matematikai készségek fejlesztéséhez is. A játékok és szórakoztató feladatok beépítése a tantervbe hatékony eszköz lehet a tantárgy iránti pozitív attitűd erősítésére.
- Új kihívások elfogadása: A „Szereted az új és szokatlan feladatokat?" kérdésre adott válaszok átlagértéke (3,94) szintén pozitív, de valamivel alacsonyabb, mint a többi játékos vagy szórakoztató jellegű tevékenységé. Ez arra utal, hogy a tanulók nyitottak az újdonságokra, de ezek sikeres alkalmazásához megfelelő támogatásra van szükségük. Az új feladatok bevezetésénél fontos, hogy azok ne legyenek túl nehezek, különben csökkenhet a tanulók motivációja és önbizalma.

[19] MAZANA, Mzomwe Yahya–SUERO MONTERO, Calkin–OLIFAGE, Casmir Respickius: *Investigating students' attitude towards learning mathematics*. International electronic journal of mathematics education, 2019/1. 207–231; MATA, Maria de Lourdes–MONTEIRO, Vera–PEIXOTO, Francisco: *Attitudes towards mathematics: Effects of individual, motivational, and social support factors*. Child development research, 2012/1–10.

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- Sikerélmény és versengés: A „Boldog vagy, amikor megoldasz egy feladatot?” kérdés magas átlaga (4,43) azt mutatja, hogy a sikerélmény erőteljes motiváló tényező a tanulók számára. Ez különösen fontos a matematika-tanításban, ahol az elért eredmények megerősíthetik a tanulók önbizalmát és pozitív hozzáállását. Az „Örülsz az osztályon belüli versenyhelyzeteknek?” kérdésre adott válaszok (átlag = 4,01) szintén azt jelzik, hogy a versenyhelyzetek motiváló hatással bírhatnak. Azonban ezek alkalmazása során figyelembe kell venni a tanulók eltérő képességeit, hogy senki se érezze magát hátrányos helyzetben.

Mivel a tanár jelentős szerepet játszik a tanulási motiváció és a tantárgyhoz, valamint a matematikatanuláshoz való hozzáállás kialakításában, fontosnak tartottuk megvizsgálni a diákok véleményét a tanárral való viszonyról (4. táblázat). Az eredmények egyértelműen rámutatnak arra, hogy a tanár közvetlen hatással van a tanulók matematikához való viszonyára és tanulási motivációjára. A tanári segítségnyújtás és dicséret kiemelkedően pozitív megítélése arra utal, hogy a tanulók számára a támogató tanári attitűd kulcsfontosságú tényező.

Kérdés	átlag	szórás	válaszadók száma
Örülsz, ha a tanárod segít, amikor nem boldogulsz egy feladattal?	4,37	1,141	363
A tanár megdicsér, ha jól teljesítesz matematikából?	4,32	1,176	363
Szoktál kérdezni a tanárodtól, ha valamit nem értesz az órán?	4,07	1,258	363
Ad a tanárod kiegészítő matematikai feladatokat?	3,07	1,664	360

Kapcsolat a matematikatanárral (4. táblázat)

- Tanári segítség és dicséret: Az „Örülsz, ha a tanárod segít, amikor nem boldogulsz egy feladattal?” kérdésre adott válaszok magas átlaga (4,37) azt mutatja, hogy a diákok nagyra értékelik a tanár támogató szerepét. Ez a segítség nemcsak az adott problémák megoldásában segíti őket, hanem biztonságérzetet és önbizalmat is nyújt, ami hosszú távon pozitívan befolyásolja a matematika iránti attitűdjüket. Az „A tanár megdicsér, ha jól teljesítesz matematikából?” kérdés szintén magas átlagértéke (4,32) azt jelzi, hogy a dicséret fontos motivációs eszköz a diákok számára. A dicséret nemcsak megerősíti a diákokat, hanem a tantárgy iránti pozitív érzelmi kötődést is erősíti. Ez különösen fontos abban az életkorban, amikor a tanulók önértékelése még nagyban függ a tanári visszajelzésektől.
- Kérdezési hajlandóság és a tanárhoz fordulás: A „Szoktál kérdezni a tanárodtól, ha valamit nem értesz az órán?” kérdésre kapott átlag (4,07) szintén magas, ami arra utal, hogy a diákok többsége nyitott arra, hogy tisztázza a meg nem értett részeket. Ez egy jól működő tanár-diák kapcsolat meglétét feltételezi, ahol a tanulók úgy érzik, kérdéseikkel bizalommal fordulhatnak a tanárhoz.
- Kiegészítő feladatok hozzáférhetősége: Az „Ad a tanárod kiegészítő matematikai feladatokat?” kérdés alacsonyabb átlaga (3,07) viszont arra

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utal, hogy a tanulók kevésbé részesülnek kiegészítő feladatokban, vagy ezek kevésbé elérhetők számukra. Bár a kiegészítő feladatok célja, hogy a tanulók elmélyítsék matematikai ismereteiket, az alacsony pontszám arra figyelmeztet, hogy ezek alkalmazásakor figyelembe kell venni a tanulók egyéni terhelhetőségét és érdeklődését. A túlzott terhelés elkerülése érdekében fontos, hogy ezek a feladatok differenciáltak és az egyéni szükségletekhez igazítottak legyenek.
- A tanári kapcsolat hatása a matematikai attitűdre: Az adatok azt mutatják, hogy a tanulók pozitívan viszonyulnak a matematikatanárhoz, ami alapvető feltétele a tantárgy iránti pozitív hozzáállás kialakulásának. Egy támogató, bátorító pedagógus képes motiválni a tanulókat, és hozzájárulhat ahhoz, hogy a matematikaórák ne csak hasznosak, hanem élvezhetőek is legyenek.

Továbbá megvizsgáltuk az olyan tényezőket, mint a teljesítmény, a matematikaórákon jelentkező szorongás, valamint az erkölcsi és intellektuális dimenziók elemeit (5. táblázat). Az elemzés alapján a tanulók általánosságban pozitív hozzáállást mutatnak a matematika iránt, és elégedettek a teljesítményükkel. Az „Elégedett vagy a matematikai eredményeiddel?" kérdésre adott magas átlagérték (4,37) azt mutatja, hogy a diákok többsége sikeresnek érzi magát a tantárgyban, ami fontos alapja a további motivációnak és az önbizalomnak.

Kérdés	átlag	szórás	válaszadók száma
Elégedett vagy a matematikai eredményeiddel?	4,37	1,177	362
Mindent megteszel a jobb eredményekért?	4,67	0,755	364
Fontosnak tartod a matematika tanulását?	4,76	0,640	360
Ideges vagy a matematikaórákon?	2,71	1,750	364

Teljesítmény és a szorongás a matematikaórán (5. táblázat)

- Motiváció és elkötelezettség: A „Mindent megteszel a jobb eredményekért?" kérdés kiemelkedően magas átlagértéke (4,67) arra utal, hogy a tanulók nagy többsége elkötelezett a matematika tanulása iránt. Ez az érték különösen jelentős, mivel azt jelzi, hogy a diákok nemcsak elfogadják a tantárgyat, hanem aktívan tesznek is a jobb eredményekért. Ez az elkötelezettség összefügghet a tanárral való pozitív kapcsolattal, valamint a tantárgy fontosságának felismerésével.
- A matematika fontosságának megítélése: A „Fontosnak tartod a matematika tanulását?" kérdésre kapott legmagasabb átlag (4,76) egyértelműen jelzi, hogy a tanulók többsége felismeri a matematika tanulásának jelentőségét. Ez a hozzáállás hosszú távon hozzájárulhat a diákok tanulmányi sikeréhez és a tantárgy értékének megértéséhez.
- Szorongás a matematikaórákon: Bár a tanulók általános hozzáállása pozitív, az „Ideges vagy a matematikaórákon?" kérdésre adott átlag (2,71) és magas szórás (1,750) arra utal, hogy a szorongás mértéke jelentős egyéni különbségeket mutat. Ez azt jelzi, hogy bár sok diák nem érez számottevő stresszt a matematikaórákon, egyesek számára a tantárgyhoz való viszonyulás

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nehézségekkel jár. A szorongás okai lehetnek különbözőek, például a nehéznek érzékelt tananyag, a félelem a kudarctól vagy a szülők/tanárok elvárásai. A szorongás csökkentése érdekében fontos a támogató tanári környezet megteremtése, amely elősegítheti a diákok magabiztosságának növelését.

Az adatok tükrében megfigyelhető, hogy a diákok nemcsak a saját eredményeikre és fejlődésükre fókuszálnak, hanem a matematika intellektuális és erkölcsi jelentőségét is felismerik. Ez a hozzáállás szoros összefüggésben állhat a tanárok által közvetített értékekkel és a tantárgy tanításának módszereivel.

A 6. táblázat adatainak elemzés alapján egyértelmű, hogy a tanulók morális meggyőződései szoros összefüggésben állnak a matematika tanulása iránti motivációjukkal.

Kérdés	átlag	szórás	válaszadók száma
Gyakorolsz, ha bizonytalan vagy valamiben?	4,39	0,998	363
Felkészülsz a matematika felmérőkre?	4,45	1,036	362
Megoldod a plusz feladatokat?	3,96	1,247	362

Erkölcsi hatás befolyása (6. táblázat)

- A rendszeres gyakorlás szerepe: A „Gyakorolsz, ha bizonytalan vagy valamiben?” kérdés magas átlagértéke (4,39) tovább erősíti azt a képet, hogy a tanulók a hiányosságaik pótlására és a tudásuk fejlesztésére is hajlandóak időt szánni. Ez a válasz kiemeli a tanulók önreflexióját és a fejlődés iránti igényüket, amely a matematika tanulásának egyik kulcsa.
- A plusz feladatok megoldása: A „Megoldod a plusz feladatokat?” kérdés esetében a viszonylag alacsonyabb átlagérték (3,96) azt sugallja, hogy bár a tanulók részben nyitottak az opcionális feladatok megoldására, ez a motivációjuk kisebb mértékű. Ennek hátterében több tényező is állhat. Az extra feladatok elérhetőségének hiánya bizonyos osztályokban, a tanulók elfoglaltsága más tantárgyakkal vagy szabadidős tevékenységekkel, vagy pedig az extra feladatok kihívásként való érzékelése, amely eltántoríthat egyes diákokat. Az extra feladatokat a tanár népszerűsítheti az opcionális feladatok rendszeres és egyértelmű biztosításával. Úgyszintén, az extra feladatok elvégzését követő tanári dicséret vagy jutalmazás motiválhatja a diákokat. Az extra feladatok nehézségi szintjének és típusainak változatossága elősegítheti, hogy minden diák találjon számára érdekes és kihívást jelentő feladatokat.

A kutatás eredményei alapján megállapítható, hogy a tanulók belső motivációja erős, különösen azokban az esetekben, amikor a tanulás célja konkrét, például egy felmérőre való felkészülés. Ez arra utal, hogy a jól strukturált és egyértelmű tanári elvárások támogatják a diákok tanulási attitűdjét.

A 7. táblázatban található adatok elemzése során az eredmények rávilágítanak arra, hogy a tanulók tanulási preferenciái elsősorban az önálló problémamegoldásra és a tanórai tevékenységekre összpontosulnak.

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- Az „Önállóan készíted el a házi feladatodat?” kérdésre adott magas átlagérték (4,25) azt jelzi, hogy a diákok nagy része felelősséget vállal saját tanulási folyamatáért, és önállóan oldja meg a házi feladatokat. Ez az eredmény alátámasztja az önálló tanulás fontosságát, amely alapvető szerepet játszik a matematika tanulásában.
- A szakkörök és versenyek részvételi arányának alakulása: A „Részt veszel matematika szakkörön?” és a „Voltál már matematika versenyen?” kérdésekre adott alacsonyabb átlagértékek (1,79 és 2,43) azt mutatják, hogy ezek a tevékenységek kevésbé elterjedtek a tanulók körében. Ez azzal magyarázható, hogy a matematika szakkörök és versenyek általában a kiemelkedő teljesítményű tanulók számára kínálnak lehetőségeket, miközben a tanulók többsége inkább a tanórai keretek között marad aktív.

Kérdés	átlag	szórás	válaszadók száma
Önállóan készíted el a házi feladatodat?	4,25	1,073	359
Részt veszel matematika szakkörön?	1,79	1,532	362
Voltál már matematika versenyen?	2,43	1,820	361

Intellektuális hatás befolyása (7. táblázat)

Az eredmények rámutatnak arra, hogy a tanulók motivációja az intellektuális tevékenységekben jelentős eltéréseket mutat. Ez a különbség különféle tényezőkkel magyarázható. A tanulók számára a szakkörök és versenyek időigényesek lehetnek. Egyes tanulók nem érzik magukat elég kompetensnek ahhoz, hogy részt vegyenek ilyen tevékenységekben. Nem minden iskolában érhetők el rendszeresen szakkörök, és ezek népszerűsítése sem mindig megfelelő.

Következtetés

Kutatásunk célja annak vizsgálata volt, hogy a tanulók matematikai attitűdje milyen összefüggésben áll a tanulási motivációjukkal. A kérdőív összeállításakor kiemelt figyelmet fordítottunk azokra a tényezőkre, amelyek jelentősen befolyásolhatják a motivációt. Fontosnak tartottuk feltérképezni a tanulók viszonyát a matematikához, különös tekintettel a tanári kapcsolatra és a matematikával kapcsolatos szorongásra. Emellett vizsgáltuk a tanulók önállóságát, kitartását és szorgalmát is.

A kutatás eredményei azt mutatják, hogy a tanulók pozitív hozzáállással tanulják a matematikát, és jó kapcsolatot ápolnak oktatóikkal. A tanulási motivációt leginkább az érzelmi és morális tényezők befolyásolják, míg az intellektuális tényezők hatása kisebb mértékű. Ez a megállapítás összhangban áll más kutatók eredményeivel is.[20] Az eredmények kiemelik a szorongás jelentős negatív hatását a tanulási motivációra. Több kutatás is alátámasztja ezt a megállapítást.[21]

[20] KOZÉKI Béla: *The pedagogical psychology of the relationship between motivation and motivation*. Bp., 1980. (Továbbiakban: KOZÉKI, 1980.); SKAALVIK–FEDERICI–KLASSEN, 2015.
[21] ASHCRAFT, Mark H.–KIRK, Elizabeth P.: *The relationships among working memory, math anxiety, and performance*. Journal of Experimental Psychology: General, 2001/2. 224–237.

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Fontosnak tartjuk ezért, hogy az iskola első éveiben különös figyelmet fordítsunk a kudarctól való félelem csökkentésére és a tanulók önbizalmának erősítésére a matematikai problémamegoldás terén.

Emellett eredményeink alátámasztják más kutatók megállapítását, miszerint a matematikaórák érdekes és élvezetes jellege kulcsfontosságú a hatékony tanulás szempontjából.[22] Kutatásunk eredményei rámutatnak arra, hogy a motivációnak kiemelt szerepe van a matematikaoktatásban. A motivációs pedagógiai módszerek alkalmazása segíthet a tanulók számára szórakoztatóvá és érthetővé tenni a matematikát, valamint fokozhatja elkötelezettségüket a tantárgy iránt. A kutatási eredmények alátámasztják, hogy a tanári kapcsolat és a tanulók személyes viszonya a matematikához jelentős hatással van a tanulási motivációra.

Ezt számos korábbi tanulmány is igazolja.[23] A felmérésünk kiemelte az önálló tanulás fontosságát, amelyet más kutatás is hangsúlyozott.[24]
A szerzők szerint a tanároknak ösztönözniük kell a tanulók önállóságát a házi feladatok megoldásában, miközben figyelembe veszik az egyéni sajátosságaikat és szükségleteiket. A matematikatanároknak fontos szerepük van abban, hogy a tanulók pozitív érzelmekkel tanulják a matematikát, fejlesszék képességeiket és hosszú távon is érdeklődjenek a tantárgy iránt.[25]

A kutatásunk rámutatott a tanulók motivációja és elkötelezettsége közötti szoros kapcsolatra, amelynek jelentős következményei vannak a matematikaoktatás fejlesztésére. Korábbi kutatások már bizonyították, hogy a tanulók matematikai teljesítménye szorosan összefügg a matematikához való viszonyulásukkal.[26] A lányok kudarcaikat gyakran a képességeik hiányával magyarázzák,

(Továbbiakban: ASHCRAFT–KIRK, 2001.); NÓTIN Ágnes–PÁSKUNÉ KISS Judit–KURUCZ Győző: *Examining the within-person factors of mathematics anxiety in secondary school students using the Mathematics Anxiety Test*. Hungarian Pedagogy, 2012/4. 221–241. (Továbbiakban: NÓTIN–PÁSKUNÉ KISS–KURUCZ , 2012.); PANTZIARA–PHILIPPOU, 2015; RASMUSSEN, Karen: Break the chain. ASCD Curriculum Update, 1999/2–3; ZAKARIA, Effandi–MOHD NORDIN, Norazah: *The effects of mathematics anxiety on matriculation students as related to motivation and achievement*. Eurasia Journal of Mathematics, Science & Technology Education, 2008/1. 27–30.

[22] KENNEDY, Leonard–TIPPS, Steve–JOHNSON, Art: *Guiding Children's Learning of Mathematics*. USA: Thomson Wadsworth, 2008.

[23] LALOVIĆ, 2009; Middleton–Spanias, 1999; PANTZIARA–PHILIPPOU, 2015; SKINNER–BELMONT, 1993; TAMBUNAN, 2018; TURNER–MIDGLEY–MEYER–GHEEN–ANDERMAN–KANG–PATRICK, 2002; ASHCRAFT, Mark H.: *Math anxiety: personal, educational, and cognitive consequences*. Current Directions in Psychological Science, 2002/5. 181–185. (Továbbiakban: ASHCRAFT, 2002.); DOWKER Ann: *'Maths doesn't like me anymore': Role of attitudes and emotions*. In: Campbell, James I. D. (szerk.): *Handbook of mathematical cognition*. Psychology press Taylor & Francis Group, Hove and New York, 2005. 236–255; KOZÉKI, 1980; NÓTIN–PÁSKUNÉ KISS–KURUCZ, 2012.; RODRÍGUEZ, Susana–REGUEIRO, Bibiana–PIÑEIRO, Isabel–ESTÉVEZ, Iris–VALLE Antonio: *Gender differences in mathematics motivation: Differential effects on performance in primary education*. Frontiers in Psychology, 2020/10. 3050.

[24] BENČEK, Ankica–MARENIĆ, Mihaela: *Motivacija učenika osnovne škole u nastavi matematike*. Metodički obzori, 2006/1.

[25] PANTZIARA–PHILIPPOU, 2015.

[26] ASHCRAFT, 2002; ASHCRAFT, Mark H.–Faust, Michael W.: *Mathematics anxiety and mental arithmetic performance: An exploratory investigation*. Cognition and Emotion, 1994/8. 97–125; DOWKER Ann–CHERITON Olivia–HORTON Rachel–MARK Winifred: *Relationships between attitudes and performance in young children's mathematics*. Educational Studies in Mathematics, 2019/3. 211–230.

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míg a sikereiket nem feltétlenül tulajdonítják saját képességeiknek.[27] Ezért fontos lenne a jövőben részletesebben vizsgálni a motiváció és a teljesítmény összefüggéseit a lányok és fiúk esetében. Érdekes kutatási terület lehet továbbá annak vizsgálata, hogy a tanulási motiváció hogyan alakul a tanulók életkorának függvényében, valamint, hogy milyen hatással van rájuk a matematika tantárgyból elért tanulmányi eredményük. A további kutatásoknak arra is fókuszálniuk kell, hogy mely attitűdök a legfontosabbak a matematikai teljesítmény szempontjából, és hogy ezek az összefüggések mikor alakulnak ki a tanulási folyamat során.

A kutatás eredményei értékes alapot nyújtanak a tanulói motiváció további vizsgálatához az általános iskolai matematikaoktatás minden szakaszában, valamint a teljes formális oktatási rendszerben.

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Abstract

MOTIVATIONAL DIMENSIONS OF MATHEMATICS LEARNING IN PRIMARY EDUCATION

Motivation plays a crucial role in achieving our goals, persevering with a task and successfully overcoming obstacles. This is particularly important in the area of learning, as motivation determines student engagement, interest and achievement. The attitude of students towards the subject is essential for effective mathematics teaching.

In a survey of lower secondary school pupils, we sought to find out what factors most influence their motivation to learn mathematics. The results of the research show that emotional and moral factors are the most important factors influencing students' motivation, with intellectual influences playing a secondary role. The research contributes to a deeper understanding of the motivational factors in mathematics learning and helps to strengthen students' interest and positive attitude towards the subject.

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Gordana Stankov–Gabriella Toth-Babcsanyi

THE POTENCIAL OF ROLEPLAYS USING CONCRETE AND VISUAL REPRESENTATIOS IN TEACHING THE NOTION OF FUNCTION

Introduction

This pilot study delves into the teaching and learning the concept of function, pivotal in algebra education that is typically introduced in later primary school years.

Functions lay the groundwork for mathematical comprehension and that urged authors of this paper to arrange a complex environment that provide students with diverse learning experience which enable them to create symbolic representation of function.

This goal was accomplished by integrating concrete objects, everyday items, visual aids, and role-playing scenarios offering students varied perspectives. Through discussions and role-plays, students gradually developed their understanding of functions. They autonomously constructed concrete and visual representations, eventually translating them into symbolic representations. This approach, coupled with role-plays and tangible objects, proved promising for teaching the concept of functions.

Theoretical background

Constructivism as a learning theory highlights the importance of active student participation in knowledge creation, rather than passive acceptance of information. Glaserfeld's formulated his first principle as: „knowledge is not passively received but actively built up by the cognizing subject".[1] In the process of learning, the learner connects the new information with the knowledge they already have, which they often have to modify in order to successfully accommodate. The key element in this process is that students use their existing, structured knowledge to interpret new information. When there is a contradiction between the new information and the students' internal framework, it can result in a profound transformation of their internal system, a phenomenon referred to as conceptual change in constructivism.[2]

According to Tamás Varga abstraction can only occur from concrete experience,[3] so he recommended to introduce concepts using concrete tools and objects. The literature on teaching and learning theories underscores the significance of

[1] Ernest GLASERFELD: *Constructivism in Education*. The International Encyclopedia of Education (T. Husen & T. N. Postlethwaite, (eds.): Supplement Vol.1. Oxford/New York: Pergamon Press, 2000. 162–163. (Later GRASERFELD 1989)
[2] Iren VIRAG: *Tanuláselméletek és tanítási stratégiák (*Médiainformatikai Kiadványok) Eszterházi Károly Főiskola, Eger, 2013. (Later VIRAG 2013)
[3] Tamas VARGA: *A matematika tanítása,* Tankönykiadó, Bp., 1969.

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representations. Bruner's[4] theory of representation posits three planes – material (enactive), pictorial (iconic), and symbolic – that build upon each other:

1. Material plane (enactive): Knowledge acquisition occurs through concrete material activities, such as using tools.
2. Pictorial plane (iconic): Knowledge is gained through graphic images and imaginary situations, such as Venn diagrams or visual representations of text tasks.
3. Symbolic plane: Knowledge of mathematical symbols and language is developed and utilized. Symbols are divorced from their concrete material form and hold their own meaning.

According to Tall, McGowen and DeMarois,[5] cognitive root is an object phenomenon or procedure which students find easy to understand, and forms the basis of the given conceptual theory. That is, the cognitive "root" (here inafter referred to as the source of the concept) is meaningful cognitive unit of basic knowledge at the beginning of the learning process.

According to function machines serve as versatile tools in mathematics education, aiding children in comprehending and exploring various mathematical concepts in an enjoyable manner. These conceptual tools illustrate the operations of functions, comprising an input stage where values are input, a functional stage where transformation occurs based on predefined rules or algorithms, and an output stage where transformed values are generated.

This model effectively demonstrates the relationship between input and output values governed by a given function. It essentially takes an object within its domain and maps it to a different object, akin to a transformation machine. This conceptualization encapsulates the three key elements of a function: inputs, outputs, and the rule determining their connection.

Taking the above mentioned into account, the function machine is a cognitive root which objectifies the stages of understanding the concept of function (process, object), and enables students to construct the visual representations of the function: table, graph, formula, verbal.

Function machines could be used in role-plays, which help students immerse in roles and imagined situations.

Learning process

After analyzing textbooks, and workbooks, it turned out that they lack emphasis on concrete representations in the process of introducing function concept. Although pictorial representations frequently appear in the textbooks and workbooks, they rarely refer to concrete representations. Acquainted with the relevant scientific and methodological literature, essential statements are

[4] Jeremy S. BRUNER: *Towards a Theory of Instruction*. Harvard University Press, 1966. 44–45.
[5] David TALL, Mercedes MCGOWER, Phil DEMAROIS: *The function machine as a cognitive root for the function concept*. 2000. (Later TALL-MCGOWER-DEMAROIS) https://www.researchgate.net/publication/238344550_The_function_machine_as_a_cognitive_root_for_the_function_concept

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presented in the above chapter (theoretical background) in this paper, the researchers decided to structure the learning environment in a specific manner so that it facilitates students to create the symbolic representations of functions. To achieve this goal, the authors meticulously designed learning environments that incorporated: concrete objects, household, and do-it-yourself devices (i.e. handmade function machine) and visual aids, while role-playing facilitated discussions that helped gradually build understanding the function concept.

In doing so, learners were exposed to diverse experience and perspectives on the concept of functions. By constructing their own concrete and visual representations, students got engaged with the learning material on a deeper level. This approach fosters active participation and hands-on learning, leading to a deeper comprehension of the abstract mathematical concept of functions. Thus, the authors formulated the following research question:

Q1: Can arranging the learning environment in a certain way help students create symbolic representations of functions?

To address this question, researchers conducted three 60 minutes interventions with 16 students, who attended 6th grade in a non-standard school, a Waldorf School in Szekszárd, Hungary.

Function machine which inputs are fruits and nuts

The goal was to introduce a representation of function machine as a representation of function, and to emphasize the attribute of the function concept, which is that each element in a domain set is mapped into exactly one element of the codomain set. There were no numbers here, so instead of measurable quantities, by using a qualitative transformation process known from everyday life, which was considered to be closer to students.

During the first intervention which started with an introductory discussion, students' attention was drawn to the simple household devices around them. Questions that were asked helped students analyzing in detail the components, accessories, and principles of operations of the manual and electric machines.

In the discussions students realized that machines determine their inputs; for instance, a juicer can only take fruits and it cannot take nuts or seeds. Students also concluded that machines transform given input into only one corresponding output i.e. by squeezing lemon, lemon juice is produced, and grinding walnut results in ground walnut. These conclusions would be crucial in understanding and creating the knowledge related to functions. At the beginning of the action process the students were divided into two groups and they were given the instructions: to put together a performance about the juicing and grinding tranformation process.

One group chose to work with the juicer, the other with the grinder; so, one was the juicer team and the other the grinder team. Several items were placed on a table such as a manual grinder and juicer, various nuts, seeds, fruits (picture 1).

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Tools and supplies: grinder, juicer, fruits, seeds, nuts (picture 1.)

The teams chose the appropriate items according to their tasks. Students in the juicer team took the juicer and the fruits that could be squeezed, whereas the grinder team chose the grinder and nuts. They considered that poopy seeds should be left on the table since there was no corresponding machine.

They had to create a model of juicer and grinder using the accesories they could find in the classroom. They used tables, tablecloths, chairs, papers, glasses, boards, trays, in order to build up a device similar to the real „machine“ (juicer or grinder). As for the input and output they had the fruits and nuts and the corresponding tools so that they could prepare the output (juice and ground nut). During the compilation of the mini-play that showed the process of squeezing (or grinding) , the students collaborated not only in the process of designing the stage elements but also in asigning the roles: some of them were involved in interacting with the audience, others took on the role of helpers behind the scenes, as well as there were students who were responsible for sound effects such as machine noise.

In order to show which products their machine could produce, the students paired up and the corresponding fruits and liquids, that is how they explained which juice originated from which fruit. In other words, the inputs were placed on the righthand-side and the corresponding outputs to lefthand-side on the table, and the pairs were put one below the other. (see picture 2).

This way they got the concrete representation of the table representation of the function.

Concreate representation of a table (picture 2.)

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Some students' idea was to make posters for their performance, which would show the process. After discussion, the members of the group agreed that the most important fact about squeezing was that they got different-coloured juices, so they decided to draw the fruits and juices as they were arranged on the table. This way they got the table of the function where input and output were drawn. One member of the group considered that instead of drawing, it would be easier to write down the names of the fruits and corresponding juices.

That's how they spontaneously got the table representation of the function where the input and output elements were represented both in drawings and words. (see picture 3).

Visual representations of a table (picture 3.)

Both groups performed their plays to the students from the other group. (see picture 4).

Students roleplay (picture 4.)

Function machine which inputs are concreate representations of numbers

As a second intervention, in the next lesson, students used a do-it-yourself function machine made by researchers, for ther acti
vities. (see picture 5)

Function machine-from a machine operator perspective (picture 5.)

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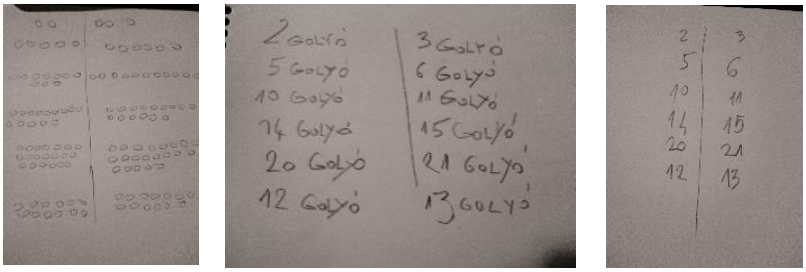
The machine worked on a principle that after inserting a certain number of balls into the input slot – according to the „working rule" of the machine – some balls fell out of the output slot. One student played the role of the machine (machine operator), so he or she was the one, who chose the rule according to which the machine would work. And standing behind the machine, he or she carried out the rule by adding or distracting the appropriate number of balls in third slot, that was hidden from the audience. (see picture 6).

Function machine-from an audience perspective (picture 6.)

In the interactive play, the first student who played the role of the machine chose the rule which was: to add one ball to the balls that were dropped in the input slot. When one of the members of the "audience" put two balls in the input slot, the student who played the role of the machine, inserted one more ball, so the audience saw three balls falling out from the exit slot. When the other member of the audience put five balls in the input slot, the machine "dropped out" six balls etc. In order to help the "audience" solve the task, which was to find out the principle of the operation of the machine, students were urged to make posters where they took notes about each transaction. Some students used visual representations (circles), some used descriptive way of notes (using numbers and words), and some student used numbers, as symbolic representations for balls. (see picture 7).



Representations (picture 7.)

After making the posters students were asked to show them. The student who played the role of the machine asked the audience to figure out the rule by which the machine worked. Students answered that the machine added one ball to the input balls.

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Then they were asked to point out which one among the posters was the simplest to describe what the machine did. They chose the one where numbers were used only. Then students were asked to copy the poster on the blackboard, and to write it more general, namely the description of the input elements. They added “szám” (number) bellow the last number in the first column, and “az adott számnál eggyel nagyobb szám” (the number that is one greater than the given number) bellow the last number of the output elements (see picture 9.).

Dependent and independent variable in the table (picture 9.)

They were also suggested to indicate the transformation in another way, since mathematics is universal language, and we could not use Hungarian words. They agreed, to used only the first letter, so they wrote “ sz” and “a” in the next row of the table. After we agreed, to use only one letters, so they put “s” and “a” in a next row. The next step towards generalization of the symbolic representation was that they figured out which letters would they use, if we translate the adequate words into different languages. They found out, that the letter “n” could stand for “s” if they use the adequate English word, namely number, and letter ‘t’ instead of “a”. They went further, so the put “z” (zahle), and “d” from adequate German words.

Next, they had to come up with an idea how they would interpret the working mechanism of the machine if they only saw this poster and had not ever seen the machine at all. After a short discussion they agreed that the imaginary machine added one to the input number and showed the output number, which was one more than the input number. In order, to emphasize what the imaginary machine did, one student added on the right-hand side of each output the notation of output which highlighted the adding of number one, so the third column was created. (see picture 10.)

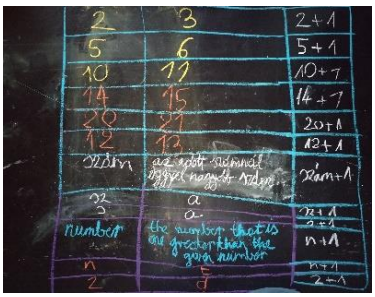

Table representation of the function y=x+1 (picture 10.)

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Then students, as they considered, that the second and the third column are equivalent, drew another table, were they by indicating this fact named the table. (see picture 11.)

On the next class several students played the role of the machine. Each figured out a different rule for the machine, in that way functions such as: y=x+1; y=2x; y=x+2; y=const., y=rand. were represented.

Than, children were given several table representations of some functions, like the examples from didactic book for teaching mathematics in lower grade of primary schools.[6] (picture 11) which they solved successfully.

I	III
II	IIII
III	
IIIII	
	IIIII
	IIIIII

s	a=s+1
5	
	10
32	
2	
	12

n	k=2*n
1	
3	
	8

(picture 11.)

Conclusion

In this study we sought the response for the question: could we by arranging the learning environment in a certain way help students to create symbolic representations of functions?

Researchers addressed students a non-standard approach to the introduction of functions, which meant that contrary to standard learning style in Hungarian schools – where students use only visual representations of function machines – here students first dealt with concrete representations instead of the visual ones. During the interventions it was proved that the diverse tools and environment can support the process of creating the notion of functions on their own.

In addition, when students were engaged in group activities like role-playing games, they had the chance to discuss and interact socially, which further enriched their understanding and contributed to the development of the function concept.

[6] Tiborné PETZ: *Függvények tanítása*. In: Eszter KÓNYA HERENDINÉ (ed.): *A matematika tanítása az also tagozaton,* Nemzedékek Tudása Tankönykiadó, Bp., 2013. 333–336.

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Tiborné PETZ: *Függvények tanítása,* In: Eszter KÓNYA HERENDINÉ (ed.): *A matematika tanítása az also tagozaton,* Nemzedékek Tudása Tankönykiadó, Bp., 2013. 333–336.

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Tamas VARGA: *A matematika tanítása*. Tankönykiadó, Bp., 1969.

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Absztrakt

A SZEREPJÁTÉKOKBAN REJLŐ LEHETŐSÉGEK, MELYEK SORÁN KONKRÉT ÉS VIZUÁLIS REPREZENTÁCIÓKAT HASZÁLUNK A FÜGGVÉNY FOGALMÁNAK TANÍTÁSÁRA

Ez a tanulmány bemutat egy kísérleti kutatást a függvény fogalmának tanításáról és tanulásáról egy nem hagyományos – Waldorf – iskolában. A hatodik osztályos diákok szerepjáték segítségével bővítették a függvény fogalmának elsajátításához szükséges tudásukat úgy, hogy használták a függvénygépek konkrét, és vizuális reprezentációit. A kutatók célja az ilyenfajta tanítás alkalmazásával az volt, hogy egy olyan gazdag tanulási környezet teremtsenek meg a tanulók számára, amely lehetővé teszi, hogy a diákok felfedezhessenek dolgokat és különböző tapasztalatokat szerezhessenek, és ezek segítségével megalkossák a lineáris függvények egyenleteit.

Kulcsszavak: matematika, függvények, konkrét reprezentációk, vizuális reprezentációk, szerepjáték

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Szabolcs Zalay

THE UNIVERSAL PEDAGOGICAL INDEX (UPI) INTRODUCTION OF CONCEPT AND METHODOLOGY

„Give me a fixed point,
and I will move the earth out of its place."
Archimedes

In my article, I undertake to present the dimensions and components of pedagogical culture in a complex system. Based on the basic hypotheses of my currently ongoing pedagogical research series, as well as the test results of the phases that have already been completed, as well as my practical, personal experiences, I am convinced that we have preserved the image of the completeness of the world in our common spiritual memory. A pedagogical situation or an independent entity (for example, a teacher, class, kindergarten activity, pedagogical organization, or system) can carry this image, depending on its quality, as a result of the interaction of the elements of the pedagogical culture. The number expressing the quality/extent of this can be called the Universal Pedagogical Index (UPI). Until now, this concept did not exist either globally or locally.

The UPI's trademarked logo (Fig. 1)

Archimedes' quoted famous sentence is about a basic geometric and physical theorem, while also conveying a philosophical message. Its topicality stems from the fact that, on the one hand, it is very difficult to find certain reference points in our world when we interpret everything relatively. On the other hand, it is perhaps even more difficult to dislodge humanity from its entrenched positions and habits. Yet the desire is stronger in us to find our security again, which we once had in an archaic time, when we still believed in gods, ideas, and the center of the world – so we have a need for a quality, orderly life. The world crisis is also a challenge for pedagogy. Grasping the nature of the crisis as precisely as possible can help to identify pedagogical tasks. The definition of the seven directions of the crisis can be imagined along a cross, with man in the middle. In all seven cases, our relationships show a rupture, which results in closure, „straitjacketing", and alienation. We have come into conflict with nature, society, history, the

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transcendent, our talents, our aspirations, that is, our goals, and even our own consciousness. Breakthrough points can also be grasped through these, or through a pedagogical cultural model that can grasp the relationship between man and the world in an organic system.

Several research and development projects deal with the objective measurement of the quality of pedagogical work.[1] There are promising initiatives to compare different pedagogical entities (sessions, lessons, teachers, organizations, educational systems, etc.). Pedagogical work is complex and multifaceted, so it is difficult to characterize its quality with a single indicator.[2] However, based on my research, I claim that we now have an increasingly accurate picture of the factors influencing pedagogical efficiency, and based on these, a complex indicator system can be developed that takes into account all important aspects of pedagogical work. For this, it is necessary to choose aspects that, in addition to professional knowledge, can grasp the pedagogical culture through its essential focuses and in its entirety. Pedagogical culture here means the quality of life in the learning environment, which each entity can create, create, create, and construct to a greater or lesser extent – depending on its knowledge, abilities, and aptitude. In order to see this in detail and together, we need a holistic, or even more universal, approach within the framework of defining a new pedagogical paradigm, which we can call the pedagogy of Homo Studens[3]

According to our concept, the „Homo Studens" uses the knowledge we have acquired so far about the world, but does not fetishize it. Just as you need the maximum development of your key competencies, without trading them against your knowledge. After all, we need both types of knowledge in order to surpass ourselves in a new synthesis, finding solutions to our countless problems indicated above. This pedagogic system of thought is being defined and outlined more and more precisely in our world at the moment, both locally and globally. And the stakes of the speed of the process only increased with the appearance of artificial intelligence, through which the Machine inevitably became a competitor to the Human who creates pedagogical entities. The need for relearning is thus no longer an issue, unless we want to make ourselves completely vulnerable to the ever-increasingly independent „creature"„ we have created.

It is therefore a strategic educational and educational goal to offer our students solutions to crisis situations, or more precisely, to make them capable of looking for viable alternatives. However, only those who seek and live life are capable of this. We must raise young people who are united and healthy in a physical, mental, and spiritual sense, becoming „well-rounded people", who represent the higher meaning of autonomy, i.e. they are able to exist freely, responsibly, and with a high degree of love on all three levels of the personality,

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[1] Ildikó BALÁZSI–Zsuzsanna HORVÁTH: *The quality and effectiveness of public education. In: Report on Hungarian public education.* 2010. http://www.ofi.hu/9-kozoktatas-minosege-es-eredmenyessege-balazsi-ildiko-horvath-zsuzsanna [2024.04.10.]

[2] Gábor HALÁSZ: *Effectiveness and quality of education*. In: Gábor HALÁSZ–Judit LANNERT: *Report on Hungarian public education*. OKI, Bp., 2000.

[3] Szabolcs ZALAY: *"Homo Studens" – The school of the student. Application for the position of director of the Klára Leőwey High School in Pécs*. 15.03.2021 Pécs Education District, Pécs. 2021. https://www.leoweypecs.hu/wp-content/uploads/2021/08/new.leoweypecs.hu-palyazat-dr.-zalay-szabolcs-2021.03.15..pdf. [11/01/2024]

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radiating from themselves happiness at the higher frequency of living human life towards all age groups of their fellow human beings. These people can „save the world" or represent the paradigm of a new world, in which the Light resides even in the midst of the „darkness" of today. This is how our students can become people of the age of „contemplation". This requires learning and teaching models that are capable of new „world creation".

Dimensions of pedagogical culture

Just as an artist creates a second world by creating his work, according to the description of aesthetic theories, the teacher does the same when „creating" a lesson or activity or „initiative". But this is also what a leader does when, for example, he operates the „world" of a pedagogical institution, or a system-creating researcher whose „method" turns from a pedagogical alternative into an alternative pedagogy, and can be implemented on a wider scale, even on a national level.[4]

It is worth mapping out the characteristics on the quality of which the functionality of such a „world" depends. In other words, we take into account the indicators that characterize the pedagogical culture of a particular pedagogical entity. According to our research results so far, not only the success of knowledge transfer depends on them, but the degree of „world-creating ability" influences the atmosphere of the entire pedagogical „universe", ultimately the well-being of the participants, which we know from modern „atmosphere" and „experience studies" is not a negligible factor at all.[5] And from the latest network research results, we also understood what we had guessed through holistic intuition until now, that the functional analogy of small units and large networks has been scientifically proven. Through network theory, which proves the scale independence of complex networks, we know that the same ordered laws govern cellular networks and organizational networks,[6] as we can also prove this during the examination of pedagogical entities.

The quality level of a teacher's professional knowledge/lesson (occupation), the organization of a school, the pedagogical system of a country is determined by the level of pedagogical culture, the quality of which can be measured by introducing the Universal Pedagogical Index (UPI) number. This number, which indicates the quality degree of the given entity on a scale of 100, can be calculated based on a special formula that corresponds to the calculation of the volume of the SPHERE. The principle explanation for this is that the above entities can all be understood as a closed system that can be well described with the help of the „sphere analogy", if every teacher, school and education system creates more and more closed worlds whose performance and effectiveness can be compared. The individual „spatial dimensions" show the degree of quality compared to the maximum standards of the „spherical radii". While the metrics of the „fourth dimension" determine the quality of the climate, i.e. the

[4] Mihály KOCSIS: *Training of trainees (self and further)*. Tárogató Publishing House, Bp., 1996.
[5] Szabolcs ZALAY: *Chances of a paradigm shift in the Hungarian public education system and Leőwey. In: Tradition and renewal. School history conference volume*. Pécs, 2017. 97., 111.
[6] Albert László BARABÁSI: *Hidden patterns. The language of network thinking*. BarabásiLab. ed. Alanna Stang; Open Books, Bp., 2021.

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atmosphere, according to the „time analogy". Its standard is adapted to the PI (irrational, transcendent) unit. The moderately increased weight of the „climate value" well expresses the importance of the quality of the pedagogical atmosphere compared to the other dimensions, which is now supported by the literature based on numerous researches.[7]

The 100 scale can be used in a variety of ways, depending on whether we are evaluating individuals, organizations, or systems. The term Universal Pedagogical Index has a very precisely delineated, defined meaning, the use value of which can be very significant, with a high degree of correlation results expected during an increasing number of comparisons with other evaluation data.

Pillars of teaching/educational knowledge

In the following, we will outline those aspects, focusing primarily on the „cell level", i.e. the elementary level of the pedagogical situation, on the lesson or session, in which all the defining elements are already present, which can also characterize an entire „organization" or „system". Based on practical experience, it can be confidently stated that the organization of the learning process is a multiple world-building exercise. They play a fundamental role in this as „pillars of knowledge", the components of the professional basic knowledge of the teacher. Such are the multi-level planning work – the mobilization of the teacher's personality – the ability to choose an adequate pedagogical philosophy – the differentiation of the world of values - the application of pedagogical psychology – the nuances of the image of the child and the quality of the tools and methods appropriate to the pedagogical situation, all of which are in accordance with the Hungarian qualification procedure. 9 competencies" system as well.

Supporting the steps of the learning/development process

The knowledge of supporting the learning process is already the second dimension of the pedagogical culture of the pedagogical entity. This includes entry, context building, narrative selection, inducing a change in understanding, deepening, reflecting and supporting exit. These are the phases of the process of pedagogical construction, in which the existing knowledge structure is retuned, in the language of modern neurobiology, „rewiring", which is the basis of all real learning.[8] The advantages of this conscious „world-building system" are primarily shown in the intensive motivational activity, with which the educator, the teacher, the school „stimulates" the child, the student in the session, in the lesson, and

[7] HATTIE, John: *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge, 2009. https://inspirasifoundation.org/wp-content/uploads/2020/05/John-Hattie-Visible-Learning-A-synthesis-of-over-800-meta-analyses-relating-to-achievement-2008.pdf [01.11.2024].; Krisztián SZĚLL: *School atmosphere and effectiveness: focus on resilient and vulnerable schools.* Belvedere Books. Belvedere Meridionale, Szeged, 2018.; Krisztina GASKÓ–Ida SŚCS: *The atmosphere of the school. In: From the practitioner to the professional development school.* EKKE Lyceum Publishers, Eger, 2021. 89–114.

[8] Szabolcs ZALAY*: The creative development of the world of the school.* In: András BUDA–Endre KISS (ed.): *Interdisciplinary pedagogy and changes in higher education*. VII. Árpád Kiss Memorial Conference Debrecen, Institute of Educational Sciences, University of Debrecen, Debrecen, 2001. 413–420.

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achieves a change in understanding, or conceptual shift in the language of constructivism.[9] However, „telling" is not enough for this, but neither is „action" in itself. It is important to implement the deductive process and the attitude of planning with continuous negotiations and redesigns.

The learning manifested in various changes takes place in the lessons of a teacher who consciously practices the principles of world-building by evaluating, understanding, analyzing situations and trying out variations, so his task is to create the structure of the world of situations, on the one hand, according to his plans, on the other hand, the session together with the participants, and during class. These are the first two dimensions of the „world-building" process of pedagogy.

The dimension of communication factors

With the presentation of the pillars and process of the pedagogical context, the structure of a session or lesson is apparently in front of us. In fact, we see the elements of a two-dimensional, „quasi-plane system" side by side. The change in understanding, the learning process at a deeper level, can only be grasped on the basis of a dynamic description of the communication of the pedagogical situation.

The essence of the working mechanism of the learning situation can be described primarily with further, more differentiated definitions of the context factors, which primarily represent the internal structure of pedagogical situations, the relationship of the components mentioned so far, their order within a lesson or session, and the models that carry the structure of different approaches to problems. The determinants of the pedagogical, „second" world are therefore situations. Making them aware and guiding them with questions and instructions is one of the teacher's main tasks, similarly to process management in drama pedagogy.[10] By exploring and understanding the situations, the artistic means of creating and releasing tension can be used during the session or within the class. Borrowing from the technical language of the theater, a situation is defined by seven important factors: space, time, actors, relationships, antecedents, intentions and present expressions.[11] Every true teacher knows that we have to take these factors into account in all kinds of pedagogical situations if we want to operate them successfully.

Space defines a situation in two aspects. The „big space" means the geographical orientation, which always plays into the pedagogical situation: country, city, village, etc. The „small space" is the clarification and management of the specific place: what the participants of the class do with the spatial elements available to them. Time also appears in both aspects. „Great time" means the historical determination of the pedagogical situation, which always frames our work, sometimes more directly, sometimes indirectly. While in „little time", the time of day appears: morning or evening, and the duration of the educational

[9] István NAHALKA: *How does knowledge develop in children?* National Textbook Publisher, Bp., 2002.
[10] NEELANDS, Jonathan: *Drama in the Service of Teaching*. Hungarian Society of Drama Pedagogy and the Marczibányi Square Cultural Center, Bp., 1994.
[11] László KAPOSI: *The teaching drama.* Manuscript pending publication. Bp., 2007.

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situation. Just as important is how much time is available to analyze each problem.

The actors can also be defined in several layers. Based on the classic three-level personality model, physical, mental and spiritual attributes and characteristics can be specified. The conditions offer another three possibilities for refining the communication conditions. Relationships between the participants must be continuously managed according to their subordination, and the quality of the relationship.

The antecedents represent the „past" of the pedagogical situation. The participants can think about this in the longer and shorter term and call up their prior knowledge. They can do the same with intentions, again in the longer and shorter term, which represent the „future" of the situation. Here, the main role is played by the goals, wills, and orientations that drive the communicators of the pedagogical situation. Last, but not least, the most obvious characteristics of communication determine the quality of the operation of the situation. These are the utterances that are the components of the „present" of the situation. This includes all kinds of expression, from movements, to words, to thoughts and feelings. It is clear from the above list that in the pedagogical situation these are the main components of consciousness with which the participants must work during the learning process.

Components of the atmosphere of the pedagogical world

In the past period, the volume of pedagogical „climate research" has increased significantly. Not by chance. This can be the least tangible, yet distinguished characteristic of a pedagogical situation, on which the success of the other components stands or falls. In other words, an important component of a teacher's pedagogical culture is what kind of atmosphere he creates in his sessions and classes, how much he motivates different children and students, is he able to resolve tensions, does he have a sense of humor? How well can you create an atmosphere in which learning is an experience, even if it requires hard work? This dimension can be described as the „time factor" of the pedagogic world, which quickly flies away if we can experience the experience of trust, motivation, „celebrate" our uniqueness, at the same time our unity with the community and our world, the joy of the differentiation and complexity of knowledge acquisition, the real joy of life, high-level flow.[12] „World experience" is the student's most important motivational base. Without this, all learning is „unworldly". If, on the other hand, it is possible to create a good climate, it may happen that through the conscious planning and management of the classroom situation, the participants can have a real „world experience" in the learning process, because behind the revealed „research topics", „learning areas", and analyzed problems, an orderly world image may unfold.

[12] Mihály CSÍKSZENTMIHÁLYI: *Flow – the psychology of the perfect experience.* Academic Publishing House, Bp., 2001.

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From the cellular level, through organisms, to systems

The UPI model described above captures indicators suitable for measuring and developing the quality of universal pedagogical culture in a given entity. Through the above-mentioned evaluation procedures, we want to put the observation of many agents of education and education on a broader basis and to plan their coordinated development, surpassing not only the previous usages of terms, creating a common language between the old and new workers in the system, but we also want to achieve a breakthrough in the „Homo Studens paradigm" in order to significantly improve the viability and effectiveness of the system.

In the emerging synthesizing paradigm, on the one hand, the transmission of values and the acquisition of knowledge that represents the foundations of literacy, on the other hand, the acquisition of competences that provide orientation and useful abilities in the present world, and, on the third hand, access to the level of knowledge necessary for the visible future, rising to higher registers and carrying deeper contents, are equally important. Thus, in this approach, *the concept of pedagogical culture means the quality of life in the learning environment*, arising from the complex intelligence of the teacher(s), at the „cell level" (in lessons, sessions), at the organizational level (in schools, kindergartens, universities), in the entire system (nationally) and globally. Deviating from this use of meaning, both Bruner's concept[13] of „spontaneous and intentional socialization" – which is too general and emphasizes the sociological aspect of development, and József Nagy's concept of „criteria-oriented development assistance"[14] – which is too specific and emphasizes the psychological side of development, we introduce an archaic-based (meaningful principle) yet modern concept, connecting the meaning with the central importance of the concept of learning at the origin of multidisciplinary scientific approaches.

Starting from the original meaning of the word culture (agriculture-cultivation of the land), which from the beginning shows a close connection with the nature of pedagogical work (helping change in understanding), we arrive at the concept of „Cultivation" adaptively appropriate to the age of the globalizing world, when Kant's „enlightenment-concept", the stake for pedagogy is whether it can promote „the recovery of humanity from adolescence" to adult, autonomous existence. In other words, the vital question of pedagogical culture is whether it can support the saving of Life on Earth, or rather hinder it, thereby strengthening the „Civilization of Death", not only in terms of content, but also in terms of form? Therefore, an important question is what is the quality of the representation of the Life Principle in each pedagogical situation, and how well do we manage to fulfill our original, gendered task while creating and supporting the learning process?

Educational science must keep up with the modern scientific revolution if it really wants to contribute to the global search for solutions. In pedagogical situations, all important dimensions of pedagogical culture appear, whether we are examining classroom aspects, institutional organizational development, or the level of the system as a whole. If the teacher(s), the school management, the

[13] BRUNER, Jerome: *The Culture of Education*. Gondolat Publishing House, Bp., 2004.
[14] József NAGY: *New pedagogical culture*. Mozaik Publishing House, Szeged, 2010.

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managers of the education system have the ability to operate these dimensions at a high level, then there is a chance in the given pedagogical environment for adequate reactions to the current challenges of the era, as well as the management and interpretation of global problems, both in terms of finding appropriate communication tools for different age groups.

Research directions

In order to make the Universal Pedagogical Index a truly „universal" measurement and development tool, we have to meet a number of challenges. We must conduct reliable scientific research background checks. We need to make the tool widely known and recognized, thereby improving the prestige of the profession, not only at the image level, but also by promoting a real, significant change in attitude.

The UPI, measured on a scale of 100, can be used in a variety of ways, depending on whether we are evaluating individuals, lessons, organizations, alternative methods, learning organizations, national systems or even „people learning". In order to use the scale effectively, it must be taken into account whether the test is made for diagnostic, comparative or evaluative purposes. The purpose of the study determines the interpretation of individual points of the scale and the weighting system. According to the 28 criteria, the weighting system may vary depending on the purpose and context of the study. The exact adjustment of the weighting system takes place in the framework of observational tests and computer simulation tests.

– The main research questions of the simulation study are the following:
Does the simulation reflect the real conditions of the learning unit?
– What tools and resources will the participants use?
– Who will participate in the simulation? (E.g. students, teachers, experts)
– Do the participants represent the target group?
– Does the scenario of the simulation reflect the content and objectives of the learning unit?
– How will the performance of the participants be evaluated?
– What artificial intelligence tools can be used to automatically measure indicators of pedagogical culture?
– How can AI be used to analyze simulation results and optimize weights?
– What data do we collect during the simulation?
– How do we analyze the data to weight the indicators of pedagogical culture?
– What do the simulation results show about the effectiveness of the learning unit?
– How can the simulation results be used to improve the learning unit?
– How can analyses of the mood and emotional content of teacher-student interactions be interpreted?
– On the basis of which network analysis aspects can the analysis of interactions and cooperation patterns between students be included in the further research?

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According to our expectations, with the help of the simulation study, we will have a research database with a number of elements that far exceeds the number that defines the validity ranges of traditional pedagogical studies, and in the end we will be able to gain a much deeper and more differentiated insight into the determining factors of the effectiveness of learning units, levels, systems, and the characteristics of the pedagogical culture. in connection.

Pedagogical paradigm shift

From the high-level operation of world-building knowledge and from the clear management structure, we can rightly expect a significant qualitative development of the entire educational process, both in the field of organizational culture and in the well-being of the participants. A strategic pedagogical goal, in the midst of the crisis conditions of our time, the transparent value and goal system, the structural development program based on world-building knowledge, which can be followed in each pedagogical environment. This is how we can only offer solutions to our students, teachers, schools, or more precisely, how we can make them capable of looking for viable alternatives in the entire system.

A „good school" also presupposes a „healthy pedagogical world", thinking in complex networks and systems, education for advanced emotional intelligence in addition to high-level knowledge development and encouragement for regular exercise, nurturing social sensitivity. Complex personality and school development must move in the direction that the participants in pedagogical situations, in the „well-operated world of dimensions", can explain the phenomena and processes that often appear unexpectedly nowadays, and sometimes seem paradoxical. In addition to machine learning, live encounters are highlighted have a role in the life of organizations.[15]

For the personalities studying and developing in such „worlds", the positive shaping and care of their own physical and psychological health, as well as their narrower and wider environment, appears as a value.[16] In healthy „pedagogical worlds" built on archaic principles, students and teachers must think systematically, their range of concepts must continuously expand and synthesize, using their previous knowledge to be sure of the processes taking place on Earth, both in space and time. In one of his last studies, József Nagy formulates the historical role of pedagogy in a very interesting way: „The most important condition/ explanation is that the members of the new group society separated by the division learned everything that was necessary for their survival and the creation of new groups thanks to their pedagogical culture."[17] Today, we face a very similar task in ultramodern space-time. That is why I consider it important, in the above spirit and manner, to continue the in-depth research of pedagogical culture, harmonizing practice and theory, modernity and mobilizing the power of tradition.

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[15] Szabolcs ZALAY: *Chances of a paradigm shift in the Hungarian public education system and Leőwey*. In: *Tradition and renewal. School history conference volume*. Pécs, 2017. 97–111.

[16] Krisztina D. NAGY: *The possibilities of interpreting and modeling school well-being*. Hungarian Pedagogy, 2020/2. 123–148.

[17] József NAGY: *Renewing pedagogy*. http://www.staff.u-szeged.hu/~nagyjozs/pdf/2020_Megujulo_pedagogia.pdf [11.04.2023]

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Currently, based on the above model, the pedagogical and cultural components and level of each school have already been analyzed, and the correlation of the model with effectiveness is also being investigated. If we want to apply the examination of the above indicators of pedagogical culture on a national or global, systemic level, then we must look for the appearance of the same defining categories at a higher level. This research process has also begun. We try to capture the quality of the entire pedagogical system as a value mediator, the quality of the change in understanding, i.e. the degree of changes in the development of the participants, the quality of communication that serves to increase social esteem and prestige, and the general level of the school climate, atmosphere, flow and the mutual interaction of all these. in the research process, which also requires a serious IT background. After all, a serious problem is caused by the time limit of the scientific background and results of examination of system-level pedagogical interventions (reforms). By the time an investigation is completed or the results of a reform are published, we are already trying to implement another idea, a mechanism that does not serve the need for well-founded crisis management. With a „supercomputer" and the new possibilities provided by artificial intelligence, it is assumed that the conduct of research can be accelerated, in addition to the installation of appropriate security mechanisms, the results of which can have significant buoyancy in our field and can promote the success of a scientifically supported, broader spectrum, paradigm shift based on public consensus. against a mechanized civilizational process through the development of pedagogical culture with the help of the Machine.

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Absztrakt

AZ EGYETEMES (UNIVERZÁLIS) PEDAGÓGIAI INDEX FOGALMÁNAK ÉS MÓDSZERTANÁNAK BEVEZETÉSE (UPI)

Az Egyetemes Pedagógiai Index (UPI) fogalma eddig nem létezett sem nemzetközi, sem helyi használatban. Tanulmányomban egy új mérőszámként kezelem ezt, amelyet a pedagógiai kultúra összetevőiből generált képlet segítségével számolunk ki. Mértéke jelzést ad a pedagógiai entitások „életminőségéről", új aspektusba helyezve ezzel egy-egy pedagógiai szituáció értékelését, egyúttal kijelölve a lehetséges fejlesztési irányokat is. Az Univerzális Pedagógiai Index bevezetése számos előnnyel jár, rávilágít a pedagógiai kultúra jelentőségére, megmutatja annak dimenzióit, indikátorait, változóit, objektívebb és összehasonlíthatóbb értékelést tesz lehetővé a pedagógiai munkáról. Támogatja a pedagógusok szakmai fejlődését és a pedagógiai munka minőségének javítását. Hozzájárul a hatékonyabb oktatásirányítási döntések meghozatalához.

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Ljubac Mec, Danijela–Zlatarević, Vesna

IZAZOVI U SUVREMENOM OBRAZOVANJU

Uvod

Obrazovanje je temelj sigurnog, organiziranog, dostižnog i održivog društva u svijetu. Međutim, kako bi služilo ovoj ulozi podrške i osnaživanja u modernom društvu, treba ga ispravno razumjeti i provoditi. Jedan od izazova obrazovanja je i moderno društvo. To je 'društvo' suočeno i oblikovano današnjim razvojem u svim različitim sektorima ljudskog postojanja na lokalnoj, nacionalnoj i međunarodnoj razini. Stoga je u biti 'moderno društvo' svako postojeće društvo u promjeni. Ovi današnji razvoji odnose se, na primjer, na trendove u demografiji, gospodarstvu, politici, jeziku i komunikaciji, znanosti i tehnologiji i filozofijama koji imaju odlučujući utjecaj na određenu zajednicu – malu ili veliku. Trendovi su poznati dugi niz godina, ali se ostvaruju jedinstveno u različitim „modernim društvima". Na primjer, Wolhuter dao je pretpostavku o vjerojatnim društvenim trendovima ili tendencijama koje će se manifestirati u 21. stoljeću.[1] Obrazovanje i moderno društvo su međusobno ovisni. Nacionalna društva očekuju od svojih odgovarajućih obrazovnih sustava da pruže obrazovanje koje će podržati održavanje i razvoj jedinstvenih i cijenjenih obilježja društava da svojim članovima pruže primjenjive obrazovne mogućnosti za učinkovito funkcioniranje u društvu i međunarodnom svijetu. Obrazovni sustav treba svojim stručnim kompetencijama organizirati i jačati sastavnice i elemente tog sustava na način da se potrebe obrazovanja mogu kontinuirano zadovoljavati, a istovremeno učinkovito brinuti o stalno promjenjivim tendencijama i kratkoročnim promjenama. Društvo će očekivati da obrazovanje pojedinim učenicima pruži diferencirane obrazovne mogućnosti za njegovanje i razvoj sadašnjih značajki određene zajednice u kontekstu nagađanja vjerojatnih društvenih trendova na lokalnoj, nacionalnoj i međunarodnoj razini. Kroz ove obrazovne mogućnosti učenici će steći bitne kompetencije za podršku i održavanje dobrobiti sigurnog i zdravog društva. Učenici će, kao pojedinci koji se samoostvaruju, očekivati da će obrazovanje pružiti dovoljno diferenciranih obrazovnih prilika kako bi se svakom učeniku omogućilo da se osposobi za zadovoljavajući život, integriran i usklađen s ostalim pojedincima i organizacijama na nacionalnoj i međunarodnoj razini.[2] Obrazovanje i obrazovni sustav trebaju imati viziju koja će zadovoljiti obrazovne potrebe određenog društva kojemu je namijenjena. Da bi se postigla takva učinkovita obrazovna ponuda koja podržava održivi razvoj modernog društva koje karakteriziraju stalne brze promjene, važno je razmotriti sljedećih nekoliko elemenata:

[1] STEYN, H. J.–WOLHUTER, C. C. (Eds.): *Education systems: challenges of the 21st century*. Potchefstroom: Keurkopié, 2008. 13.
[2] STEYN, H. J.–WOLHUTER, C. C. (Eds.): *The education system: a comparative education perspective*. Potchefstroom: Keurkopié, 2014. 98–100.

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– trebalo bi koristiti odgovarajuću definiciju obrazovanja;
– razumjeti strukturu i funkcioniranje obrazovnog sustava;
– identificirati različite vrste obrazovnih sustava;
– vanjske i unutarnje kontekstualne tendencije treba ispravno obraditi;
– organizirati obrazovne potrebe različitih skupina zainteresiranih za obrazovanje;
– potrebna infrastruktura za ispunjavanje obrazovnih potreba treba biti dobro osmišljena;
– treba odlučiti o potrebi pružanja dodatnih obrazovnih programa i Projekata.[3]

Osim toga, kako bi se osigurao održiv odnos između obrazovanja i društva treba koristiti jednostavnu i razumljivu definiciju obrazovnog sustava. U tom kontekstu, obrazovni sustav može se definirati kao okvir za učinkovite obrazovne mogućnosti za zadovoljavanje obrazovnih potreba članova i organizacija u ciljnoj skupini ili društvu gdje se planirane nastavne aktivnosti su organizirane u svrhu podupiranja pojedinačnih učenika kako bi stekli međusobno dogovorene kompetencije (znanja, vještina i stavova te kako bi mogli obavljati svoje različite uloge u životu.[4] Planirane nastavne aktivnosti uključuju tipične elemente poučavanja kao što su ciljevi poučavanja, nastavne strategije i metode, sadržaj, ocjenjivanje. Smatra se da nastavnik treba 'podržati' učenike da uče ili da sami steknu dogovorene kompetencije. Međus-obno dogovorene kompetencije uključuju integriranu kombinaciju znanja, vještina i stavova, što uključuje komunikacijske, numeričke, socijalne, ekonomsko-financijske, znanstvene, tehnološke, fizičke, ekološke i filozofske kompetencije. Ove kompetencije su međusobno dogovorene kao prihvatljivi, cijenjeni i ostvarivi ishodi obrazovanja. Učenici bi trebali moći primijeniti ove kompetencije kako bi mogli obavljati svoje različite uloge u životu. Učenici trebaju funkcionirati kao samoaktualizirajuće osobe, kao članovi obitelji, svojim profesionalnim uključivanjem, kao aktivni građani i članovi organizacija zajednice koje pridonose dobrobiti zajednice.[5] Okvir obrazovnog sustava sastoji se od nekoliko komponenti: politike obrazovnog sustava, administracije obrazovnog sustava i obrazovnih potpornih službi, koje funkcioniraju na integrirani način kako bi se zadovoljile raznolike i jedinstvene obrazovne potrebe ciljne skupine ili nacionalnog društva. Između ciljne skupine i obrazovnog sustava postoji recipročan odnos. Ciljnu skupinu nacionalnog obrazovnog sustava čini nacionalna zajednica pojedine zemlje. Glavna svrha obrazovnog sustava je zadovoljiti obrazovne potrebe ciljne skupine. Isto tako, treba uzeti u obzir i određivanje tipa obrazovnog sustava koji može biti ovisan ili neovisan. Priroda odnosa između obrazovnog sustava i njegove ciljne skupine određuje vrstu obrazovnog sustava o kojem se radi. U slučaju ovisnog obrazovnog sustava, uspostavlja se određeno društvo, posebno kako bi zadovoljilo svoje obrazovne potrebe. U ovom slučaju, predmetni

[3] STEYN, H.–VOS, D.–BEER, Louw de: *Education in Modern Society*; BCES Conference Books, Volume 16. Sofia: Bulgarian Comparative Education Society, 2018. 13.
[4] STEYN, H. J.–WOLHUTER, C. C.–VOS, D.–De BEER, Z. L.: *South African education system: core characteristics in focus*. Potchefstroom: Keurkopié, 2017. 12. (U nastavku STEYN–WOLHUTER–VOS–De BEER, 2017.)
[5] STEYN–WOLHUTER–VOS–De BEER, 2017. 161–182.

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obrazovni sustav dužan je primijeniti svoje profesionalne sposobnosti za analizu i integraciju obrazovnih potreba koje se stalno mijenjaju i sastaviti potrebnu infrastrukturu da zadovolji te potrebe. Svi nacionalni obrazovni sustavi spadaju u ovu kategoriju. U slučaju neovisnih ili privatnih obrazovnih sustava, sami si biraju svoje pojedinačne ciljne skupine i osiguravaju sve ili dio obrazovnih potreba identificiranih ciljnih skupina.[6]

Prema članku 65. Ustava Republike Hrvatske, obrazovanje je u Republici Hrvatskoj svakomu dostupno, pod jednakim uvjetima, u skladu sa sposobnostima te besplatno, u skladu sa Zakonom o odgoju i obrazovanju u osnovnoj i srednjoj školi.

Izazovi u suveremenom obrazovanju

Šetić upozorava da dinamične promjene u našem društvu impliciraju promjene u obrazovanju,[7] a organizacija Unesco (2022) ističe da suvremeno vrijeme zahtjeva hitnu i veliku transformaciju u obrazovanju kako bi se utjecalo na povećanje sposobnosti djelovanja na održiviju budućnost. Današnje su društvo zaokupili globalizacijski procesi koje za sobom vuku brojne izazove pri čemu su sve izraženiji problemi sustava školstva i nastojanja da se na njih primjereno odgovori. Diane Whitehead) ističe da se napredak obrazovanja može potaknuti ukoliko obrazovni sustavi omoguće pristup kvalitetnim i pravednim obrazovnim mogućnostima kako bi svi učenici mogli ostvariti svoj puni potencijal.[8] Posebno se pri tome ističu pitanja o okolišu, gospodarskoj krizi, globalnoj pandemiji te važnosti fleksibilnosti obrazovnog sustava.

Veliki je broj izazova suvremenoga obrazovanja, a oni koji se osobito ističu i utječu na sustav su: financiranje, depopulacija, starenje stanovništva, promjene na tržištu rada i gospodarstva, kultura škole, sustav vrednovanja, razvoj novih tehnologija, opremljenost, vrijednosti društva, položaj učitelja, rezultati međunarodnih procjena znanja i drugi.

Nedovoljno financiranje jedan je od najvećih izazova u obrazovanju. To je onaj izazov koji dovodi do niza drugih problema u funkcioniranju. U Republici Hrvatskoj javne se potrebe u osnovnom i srednjem školstvu utvrđuju na temelju državnog pedagoškog standarda koji donosi Hrvatski sabor, na prijedlog Vlade Republike Hrvatske. Pri tome se financijska sredstva osiguravaju za materijalno poslovanje osnovnih škola, tekuće i investicijsko održavanje te adaptaciju i sanaciju osnovnoškolskih građevina kroz decentralizirana sredstava. Problem nastaje u tome što je razvoj obrazovanja brži od porasta potrebnih financijskih sredstava pri čemu je ključan gospodarsko-politički sustav zemlje te koncepcija financiranja javnih rashoda. Svjesni loše financijske situacije u obrazovnom sustavu Republike Hrvatske, osnovnoškolske institucije samostalno pokušavaju naći izvore financiranja neovisne od osnivača ili Vlade (sponzorstva, donacije, dotacije, otvaranje tržišnih odnosa i dr.).

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[6] WOLHUTER, C. C.–JACOBS, L.–STEYN, H. J. (Eds.): *Thinking about education systems*. Potchefstroom: Keurkopié, 2015. 37.

[7] ŠETIĆ, Nevio: *Izazovi suvremenog obrazovanja i hrvatski nacionalni kurikul*. Hrvatska revija 1, 2018.

[8] WHITEHEAD, Diane: *Leading Innovation in Education*. Pristupljeno 20 ožujka, 2024. 66–70.

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Značajna financijska sredstva osnovne škole osiguravaju iz europskih fondova i time doprinose kvalitetnim sadržajima, unaprjeđuju kvalitetu rada i stvaraju poticajnu okolinu.

Razmišljajući o digitalizaciji, neizostavno je istaknuti važnost digitalne transformacije i kao_katalizatora za inkluzivne inovacije.[9] Svako suvremeno društvo obilježeno je tehnološkim razvojem. Tehnološki se napredak ogleda u svakom području života, pa tako i u odgoju i obrazovanju. Prvenstveno se to očituje u potrebi osposobljavanja učitelja za obrazovnu upotrebu informacijsko-komunikacijske tehnologije, potom osposobljavanju učenika, prilagodbi nastavnih materijala, upotrebi računalnih programa, interneta i multimedijskih izvora. Naravno, ključ svega navedenoga stoji u odgovarajućem opremanju škola računalnom tehnologijom, iako je u razvijenijim zemljama ulaganje u ljudske resurse podjednako ulaganju u opremu.

Centar za digitalna obećanja za inovacije kombinira povjerenje unutar edukatora, istraživača, lokalne i regionalne obrazovne zajednice, uključujući pritom studente, roditelje i neprofitne organizacije sa sposobnošću istraživanja, razvijanja i pronalaženja kvalitetnih rješenja putem metoda koje su prihvatljive i usmjerene na razvoj kapitala.

Razvoj gospodarstva jedan je od najvećih izazova suvremenog obrazovanja. Hrvatska udruga poslodavaca apelira na razvijanje konkurentnih obrazovnih programa kako bi se došlo do kvalitetnog visokog obrazovanja i gospodarskog napretka, ističući pritom da bi ljudski kapital trebao biti značajniji od prirodnih resursa ili financijskog kapitala jer je osnovni potencijal za razvoj gospodarstva što implicira kvalitetniji život stanovništva. Utjecaj najjačih gospodarskih sila je velik i domaće je gospodarstvo izloženo toj konkurenciji, stoga je potrebno uvesti strateške promjene u odgoju, obrazovanju, znanosti i tehnologiji u smislu prilagodbe obrazovnih programa potrebama razvoja hrvatskog društva i gospodarstva. Sukladno navedenomu, u Republici Hrvatskoj nužan je razvoj gospodarske politike.

Da bi se napredovalo u primjerenom razvoju obrazovnog sustava potrebno je zadovoljiti sljedeće:

– demografske preduvjete
– političke preduvjete
– gospodarsko – financijske preduvjete
– kadrovske preduvjete
– tehničko-informatičke preduvjete
– pedagoško-didaktičke preduvjete

Kulura škole kao izazov u suvremenom obrazovanju

Jedan od izazova današnjeg odgojno obrazovnog sustava je svakako i kultura škole. Pojam „školska kultura“ definiran kao „kvaliteta i karakter života temeljen na iskustvenim modelima akademske zajednice“.[10] Ona što karakterizira

[9] SMITH, Kimberly–YOUNG, Viki M.: *How Unlocking the Power of R&D Through Inclusive Innovation Can Transform Education*. Digital Promise, Center for Inclusive Innovation, 2024. 3.
[10] TUS, Jhoselle: *An assesment of the school culture and its impact on the academic performance of the students*. International Journal of All Research Writings, 2020/11. 11.

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kulturu škole je široka raznolikost ponašanja i aktivnosti koje demonstrira svaki pojedini učenik. Osim toga, Escalona smatra da kultura nije nepromjenjiva niti podložna promjenama. Osim toga,[11] Peterson i Deal opisuju školsku kulturu kao način na koji nastavnici i osoblje surađuju kako bi postigli cilj i unaprijedili viziju škole.[12] Atmosfera i kultura koja pogoduje učenju korisna je za učenje učenika te može imati pozitivan učinak na akademska postignuća učenika Školska kultura se odnosi na podupiranje percepcije,[13] odnose, stavove te pisana i verbalna pravila koja pomažu profesionalnom zadovoljstvu, moralu i učinkovitosti, kao i uspjehu učenika.[14] Istraživanja pokazuju da je visoka razina učeničkih postignuća značajno povezana s trudom i pozitivnim stavom nastavnika, učinkovitim izvršavanjem zadataka koji su zadani te povećanom željom učenika za učenjem. Harper navodi kako su učenici pod najvećim utjecajem školske kulture.[15] Pozitivna školska kultura jedan je od elemenata u kojem napori i nastavnika i učenika, svih koji su uključeni u nastavni proces rezultiraju korisnim iskustvima. Ona utjelovljuje standarde, tradiciju i očekivanja institucije.[16] Učenici su najviše pod utjecajem školske kulture i najodgovorniji su za njezino provođenje na najnižoj razini.[17] Pozitivna školska kultura je pozicija u kojoj se napori prenose u pozitivna iskustva za osoblje i učenike. Uspjeh i ispunjenje glavna su obilježja pozitivne školske kulture. Kada škola ima pozitivnu kulturu, učitelji su oduševljeni radom jer vide širu sliku, a učenici su u funkcionalnoj sposobnosti, mentalno i emocionalno, da uče.[18] Brojna istraživanja su provedena kako bi se istražio uzročno-posljedični odnos koji postoji između školske kulture i niza čimbenika, uključujući, izvedbu, postignuća učenika, psihološke potrebe i ulogu koju školski voditelji igraju u školskom okruženju. U školama je jako važno da se stavi snažan naglasak na kulturu škole kako bi se poboljšala školska uspješnost.[19] U istraživanju pod nazivom „Školska klima, angažman učenika i akademski uspjeh“ Konolda i sur.,[20] istraživači su pokazali da je autoritativna školska klima povezana s akademskim uspjehom u

[11] ESCALONA, D.: *Your voice: Culture is not static and unchanging, let's celebrate that*. 2018. http://www.chicagotribune.com

[12] PETERSON, Elizabeth R.–RAYNER, Stephen G.–ARMSTRONG, Steven J.: *Researching the psychology of cognitive style and learning style: Is there really a future? Learning and Individual Differences*. Journal of Educational Psychology; 2009/4. 518–523.

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[14] LOGAN, Carissa: *School Culture: A Place Where Every Child Is a Leader*. 2019. https://www.leaderinme.org/blog/leader-school-culture/

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srednjoj školi. Utjecaj ravnatelja, nastavnika i drugog osoblja ima značajan učinak na to kako će učenici biti uspješni.

Izazovi za uspostavljanje pozitivne školske kulture:

1. Tehnologija. Digitalizacija u obrazovnom sustavu je u skladu s trenutnim tehnološkim razvojem i naširoko se prakticira od implementacije online učenja koje nastupilo uslijed COVID pandemije. Nakon što sastanci licem u lice više nisu prioritet, svako planiranje proces, radna uputa, rasprava, donošenje odluka te, radni sastanci počelo se odvijati putem različitih online platformi. Aspekti komunikacije uz korištenje različitih medija kao što su pametni telefoni, korištenje kanala društvenih medija i digitalnih platformi kao što su Google Meet, Zoom i Teams postali su vrlo važan medij u povezivanju organizacijskih administracija s razinom implementacije.[21]

2. Vještine i znanja u razvoju kontinuiranog profesionalizma nastavnika integracijom metode korištenja digitalnih platformi u različite obrazovne svrhe. Smatra se kako je kreativniji i inovativniji pristup bitan u suočavanju s takvom krizom kako bi se formiralo održivije i cjelovitije rješenje.[22] Svaki nastavnik dužan je osigurati materijale za učenje i poboljšati ih online korištenjem različitih postojećih aplikacija za učenje kao što je korištenje Google učionice kao jednog od medija za učenje na mreži.[23]

3. Integritet za koji su odgovorni lideri u uključivanju vrijednosti nastavnika kako bi se oni i dalje pridržavali ključnih vrijednosti koje su temeljne za organizaciju. Mogu se implementirati različiti programi usredotočujući se na osnovne vrijednosti u organizacijama kao što su izvrsnost u karijeri, razvoj održivosti i povećani integritet, uključujući duhovne vrijednosti koje mogu ojačati čiste vrijednosti u službi.[24] Ovi programi pomažu ravnateljima poboljšati učinkovitost škole i pomažu učiteljima da ostanu svjesni trenutnih potreba i potreba politike**.** Poštivanje vrijednosti i integriteta organizacije od strane nastavnika pomaže pozitivnoj školskoj klimi.

Suvremene nastavne metode – prioritetni smjer razvoja obrazovanja

Obrazovanje je važan čimbenik razvoja svakog društva i ima presudnu ulogu u oblikovanju budućnosti pojedinaca i zajednica. Obrazovanje je značajno evoluiralo, a tradicionalne metode zamijenjene su suvremenim metodama poučavanja koje su djelotvornije, učinkovitije i prilagodljivije. U posljednje vrijeme

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raste zabrinutost oko kvalitete obrazovanja u raznim dijelovima svijeta. Kao takva, postoji potreba za usvajanjem suvremenih metoda poučavanja koje su u skladu s aktualnim trendovima i mogu zadovoljiti različite potrebe učenja učenika. Tijekom godina obrazovanje je značajno evoluiralo, a tradicionalne metode zamijenjene su suvremenim metodama poučavanja koje su djelotvornije, učinkovitije i prilagodljivije. Tradicionalne nastavne metode podučavanja pokazale su se neučinkovitima u zadovoljavanju potreba učenika 21. stoljeća, koji je izložen širokom rasponu tehnoloških dostignuća. Napredak tehnologije doveo je do pojave raznih nastavnih tehnika koje su revolucionirale obrazovni sustav i unaprijedile i suvremene nastavne metode koje imaju bitnu ulogu u razvoju obrazovanja. Istraživanja su pokazala ograničenja tradicionalnih metoda poučavanja te su ukazala na nedostatnost istih za ispunjavanje zahtjeva današnjih učenika. Smatra se kako su suvremene metode poučavanja kao što su gamifikacija, projektno učenje i personalizirano učenje učinkovitiji u jačanju angažmana učenika, motivacije i ishoda učenja. Isto tako, smatra se da je uključivanje suvremenih metoda poučavanja u obrazovnu praksu neophodno za kontinuirano unaprjeđenje obrazovnih sustava i pripremu učenika za izazove 21. stoljeća. Pri tome se ističe značaj izobrazbe i stručnog usavršavanja nastavnika u uspješnoj primjeni suvremenih metoda poučavanja. Suvremene metode podučavanja neophodne su kako bi se osiguralo relevantno i učinkovito obrazovanje. Razvoj suvremenih nastavnih metoda prioritetno je usmjerenje za razvoj obrazovanja. Istraživanja su pokazala da moderne nastavne metode imaju potencijal poboljšanja ishoda učenja i povećanja angažmana učenika. Međutim, uspješna provedba zahtijeva odgovarajuću obuku, resurse i podršku za nastavnike i učenike. Interaktivne metode podrazumijevaju metode koje aktiviraju učenika i potiču ga na samostalno razmišljanje, a učenik je u središtu obrazovnog procesa. Teorijski temelj suvremenih metoda poučavanja su pedagoške teorije i koncepti koji se usredotočuju na poticanje sudjelovanja učenika u procesu učenja. Imaju utjecaj na razvoj kreativnog mišljenja i neovisnost učenika korištenjem novih informacijskih i komunikacijskih tehnologija. Osim toga, važnu ulogu igra i socio-psihološki pristup koji se temelji na razumijevanju individualnih potreba i interesa. Pri odabiru nastavnih metoda važno je uzeti u obzir interakciju učenika i nastavnika, kao i komunikacija među učenicima, koji su važni za formiranje kolektiva i kreativne atmosfere u učionici.

Istraživanja su pokazala da postoje sljedeće suvremene obrazovne metode:

1. Aktivno učenje: učenici aktivno sudjeluju u procesu učenja, rješavaju probleme, raspravljaju materijale i rad u skupinama.
2. Učenje na daljinu: korištenje tehnologije za učenje, kao što su online tečajevi, videopredavanja i webinare.
3. Učenje temeljeno na projektima: Učenici rade na stvarnim projektima, rješavaju probleme i primjenjuju ono što su naučili u praksi.
4. Interaktivno učenje: metoda koja uključuje korištenje interaktivnih ploča, virtualne stvarnosti tehnologije i drugih suvremenih alata za učenje odnosno korištenje interaktivnih tehnologija i igara kako bi učenje bilo zabavno i učinkovito.
5. Povratne informacije i samoprocjena: Učenici dobivaju povratne informacije o svom radu i uče se samoocjenjivati svoj napredak.

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6. Personalizacija učenja: učitelji prilagođavaju proces učenja potrebama svakog učenika, pružajući dodatne materijale i individualnu podršku.
7. Učenje temeljeno na problemima (PBL): učenici rješavaju stvarne probleme radom u grupama i dijeljenjem znanja i iskustava.
8. Interaktivno učenje: korištenje interaktivnih tehnologija kao što su računalni programi, online tečajevi, webinari i drugi oblici tehnologija koji služe za povećanje angažmana učenika u procesu učenja.
9. Internetsko učenje (E-learning): korištenje internetskih tehnologija za učenje, uključujući online tečajeve, video upute, elektroničke udžbenike i druge mrežne izvore.
10. Mješovito učenje: kombinacija tradicionalnog učenja u učionici i online učenja, dopuštajući učenicima fleksibilnost organiziranja vremena i učenja izvan učionice.
11. Tehnologijske igre (Gamification): korištenje elemenata igre, kao što su natjecanja, bodovi, nagrade, motiviranje učenike i povećanje njihove uključenosti u proces učenja.

Prednosti suvremenih obrazovnih metoda:

1. Promiče aktivno učenje omogućujući učenicima da se aktivnije uključe u proces učenja.
2. Poboljšava kritičko razmišljanje i usmjerene su na razvoj vještina kritičkog mišljenja, koje su bitne učenicima za analizu informacija i donošenje odluka.
3. Promiče suradnju jer naglašavaju grupni rad i suradnju, što omogućuje učenicima da uče jedni od drugih i izgrade svoje socijalne vještine.
4. Olakšava personalizirano učenje koristeći tehnologiju te omogućuju individualizirane planove učenja koji učenicima pomažu da uče vlastitim tempom.
5. Pruža neposrednu povratnu informaciju jer koriste tehnologiju za pružanje trenutne povratne informacije učenicima, omogućujući im da prate svoj napredak i identificiraju područja za poboljšanje.

Nedostaci suvremenih obrazovnih metoda:

1. Pretjerano oslanjanje na tehnologiju: Neke moderne obrazovne metode uvelike se oslanjaju na tehnologiju, koja može biti nedostatak u područjima s ograničenim resursima ili nepouzdanom tehnologijom.
2. Nedostatak interakcije licem u lice: Suvremene obrazovne metode mogu smanjiti interakciju licem u lice između nastavnika i učenika, što može dovesti do nedostatka osobne povezanosti i podrške.
3. Zahtijeva specijaliziranu obuku: Mnoge moderne obrazovne metode zahtijevaju specijaliziranu obuku za nastavnika, što može biti nedostatak u područjima s ograničenim pristupom stručnom usavršavanju
4. Može biti skupo: neke moderne obrazovne metode mogu biti skupe za implementaciju, što može biti nedostatak za škole s ograničenim proračunima.
5. Nije prikladno za sve učenike: Neke moderne obrazovne metode možda nisu prikladne za sve učenike, osobito oni s različitim stilovima učenja ili posebnim potrebama.

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Zaključak

Poznato je da se promjene u obrazovanju usredotočuju na učenje učenika. Cijela promjena nije nimalo jednostavna. Promjena uključuje razvoj učitelja, ali i ishode učenika koji uče, stoga su učeničko učenje, nastavnički razvoj i školski napredak usko povezani. Zaključno se može reći da je u napretku suvremenog obrazovanja učeničko učenje središte promjena, učitelji su ključne uloge u promjeni, a škola je podrška. Napredak je nemoguć bez jednog od tih faktora.[25]

Nužnost suvremenih promjena obrazovanja, znanosti i tehnologije proizlazi iz cjelokupne složene situacije u kojoj se nalazi hrvatsko društvo, a koje su posljedica promijenjena globalizirajućeg okružja, ali i unutarnjih društvenih, ekonomskih, kulturnih i demografskih promjena. Takve okolnosti zahtijevaju dugoročno i sveobuhvatno promišljanje o važnosti obrazovanja i znanosti u društvu, a posebice u stvaranju inovativnog društva i gospodarstva, prilagodljivog budućim izazovima.

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Abstract

CHALLENGES IN MODERN EDUCATION

The time we are in is not at all ordinary. Dynamic and continuous changes in the world have caused great changes in all areas, including in the field of upbringing and education. With the development of technology and the change of lifestyle, numerous challenges appear to which the school system must adapt in order to be relevant to the main goal for which it exists, which is to guide young people towards overall development and life in the future.

This includes enabling new knowledge, developing skills and abilities, socialization and encouraging values to create a better person.

In order to enable the state system to respond to new challenges, it is necessary to reorient the education policy, within which planning and organization of external evaluation is necessary, as this systematically monitors the quality of education. In addition, a comprehensive approach to the design of subject curricula aimed at the development of student competencies is needed in order to fully realize the potential and opportunities that such an education has.

Keywords: challenges, modern education, upbringing

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