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Kako unaprediti razumevanje pročitanog: mapiranje kritičnih zona za pedagoške intervencije

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Apstrakt *Pismenost je, prema savremenom razumevanju, situaciona, složena kompetencija, integrisana u različite socijalne prakse. Zato je određujemo kao višestruku pismenost koja ima brojne dimenzije - jezičku, matematičku, naučnu, političku, ekonomsku, medijsku i slično. Međutim, višestruka pismenost se može ostvariti samo preko razvoja jezičke pismenosti koja je medijator i moderator svih drugih pismenosti. Najviše istraživani aspekt jezičke pismenosti je razumevanje pročitanog na kome počiva svako smisleno učenje. Cilj ovog rada je da predstavi, opiše i analizira kritične činioce koje sadrži pedagoška intervencija usmerena na razvoj razumevanja pročitanog. Kada se primeni kriterijum šta je u fokusu, onda se empirijski nalazi, programi podrške i praktični poduhvati za podsticaj razumevanja pročitanog grupišu oko nekoliko činioca: modifikacija samog teksta iz koga se čita i uči; podrška razvoju učeničkih kognitivnih kompetencija povezanih sa čitanjem; podrška razvoju ličnosti i afektivnih kompetencija učenika i efikasne aktivnosti čitanja u nastavi, nastavnim situacijama, metodama nastave/učenja. U radu su opisani, analizirani i dati primeri za svaki aspekt efikasne pedagoške intervencije i zaključak da je sinergija svih najefikasniji način za razvoj pismenosti dece i mladih.*

Ključne reči: *jezička pismenost, podsticanje čitalačke kompetencije, razumevanje pročitanog, pedagoška intervencija, funkcionalna pismenost.*

Uvod

Značaj pismenosti u obrazovanju i opštem razvoju jedinke je široko prihvaćen i nalazi se u vrhu političkih agendi svih zainteresovanih za obrazovanje. Obrazovne politike

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mnogih zemalja su u stalnom reformskom preispitivanju postupaka, pristupa i intervencija koji mogu da osiguraju razvoj funkcionalne pismenosti u formalnom i neformalnom kontekstu za učenje. Funkcionalna pismenost označava procenjenu granicu ispod koje pismenost osobe nije dovoljna da razume, koristi i razmišlja o tekstu, da razvije znanja da bi postigla lične ciljeve i da kvalitetno participira u društvu (OECD, 2019).

Važnost jezičke pismenosti za lični razvoj ali i napredak jednog društva su brojne. Povezana je sa akademskim uspehom učenika i sa dužinom i kvalitetom školovanja (Bussiere et al., 2009). Više od toga, pismenost osobe je pozitivno povezana sa njenim fizičkim zdravljem (DeWalt & Pignone, 2005), ali i metalnim zdravljem (Hunn et al., 2023; Lincoln et al., 2017; Maughan & Carroll, 2006; Sentell & Shumway, 2003). Pismenost je u negativnoj korelaciji sa socijalnim problemima jedinke u razvoju. U odeljenjima u kojima se deca „bore" s čitanjem ima više konflikata, agresije, čak delinkvencije, preranih napuštanja školovanja i slično (Slavin & Madden, 2001). Kada se veština čitanja učenika u odeljenju unapredi, poboljšava se i njihovo mentalno, socijalno i fizičko blagostanje.

Pored istraživanja koja pokazuju važnost čitalačke kompetencije za individualni razvoj, poslednjih decenija na značaju dobijaju i međunarodna istraživanja, kao što su PISA i PIRLS. Prednost ovih istraživanja je što se realizuju ciklično na reprezentativnom uzorku, pa se nalazi mogu generalizovati na celu populaciju dece i mladih u jednom obrazovnom sistemu. Drugo, možemo pratiti trendove promena postignuća a treće, istovremeno učešće mladih iz brojnih zemalja daje podatak o njihovoj poredivosti u odnosu na kompetencije koje se mere (Ivić i sar., 2021; Mullis et al., 2023; Videnović i Čaprić, 2020). U kritikama ovih istraživanja ukazuje se da nacionalni programi i načini rada ne pripremaju učenike na isti način, pa nisu ravnopravni u rešavanju zadataka, da PISA ima svoj „skriveni kurikulum" (Uljens, 2007) koji promoviše neoliberalne ekonomske principe, smanjenu osetljivost na kulturne razlike (Eivers, 2010) i udaljavanje od humanističkih ideala vezanih za obrazovanje (Liessmann, 2008). Ipak, zadaci na testovima su zasnovani na novom određenju pismenosti, pa mogu biti upotrebljivi za planiranje reformi na nivou obrazovnih politika.

Dalje, podučavanje čitalačkim veštinama u savremeno doba nosi možda najveći izazov koji stvara odrastanje uz digitalne medije. Plasticitet mozga će, verovatno vremenom omogućiti da se prilagodimo na učenje „sa ekrana" koje traži drugačiju funkcionalnu organizaciju. U ovom trenutku sve su brojnija istraživanja koja govore o problemima čitanja teksta a povezana su sa razvojem u digitalnom okruženju: preopterećenost informacijama, „dekoncentrisani um", otežano održavanje pažnje, laka distrakcija i prekid pažnje, fragmentisano znanje, otežano dublje promišljanje, teško praćenje osnovne ideja dužeg teksta, otežano zadržavanje znanja u dugoročnom pamćenju i slično (Firth et al., 2019; Ivić, 2019; Vaidhyanathan, 2011). Tome treba dodati i karakteristike novih generacija na socio-emocionalnom planu, u domenu interesovanja i motivacije: povišen individualizam, manje brige za druge, smanjeno verovanje da je istrajan i težak rad efikasan, smanjena vera da se nešto može promeniti zajedničkim akcijama i slično (Terkl, 2011; Tvengi, 2019).

Karakteristika savremene kulture u kojoj odrastaju mladi je i eksponencijalni rast svih vrsta štampanih dokumenata koja je bila nezamisliva prethodnim generacijama. Od početka 1960-ih godina, verovatno je štampano i objavljeno više knjiga, novina, časopisa i drugih pisanih dokumenata nego u svim vekovima od Gutenbergovog vremena

(Brockmeier & Olson, 2009). Sada je brzo i lako svima dostupan svaki tekst koji se može umnožiti ili je pohranjen u brojnim virtuelnim ili javnim i privatnim bibliotekama.

Kako se menja sociokulturni kontekst tako se menja i teorijski i istraživački odnos prema pismenosti. Razvilo se više teorijskih modela i empirijskih istraživačkih paradigmi pismenosti i pristupa kako podučavati učenike govornom i pisanom jeziku. Koncept pismenosti je asimilovan u različitim naučnim disciplinama i društvenim pokretima. Nova razumevanja idu ka tome da više nije reč samo o alfabetu već više o fuziji mnogih sistema znakova, simbola, medija, načina komunikacije i odgovarajućih praksi u jednom simboličkom prostoru koji, ponovo, obuhvataju i društvo i um (Brockmeier, 2000). Drugim rečima, danas se pismenost ne vidi kao individualna, kognitivna, alfanumerička veština, već kao situaciona, složena kompetencija, integrisana u različite socijalne prakse (Antić i Stevanović, 2023; Gee, 2000; New London Group, 1996; OECD, 2019). Pismenost se u kompleksnom svetu ispoljava u svojim različitim dimenzijama, kao jezička ali i kao matematička, medijska, naučna, digitalna, ekonomska, politička i tako dalje. Višestruka pismenost, međutim, može se ostvariti samo preko razvoja jezičke pismenosti koja je medijator i moderator svih drugih pismenosti (Antić, 2022; Antić i Stevanović, 2023). Jezička pismenost je ispoljena pre svega kao čitalačka pismenost i razumevanje pročitanog i kao takva je u osnovi svakog smislenog učenja verbalnog sadržaja.

Sa novim pogledom na pismenost, otvorilo se pitanje obrazovanja učenika: da li ih podučavati jednoj opštoj transferabilnoj veštini ili specifičnim pismenostima koje su potrebne za različite profesije (Brockmeier & Olson, 2009), kako razvijati pismenost u različitim predmetima i na različitim nivoima obrazovanja, koje bi bile odgovarajuće pedagoške intervencije kao podrška daljem razvoju, koje bi sve aspekte trebalo pokriti, odnosno koje su kritične zone koje bi efikasna pedagoška intervencija trebalo da pokrije?

Za potrebe ovog rada, *pedagoške intervencije* određujemo kao sve planske, osmišljene akcije u formalnom kontekstu za učenje koji uključuje nastavna sredstva, nastavni ambijent, nastavne metode i učešće kompetentnije druge osobe. Dakle, reč je o podučavanju u najširem smislu reči koje se ne odnosi samo na organizovanje časa iz nekog predmeta, nego i na ostala vannastavna, školska i vanškolska iskustva učenika ukoliko su planirana i organizovana, na bilo kom nivou obrazovanja. Termin *intervencija* bi trebalo da naglasi fokusiranost pedagoških aktivnosti. Nalik u drugim kontekstima u kojima se ovaj termin koristi (medicinskom, psihološkom, u specijalnoj edukaciji), i ovde se želi naglasiti da su to, u ovom slučaju, pedagoški napori ciljano, planski usmereni na razvoj jezičke pismenosti.

Skoro pola veka u nauci i obrazovnoj praksi se akumulira znanje o tome šta je važno za podučavanje u čitanju s razumevanjem. Neka empirijska istraživanja u ovom domenu imaju jasne praktične implikacije i direktne preporuke za nastavnu praksu, drugima je potrebno dodatno „prevođenje" od teorije ka praksi, u trećim slučajevima reč je o već razrađenim i proveravanim praktičnim postupcima. Raznovrsni programi podrške razvoju čitanja i jezičke pismenosti realizovani su u različitim kontekstima za učenje, različitim predmetima, različitim nivoima obrazovanja. Međutim, kada se kao kriterijum uzme šta je u fokusu ovih poduhvata, možemo izdvojiti nekoliko kritičnih zona efikasne pedagoške intervencije.

Potrebno je reći da su pomenuta istraživanja nastajala u okvirima različitih disciplina, lingvistike, psiholingvistike, kognitivne psihologije i psihologije obrazovanja, pa su i teorijska polazišta bila različita. Ovi teorijski modeli kognicije i razumevanja jezika pripisuju različit značaj kognitivnim, socijalnim i kulturološkim aspektima čitanja. Izdvojićemo dva dominantna teorijska pristupa.

Kognitivističke teorije, pismenost vide kao kognitivnu veštinu koja se razvija direktnim podučavanjem. Čitanje se smatra nizom kognitivnih koraka, koji uključuju dekodiranje, prepoznavanje reči i stvaranje mentalnih slika za razumevanje pročitanog, odnosno proces ide od razumevanja površinske forme teksta, njene mikrostrukture do procesa u radnoj memoriji u kojoj se mikrostrukture umrežavaju u makrostrukturu teksta (Lalović, 2012). Proces se odvija kroz interakciju kognitivnih sposobnosti onoga ko čita i samog teksta.

Socio konstruktivističko razumevanje pismenosti, ukazuje da se vaspitavanje jezičke pismenosti odvija kroz situacionu socijalnu praksu (Purcell-Gates et al., 2007). Praksa je uslovljena kulturnim vrednostima, znanjem i očekivanjima zajednice, Pa samim tim onaj ko čita stvara značenje u okviru tog konteksta. U zavisnosti od socijalnih i kulturoloških iskustava, razumevanje istog teksta može biti različito (Gee, 2000).

Svrha ovog rada je da ponudi jedan „pogled odozgo", odnosno da na jednom mestu prikaže, mapira nezaobilazne različite aspekte koje bi trebalo obuhvatiti pedagoškom intervencijom usmerenom na razvoj jezičke pismenosti, odnosno čitanja s razumevanjem. Drugim rečima, ne zagovara neki konkretni pristup ili određenu pedagošku intervenciju nego ukazuje šta bi sve trebalo da pokrije efikasna podrška razvoju čitalačke pismenosti.

Složena i holistička priroda fenomena zahteva i eklektički odnos prema teorijskim okvirima koja nude važne uvide. Zato će teorijski okvir ovog rada biti heuristički model za istraživanje razumevanja pročitanog RRSG (Snow, 2002). U ovom modelu jednako važna su četiri činioca: onaj ko čita (kognitivni, afektivni i motivacioni aspekti), tekst koji se čita (ne samo sadržaj, već i brojni lingvistički aspekti teksta), aktivnosti čitanja (priroda zadatka, svrhe i konteksta u kome se čita) i sociokulturni kontekst u kome se svi prethodni činioci postoje. Granice između ovih elemenata su propusne što jasno ukazuje na dinamičnu prirodu procesa razumevanja pročitanog (Snow, 2002). Dakle, cilj ovog rada je da mapira, opiše kritične zone intervencije za efikasni pristup razvoju razumevanja pročitanog u formalnom kontekstu učenja. Čitanje u ovom kontekstu je nužno povezano sa aktivnostima smislenog učenja, zato je je u fokusu čitanje u službi učenja. Važno je napomenuti, da rad ne razmatra elementarno, prvo opismenjavanje, već dalji razvoj kompetencije čitanja učenika koji su usvojili početnu pismenost. Isto tako, van ovog rada ostaju specifične intervencije namenjene učenicima sa disleksijom i drugim specifičnim teškoćama u učenju.

Kako do efikasne pedagoške intervencije za razvoj razumevanja pročitanog

U nastavku ćemo pojasniti važnost svakog od sledećih činioca koji imaju ulogu u efikasnom čitanju, dati primere koji su primenljivi u praksi i ukazati na potrebe za daljim

istraživanjima. U fokusu će biti: *modifikacija teksta* iz koga se čita/uči; podrška razvoju *kognitivnih veština* učenika povezanih sa čitanjem; podrška razvoju *afektivnih aspekata ličnosti* učenika koji su povezani sa razumevanjem čitanja i efikasne aktivnosti čitanja s razumevanjem u *nastavi, nastavnim situacijama, metodama nastave/učenja*. Bitno je napomenuti da iako će pojedini činioci biti posebno predstavljeni, u svakoj konkretnoj realnoj situaciji oni deluju u dinamičnoj interakciji, pa bi zato efikasna pedagoška intervencija morala da uzme u obzir sve činioce istovremeno.

Modifikacije teksta iz koga se čita/uči

Od prvih udžbenika, autori nastoje da podrže proces učenja didaktičkim oblikovanjem sadržaja nauke. Pored selekcije i organizacije sadržaja, autori tekstova namenjenih čitanju u školskom kontekstu, morali bi biti osetljivi na karakteristike jezika samog teksta. Konkretno mislimo na sledeće:

a. Mikrostruktura teksta. Odnosi se na stilske i lingvističke parametre teksta (na primer, koliko je dugačka i složena rečenica, koliko ima zavisnih rečenica, koliko su reči bliske ili daleke učenicima tog uzrasta i slično). Istraživanja kognitivne psihologije ukazala su na mnoge varijable mikrostrukture samog teksta koje su povezane sa uspešnim učenjem tekstualnog sadržaja (Cunningham & Stanovich, 2001; McNamara et al. 1996; 2007; Otero, 2002; Snow, 2002). Primer ovog tipa istraživanja sa jasnim preporukama za praksu je istraživanje Daniele Maknamara i saradnika pod naslovom „Da li je uvek bolje učiti iz dobrih tekstova?" (Mcnamara et al., 1996). Eksperimentalno je utvrđeno da učenici koji su dobri čitači i imaju odgovarajuće predznanje, efektivnije uče ukoliko u sintaksi nisu dati svi elementi. Dok čitajući nailazimo na preklapanje reči ili pojmova, jasno je da se govori o jednoj ideji. Ili, kada autor teksta koristi priloge *zato što, stoga,* predloge *usled, zbog,* veznike *pa, takođe, isto*, rečce *dakle, osim, upravo, međutim*, onaj ko čita dobija informaciju da među idejama u tekstu postoji relacija i kakva je pridodate relacije. Ali, ako se pojedini od navedenih elemenata rečenice izostave, učenici su aktivniji u čitanju, moraju samostalno da izgrade razumevanje nedostajućih delova i celine, pokrenu procese samoregulacije, metakognitivnog praćenja vlastitog razumevanja i „popravke rečenice". Posledično, bolje nauče ono što uče. Međutim, ova pravilnost važi samo za vešte čitače, slabijim treba što više pomoći u samom tekstu da bi konstruisali razumevanje. Istraživanje sugeriše da i autori tekstova koji se koriste u nastavi, ali i nastavnici moraju promišljati i prilagođavati tekstove učenicima i po ovim lingvističkim karakteristikama.

b. Makrostruktura teksta. Filozofska, sociološka i psihološka analiza odnosa jezika i mišljenja (Bernstine, Fuko, Derida, Bachtin, Vigotski, Gee), ukazala je na druge aspekte teksta koji mogu biti važni za razumevanje pročitanog, kao, kao što su žanr teksta ili njegove diskurzivne karakteristike. Mnoga istraživanja ukazuju na razlike učenja iz različitih tipova tekstova, pre svega narativnog, ekspozitornog i deskriptivnog (Graesser, 2007; Otero, 2002; Purcell-Gates et al., 2007). Nalazi uglavnom pokazuju da upotreba narativne strukture teksta ima pozitivne efekte na učenje: povećava motivaciju i interesovanje, učenici lakše aktiviraju postojeća znanja, bolji je kvalitet prisećanja i slično (Duke & Roberts, 2010; Duke & Cartwright, 2019). Ima i oprečnih nalaza (Golke et al., 2019), koji ukazuju

da se samo kroz susret učenika i ekspozitornog teksta, može ostvariti usvajanje sistema naučnih pojmova i razvoj viših misaonih procesa (Golke et al., 2019; Graesser, 2007; Ivić et al., 2013; Otero, 2002).

Osim tipova i žanrova teksta iz kojih se uči, analiza sadržaja i analiza diskursa ukazuju na potrebu da se u njima utvrđuje i ona interpretativna, vrednosna zona koja često nije očigledna već implicitna (Antić, 2022; 2024; Gee, 2000; 1999). Ova istraživanja su zasnovana na socio konstruktivističkom razumevanju jezika koji je neraskidivo povezan sa socijalnom praksom (Bachtin, 2008; Vigotski, 1983; Gee, 2000). Analiza diskursa (još više kritička analiza diskursa), primenjena na tekstove u nastavi, omogućuje da se identifikuju pogledi na svet i sistemi vrednosti koje učenici neosetno usvajaju (Antić, 2024). Kao primer navešćemo analizu diskursa jedne lekcije iz istorije (Antić i sar., 2008). Skoro da nema udžbenika istorije koji prezentuje sadržaje vezane za Prvi svetski rat, u kome ne postoji lekcija o Sarajevskom atentatu. Reč je o događaju koji se pouzdano desio i za koji nema nedoumica oko toga „kada, ko, kako, gde i šta". Istraživanje je primenom pristupa *gramatika priče* obuhvatilo dvadeset udžbenika istorije iz devet zemalja i pokazalo je kako se finom manipulacijom elemenata priče (kontekst, zaplet, uloga protagonista i rasplet) može formirati vrednosni sud o događaju i protagonistima, koji nije samo deo istorijskog tumačenja, nego i političke platforme određene zemlje. Učeći istoriju učenici nužno usvajaju i te implicitne vrednosne poruke.

Udžbenici svih predmeta imaju mogućnost da posreduju jasan vrednosni stav (videti analizu diskursa različitih tekstova iz biologije (Gee, 2000). Zbog toga je važno da se u nastavi otvori i pitanje ovih implicitnih vrednosti, pogleda na svet, ideologija, koje svaki udžbenik dodatno posreduje. Drugim rečima, duboko čitanje kao preduslov dubokom učenju, trebalo bi da ima elemente analize diskursa a zadatak nastavnika bi bio da osigura nastavnu situaciju u kojoj se kroz smislenu aktivnost učenika, dijalog i pregovaranje o smislu i značenju otkriva interpretativni nivo značenja teksta (Antić, 2024; Gee, 2000).

v. Didaktičko prilagođavanje teksta. Istraživanja i praktične primena tih istraživanja su najbrojnija. Predstavljaju deo svesnih napora da se u samu knjigu za učenje uvede što više različitih podrški, potpora, alata za podupiranje procesa razumevanja (Ivić i sar., 2013). U obuhvatnoj sistematizaciji standarda kvaliteta udžbenika, Ivića i saradnika, opisano je 42 standarda kvaliteta udžbenika od kojih se trinaest odnose na didaktičko oblikovanje sadržaja a tri na standarde kvaliteta jezika (Ivić i sar., 2013). Standardi opisuju brojne moguće *strukturalne komponente* udžbenika, konstruisane tako da odražavaju pristup „nastave orijentisane na učenika i učenje". Polazeći od razvojnih, jezičkih, kulturalnih karakteristika učenika, komponente imaju za cilj da olakšaju susret učenika i organizovanog sistema znanja određene naučne discipline. To su na primer, pitanja i zadaci, grafikoni i tabele, rečnik manje poznatih reči i slično.

Ipak, istraživanja sugerišu da nije dovoljno da učenici imaju udžbenik konstruisan po standardima kvaliteta (Antić, 2015; Gurung, 2004). U eksperimentalnom dizajnu jednog istraživanja, učenici, prethodno ujednačeni po predznanjima i veštini čitanja, učili su lekciju o Zakonu održanja mase iz dva tipa teksta: u prvom je sav sadržaj dat kao linearni tekst, dok je drugi konstruisan tako da ima brojne strukturalne komponente koje bi trebalo da budu pro drška učenju s razumevanjem. Drugi tekst je koristio sredstva za uključivanje

učenika u interakciju koliko god je to moguće u mediju kao što je štampani tekst. Rezultati su pokazali da nije bilo značajne razlike između dve grupe u efektima učenja. Dodatno, intervju sa učenicima je ukazao da su strukturalne komponente doživeli kao prepreku da priđu osnovnom tekstu koji vide kao linearni niz informacija koje jednostavno treba upamtiti (Antić, 2015). U drugom istraživanju, odnos učenika prema didaktičkim pomagalima u tekstu, nije se menjao bez obzira koliko su bili uspešni na proverama znanja (Guru-ng, 2004). Nalaz ukazuje da je u praksi neophodno, ne samo da učenici uče iz udžbenika konstruisanog da bude podrška učenju, nego i da udžbenik postane deo nastave, da učenici uče kako da ga koriste i da nastavnici evaluiraju razumevanje a ne puku reprodukciju. Način evaluacije naučenog je najvažniji faktor koji oblikuje ponašanje učenika u učenju.

Podrška razvoju kognitivnih vetina učenika povezanih sa čitanjem

Efikasna pedagoška intervencija svakako mora biti usmerena i na kognitivne veštine učenika. Važna znanja su proistekla iz istraživanja kognitivne psihologije o prirodi čitanja, o tome koliko je to složena veština, koje veštine su ključne, kako su organizovane i slično. Uglavnom postoji saglasnost da je reč hijerarhijski organizovanom setu veština i sposobnosti, što znači da bez veštog dekodiranja slova i reči, što su jednostavnije kognitivne veštine, nije moguće savladati kognitivnu veštinu višeg nivoa (recimo razumevanje žanra i diskursa). Pravac pedagoških intervencija je jasan: treba početi sa uvežbavanjem subsposobnosti nižeg reda, preko razvoja predznanja i bogaćenja rečnika do metakognitivne regulacije i upravljanja vlastitim kognitivnim procesima (McNamara et al., 2007; Pressley, 2000). Smagorinski i Majer su prepoznali tri ključna fokusa: a. Podrška opštim i osnovnim kognitivnim sposobnostima; b. Razvoj učeničkih znanja koja su specifična za zadatak (učenje čitanja romana i učenje čitanja recepta zahtevaju različita deklarativna i proceduralna znanja) i c. Razvoj učeničkih znanja o diskurzivnoj prirodi i interpretativnim karakteristikama teksta (Smagorinsky & Mayer, 2018). Izdvojićemo moguće načine podsticanja pojedinih podprocesa razumevanja pročitanog.

a. Razvoj veštine dekodiranja reči. Pretpostavka za to da učenici razumeju tekst jeste da mogu da prepoznaju, pročitaju i razumeju one reči od kojih se rečenica sastoji. Majer prepoznaje četiri komponente kognitivne veštine dekodiranja: prepoznavanje fonema, dekodiranje reči, tečno dekodiranje reči i razumevanje reči (Mayer, 2008). Istraživanja pokazuju da nije dovoljno da učenici mogu da pročitaju i razumeju svaku reč već i da to postane automatizovana, fluentna radnja jer se tako, ograničeni kognitivni resursi u radnoj memoriji, oslobađaju za složenije procese. Postoje značajni dokazi da sistematsko praktikovanje čitanja, u školskim i vanškolskim situacijama doprinosi fluentnom dekodiranju (Cunningham & Stanovich, 2001; Mayer, 2008; Pressley, 2000; Smagorinsky & Smith, 1992; Smagorinsky & Mayer, 2018). Zbog toga su ovi autori osim istraživanja, aktivno uključeni u popularizaciju čitanja među mladima.

b. Razvoj rečnika. Kada se savlada efikasno čitanje reči, drugi procesi postaju značajni za razumevanje pročitanog (Lalović, 2012). Praktikovanje čitanja je i za ovu subsposobnost, bogaćenje rečnika, važan podsticaj. Očekuje se da učenici pod uticajem nastave

napreduju po 1000-2000 reči godišnje (Smagorinsky & Smith, 1992). Izloženost novim rečima nije dovoljna (iako se i tako uče nove reči), već je efikasnije kada to postane planski deo nastave (Joshi, 2005; Nagy & Scott, 2000). Recimo, učenici osnovne škole nauče više novih reči iz rečnika kada ih njihov nastavnik uključuje u diskusiju pre, tokom i posle glasnog čitanja knjige, nego kada nastavnik jednostavno čita knjigu bez razgovora u razredu (Greene Brabham & Lynch-Brown, 2002).

v. Sticanje opštih znanja, znanja specifičnih za sadržaj ali i lingvističkih znanja. Istraživanja potvrđuju da sadržaj dugoročne memorije (on što osoba već zna) presudno utiče na razumevanje pročitanog (Lalović, 2012). Posledično, kvalitetna nastava i efektivno učenje svih školskih sadržaja (i šire), istovremeno su intervencije za podsticanje kompetencije čitanja.

Posebna kategorija važnih znanja su metalingvistička znanja o poziciji, odlukama i namerama autora, o strukturi samog teksta i njegovoj diskurzivnoj prirodi. Ova znanja su retko sastavni deo planske nastave iako osim boljeg razumevanja teksta doprinose razvoju decentracije i drugih opštih kognitivnih sposobnosti (Danielson, 2010; Palincsar & Magnusson, 2001). Na toj liniji je program „Pitajte autora" kome je cilj da u diskusiji učenici uoče da iza svakog teksta stoji autor koji je doneo čitav niz odluka koje su dovele do teksta takav kakav je na kraju (Reichenberg & Axelsson, 2006, prema, Danielson, 2010).

g. Posebna grupa znanja koja bi trebalo usavršavati su **znanja o strategijama razumevanja i metakognitivna znanja** učenika. Sva ova znanja, zatim epistemološka uverenja učenika ali i razvoj jezika mišljenja doprinose samoregulisanom radu na tekstu (Snow, 2002). Vešti čitači umeju da upotrebe sva pomenuta znanja da konstruišu *mentalni model teksta.* Osim znanja, učenici moraju biti osposobljeni **za aktivnu primenu strategija samoregulacije**. Među različitim kognitivnim procesima (izdvajanje bitnog, pravljenje pretpostavki i slično), mnogi autori izdvajaju kao najvažnije osposobljenost za *praćenje* procesa razumevanja i aktivno menjanje strategija kad razumevanje izostane (Mcnamara, 1996; McNamara et al., 2007; Otero, 2002). Razvoj aktivne primene strategija se može podsticati postepenim povećavanjem težine teksta na kome učenici rade (Cunningham & Stanovich, 2001; McNamara et al., 1996; Pressley, 2000). Napori da se tekst razume ne znače nužno problem, ali je jasno da je potrebna budna prisutnost nastavnika da proceni i deluje u zoni narednog razvoja ovih veština učenika.

Podrška razvoju afektivnih aspekata ličnosti učenika koji su povezani sa razumevanjem čitanja

Tradicionalno viđenje čitanja kao isključivo kognitivnog angažovanja osobe, prevaziđeno je dokazima neuropsihologije koji ukazuju na povezanost kognitivne i afektivne sfere. Međutim, i dalje postoje dva bogata, ali često nepovezana polja istraživanja i prakse, prvi ima fokus na lingvističkim a drugi na afektivnim komponentama razumevanja pročitanog (Katzir & Lipka, 2017). U novim teorijskim modelima čitanja objašnjava se i uloga brojnih emocija (Beck et al., 2012; Katzir et al., 2018; Liyan et al., 2023; Meer et al., 2016). Međutim, većina programa za podršku čitanja orijentisana je na tehničke aspekte ove veštine a mnogo manje na podizanje interesovanja, uzbuđenja, suočavanja

sa anksioznošću i brigom (Zaccoletti et al., 2023) i dosadom (National Reading Panel & National Institute of Child Health and Human Development, 2000). Osim predznanja i iskustva, svako ko čita ulaže u susret s tekstom i svoje stavove, vrednosti, sliku sveta, socijalno-emocionalne veštine i određeni afektivni odnos prema konkretnom tekstu, od dosade do brige i uznemirenja (Katzir & Lipka, 2017). U zavisnosti od interesovanja, namere (svrhe) i afektivnog odnosa prema tekstu, ista osoba će različito koristiti svoje postojeće strategije i biti različito prijemčiva na podršku u tekstu i podršku iz socijalne okoline. U istraživanju u kome je kombinacija afektivnih i kognitivnih strategija bila deo obuke čitanja sa razumevanjem (ELBRCS), učenici u eksperimentalnoj grupi su bili su značajno bolji na testu razumevanja pročitanog i to u višim nivoima razumevanja (zaključivanje, evaluacija i slično) (Yussof et al., 2013). U drugoj studiji, učenici su pokazali značajno bolji uspeh u razumevanju samo kad su u tekstu iz koga uče, neutralno formulisani pojmovi, na primer „oko", obogaćeni pridevskom prisvojnom zamenicom „tvoje oko". Ova personalizacija teksta obezbedila je viši transfer, višu motivaciju za učenje i duže vreme provedeno u čitanju (Dutke et al., 2016).

Empirijski nalazi ukazuju da je važno i da učenici izgrade i *mentalni model sebe kao čitaoca*. Ukoliko učenici imaju identitet uspešnog čitača, primenjivaće drugačije strategije razumevanja, vodiće drugačije diskusije o tekstu za razliku od učenika koji uz svoj identitet vezuju da su loši čitači, nezavisno da li je stvarno tako. Razvoj identiteta uspešnog čitaoca i /ili čitalačko samopoimanje (eng. reading self-concept)je važan faktor koji može osigurati uspeh. Veza je povratna, kada se postiže uspeh u čitanju, učenicima „raste" osećaj mentalnog blagostanja – doživljaj smisla, svrhovitosti svojih aktivnosti, zajedništva i solidarnosti (Katzir et al., 2018; 2022; Sabag-Shushan & Katzir, 2023; Segal et al., 2023). Dodatno, pojedini autori sugerišu da je osim mentalnog modela sebe, to jest čitalačkog samopoimanja, važna i *teorija uma* onog ko čita. Teorija uma se određuje kao kapacitet osobe za razumevanje da drugi ljudi imaju mentalna stanja koja pokreću njihove postupke i da se ta mentalna stanja mogu razlikovati od naših. Bez razumevanja teorije uma i mogućnosti da zauzmu tuđe perspektive, deci je teško da čitaju i razumeju narativne tekstove. Autori istraživanja, prezentuju teoriju uma kao *skriveni faktor važan za razumevanje pročitanog* (Dore et al., 2018).

Aktivnosti čitanja s razumevanjem u nastavi, nastavnim situacijama, metodama nastave/učenja

Do sada opisane uvide o značajnim aspektima podrške učenicima na individualnom planu, trebalo bi integrisati u sam nastavni proces koji se odvija u odeljenju sa tridesetak učenika različitih predznanja i čitalačkih veština. Malo se zna o tome kako se tekstovi/udžbenici koriste u nastavnom procesu (Johnsen, 1993). Više znamo na osnovu izveštaja praktičara i interventnih programa a manje na osnovu istraživanja. Duga tradicija nastave orijentisane na sadržaj predmeta, otežava da se prepoznaju potencijali nastave raznih predmeta i na različitim nivoima za podršku razvoju čitalačke kompetencije.

Brojne studije su utvrdile da neke nastavne situacije (pored drugih obrazovnih ciljeva), imaju potencijal za razvoj jezičkih kompetencija posebno razumevanja pročitanog (Block et

al., 2009; Dole et al., 1991; Li et al., 2024; Palincsar & Brown, 1984; Reynolds & Fisher, 2022). Izdvojićemo neke: individualni i grupni rad u radnim sveskama; individualno tiho čitanje koje prati i nadzire nastavnik; tiho individualno čitanje sa prethodno datom instrukcijom nastavnika koju veštinu ili strategiju bi trebalo uvežbavati; pojmovno učenje (ko-konstrukcija- dva učenika čitaju dva izabrana ekspozitorna teksta na istu temu i čitaju jedan drugome i raspravljaju); tiho čitanje koje prati diskusija na nivou razreda; podupiranje – nastavnik pruža uvremenjenu personalizovanu podršku i postepeno povećava složenost tekstova i zadataka; upotreba grafičkih organizatora, postavljanje pitanja pre čitanja; interaktivno čitanje naglas – nastavnik ili učenik čita tekst naglas a zatim sledi diskusija (u kojoj se određuje značaj teksta generalno i značaj za učenike); situacije u kojima se praktikuje sumiranje, izvođenje rezimea i zaključaka nekog teksta ili više različitih izvora; literarni kružoci, gde učenici čitaju istu knjigu ili tekst i diskutuju; nastavne situacije u kojima nastavnik „glasno misli", verbalizuje misli dok čita tekst i slično. Posebno izdvajamo *recipročno podučavanje,* model nastave koji su osmislile Palinskar i Braun (Palincsar & Brown, 1984). Učenici uče kako se radi na tekstu da bi postigli razumevanje. Kroz interakciju s nastavnikom i međusobno, usvajaju strategije postavljanja pitanja, razjašnjavanja, predviđanja i slično. Vremenom se pomoć nastavnika smanjuje da bi na kraju, konkretnu strategiju primenili samostalno na novom tekstu.

Šta je zajedničko ovim različitim nastavnim situacijama? Možemo prepoznati jednu karakteristiku, a to je *dijalog*: neke situacije podrazumevaju „tiho" čitanje ili duboko čitanje u kome postoji mogućnost da se ostvari „dijalog" s tekstom. Druge situacije stavljaju u smisleni kontekst interakciju, pregovaranje o smislu i značenju između učenika i između nastavnika i učenika. Možemo reći da je i na ovaj empirijski način potvrđena Bahtinova ideja o *dijalogizmu* kao ključnom sredstvu pomoću koga nastaje smisao i značenje za onog ko čita (Bachtin, 2008).

Nekada nastavna situacija može uključiti i tekst koji nije standardni udžbenički nego ga nastavnik/ca planski konstruiše. Na primer, može biti „laboratorijska beležnica" (Palincsar & Magnusson, 2001) ili privatno pismo jednog naučnika drugom (Muždeka, 2005). Efekti ovih primera su višestruki, ne samo na usvajanje znanja i razvoj razumevanja pročitanog, nego i na podizanje motivacije, a posebno na razvoj pozitivnog vrednovanja nauke (koja dobija ličnu, personalizovanu dimenziju).

Različiti tekstovi iz nauke (popularna nauke, naučni časopisi, izveštaji) mogu biti dobar izvor za učenje. Struktura tih tekstova i upotrebljeni jezik odražavaju samu prirodu naučne discipline, pa je važno da učenici uče i jezik svake nauke kao jezik discipline ili žanr discipline. Danijelsonova smatra da je usvajanje naučnog žanra od strane učenika vid procesa *akulturacije ka diskursu naučne discipline* u kome deca usvajaju i uče da koriste naučni jezik tako da ga posle mogu koristiti van školskog konteksta (Danielson, 2010). Zato autorka insistira na sledećem: ceo školski kontekst bi trebalo da podržava ovu akulturaciju. Nije dovoljno samo da brinemo o udžbenicima iz kojih učenici uče, već bi trebalo brinuti o stvaranju ambijenta. Važna su sva semiotička sredstva jedne naučne discipline koja su prisutna u okruženju učenika, na tabli, na panoima, u sveskama, u jeziku nastavnika, u hodnicima škole, svi verbalni i neverbalni znakovi. Bitno je i da učenici imaju pristup različitim žanrovima jedne discipline (izveštajima, biografijama, autobiografijama, monografijama, tekstovima iz popularne nauke i slično).

Kao što pokazuju pojedini programi podrške, kada se deca kroz duži vremenski period (bar godinu dana), stave u situaciju da su okružena raznovrsnim tekstovima i da su angažovana relevantnim aktivnostima, obrazovni efekti se višestruko uvećavaju – stiču se znanja iz naučne oblasti ali i povećava funkcionalna pismenost (Danielson, 2010; Vitale & Romance, 2007). S toga, Danijelsonova predlaže da svaki nastavnik povremeno preispituje svoj rad i preko sledećih pitanja: Koliko i kako koristi tekst u nastavnom procesu? Koje tipove/žanrove tekstova koristi? Koliko ima eksplicitnog rada u vezi teksta i koliko meta-tekstualnih razgovora (o strukturi, žanru, rečniku discipline i slično)? Kako se izvode ove aktivnosti sa tekstovima? Ko ih inicira? Kako se evaluiraju? (Danielson, 2010).

Kultura škole je takođe važna (Bruner, 2000). Škole su sociokulturne institucije a učenje se dešava i samim boravkom u školi, eksplicitno i implicitno. Među različitim faktorima koji čine i oblikuju kulturu škole često previđamo značaj školskog prostora. Da li dominiraju „slušaonice" ili „učionice" (Ivić i sar., 2003; Thomas, 2010)? Prostori u kojima dominiraju slušaonice demotivišu i udaljavaju učenike od praktikovanja koje je nužno za razvoj funkcionalne pismenosti i obrnuto.

Na kraju, prepoznajemo još neke specifične oblasti važne za efikasnu podršku razvoju pismenosti kojima se dosadašnja istraživanja nisu dovoljno bavila. Recimo, iako se sve više priznaje važnost socio emocionalnih faktora u čitanju i učenju, oni nisu dovoljno istraživani u poređenju sa konkretnim tehnikama poučavanja ili kognitivnim strategijama. Zatim, istraživanja i intervencije usmerene na specifične grupe učenika, kao što su pripadnici manjinskih socijalnih grupa, učenici sa niskim socioekonomskim statusom ili učenici sa smetnjama u razvoju. Iako se raznolikost učenika sve više priznaje (bar u dokumentima obrazovne politike), istraživanja koja se fokusiraju na uticaj različitih jezičkih i kulturnih konteksta na čitanje nisu toliko brojna.

Zaključak

Pismenost ne utiče samo na pojedince, već i na društvo i čovečanstvo u celini. Čitanje bi trebalo da ostane centralno ljudsko iskustvo u kome su jasne veze između saznanja, emocija i vrednosti i kao takvo ugrađeno u podučavanje svih predmeta na svim nivoima obrazovanja kao eksplicitan i stalan zadatak.

Svaka pedagoška intervencija koja je zapravo metodološki gledano, akciono istraživanje, mora početi od analize problema. U našem obrazovnom sistemu, na PISA istraživanju, petnaestogodišnjaci kontinuirano postižu rezultate ispod proseka zemalja koje učestvuju. Postignuće u čitalačkoj pismenosti u različitim ciklusima razlikuje se u nijansama, pa se može zaključiti da oko 40% petnaestogodišnjaka nije funkcionalno pismeno (Ivić i sar., 2021; Videnović i Čaprić, 2020). Izraženo na drugi način, naši učenici neće biti konkurentni svojim vršnjacima u Evropi jer su rezultati takvi kao da za njima zaostaju godinu i po dana školovanja. U jednom od retkih istraživanja na velikim uzorcima učenika, ponovljeno testiranje PISA testom čitalačke pismenosti, posle dve godine pohađanja srednje škole, pokazalo je da učenici napreduju u proseku 26 poena, dok na nivou zemalja OECD-a učenici za jednu godinu napreduju, u proseku, 38 poena, što ukazuje da školovanje nedovoljno utiče na brzinu napredovanja učenika iz Srbije (Jovanović i Baucal, 2016).

Na individualnom planu, to znači slabu osposobljenost za dalja učenja (uključujući studiranje), ali i sve druge pismenosti, na primer medijsku koja traži kritičko čitanje tekstova, ali i zdravstvenu, mentalnu, političku i slično. Na društvenom planu to znači nedovoljan broj građana koji mogu da participiraju u važnim odlukama, za njih lično kao i za zajednicu, ali i slabu opremljenost za sve pokušaje političke i medijske manipulacije.

U ovom radu smo predložili kritične, nezaobilazne aspekte efikasne pedagoške intervencije koja je usmerena na razvoj jezičke pismenosti. Iz prethodno navedenih važnih aspekata dobre pedagoške itervencije vidi se koliko su međusobno povezani tekst iz koga se čita i uči, karakteristike učenika i priroda zadatka (iza koga stoji nastavnik) koji osmišljava aktivnost čitanja. Mnoga pomenuta istraživanja su realizovana u školskom kontekstu, u njima su učestvovali nastavnici, pa su nužno i faktori sociokulturnog miljea škole ugrađeni u dobijene rezultate. Dodatno, mera razumevanja je često procenjivana stepenom naučenog nastavnog sadržaja (na različitim nivoima, od pamćenja podataka do izvođenja predikcije i zaključaka). Drugim rečima, iako smo činioce za potrebe ovog rada privremeno razdvojili, jasno je da je skoro nemoguće izdvojiti stepen doprinosa svakog posebno.

Na nivou prakse, ova lista važnih činioca razvoja razumevanja pročitanog, može biti izvor ideja za kratkoročne i dugoročne akcije koje se realizuju u nastavi svakog predmeta, na nivou škole i u vanškolskim aktivnostima. Tri su ključna zaključka. Razvoj razumevanja jezika je pitanje celoživotnog razvoja i sigurno se ne završava početnim opismenjavam. Drugo, nema jednog idealnog rešenja niti sigurne pedagoške intervencije. Umesto toga, svaki nastavnik rešava i donosi odluke u odnosu na učenike sa kojima radi i u odnosu na uslove u kojima radi. Iz toga dalje proizilazi da je osmišljavanje pedagoške intervencije, ne samo stručni već i kreativni proces – kako domisliti, pronaći način koji kognitivno i afektivno uključuje učenike u smislene aktivnosti učenja koje doprinose i razvoju pismenosti. Poput veštog dirigenta, u različitim prilikama, za različite obrazovne ciljeve, nastavnik bi mogao da daje prednost nekom od pomenutih faktora: tekstu ili posebnim vežbanjima kognitivnih ili socio afektivnih veština učenika.

Pored nastavnika, odgovornost za efikasnu pedagošku intervenciju leži na različitim akterima, preciznije rečeno različiti akteri bi u timu imali vodeću ulogu. Tim koji sprovodi pedagošku intervenciju trebalo bi da ima: autore udžbenika, izdavače, stručnjake za kvalitet udžbenika, nastavnike, istraživače obrazovanja iz domena pedagogije, psihologije, lingvistike, fakultete koji obrazuju nastavnike i tako dalje. Kada govorimo o našim uslovima, pretpostavka je da obrazovna politika decentralizacijom i depolitizacijom rada škola i nastavnika postavi povoljan ambijent za promene.

Literatura

Antić, S, Pešikan, A. i Pešić, J. (2008). Kako se kreira tumačenje istorije: primena gramatike priče u analizi udžbenika istorije. XIV naučni skup *Empirijska istraživanja u psihologiji* (34-35), 7-8. Beograd: Filozofski fakultet. http://empirijskaistrazivanja.org/wp-content/uploads/2016/06/Knjiga-Rezimea-EIP-2008.pdf

Antić, S. (2015). The potentials od textbooks to scaffold construction of student's knowledge. In M.H. Martinho and M.do Céu de Melo (Eds.), *LiDEs – A literacia das disciplinas escolares: desafios nas*

aulas de História e Matemática. (pp 9-33). Universidade do Minho. Instituto de Educação. Centro de Investigação em Educação (CIEd).

Antić, S. (2022). Language in the classroom: how to support the development of functional literacy. In J. Stevanović, D. Gundogan & B. Ranđelović (Eds.), *The State, Problems, and Needs of the Modern Education Community* (pp. 29-35). Institute for Educational Research.

Antić, S. i Stevanović, J. (2023). Problemi pismenosti: danas i ovde. U A. Kostić i A. Pešikan (Ur.), *Obrazovanje: stanje, perspektive i uloga u razvoju Srbije* (str. 177-194). Srpska akademija nauka i umetnosti.

Antić, S. (2024). Makrostruktura teksta u nastavi: podrška ili prepreka smislenom učenju? *Psihološka istraživanja, 27*(1)*,* 109-129. https://doi.org/10.5937/PSISTRA0-45268

Bakhtin, M. M. (2008). *Speech genres and other late essays*. University of Texas Press.

Beck, L., Kumschick, I. R., Eid, M., & Klann-Delius, G. (2012). Relationships between language competence and emotional competence in middle childhood. *Emotion, 12*(3), 503–514. https://doi.org/10.1037/a0026320

Block, C. C., Parris, S. R., Reed, K. L., Whiteley, C. S., & Cleveland, M. D. (2009). Instructional approaches that significantly increase reading comprehension. *Journal of Educational Psychology*, *101*(2), 262–281. https://doi.org/10.1037/a0014319

Brockmeier, J. (2000). Literacy as symbolic space. In J. W. Astington (Ed.), *Minds in the making: Essays in honor of David R. Olson* (pp. 43–61). Blackwell Publishing.

Brockmeier, J., & Olson, D. (2009). The literacy episteme. In D. Olson., & N. Torrance (Eds.), *Cambridge handbook of literacy* (pp. 3-22). New York: Cambridge University Press.

Bruner, Dž. (2000). *Kultura obrazovanja*. Educa.

Bussiere, P., Hebert, R., & Knighton, T. (2009). Educational outcomes at age 21 associated with reading ability at age 15. Ottawa, ON: Statistics Canada, *Catalogue No. 81-004-X , 6*(2). Preuzeto sa: http://www.statcan.gc.ca/pub/81-004-x/2009002/article/10896-eng.htm

Compton, D. L., Miller, A. C., Gilbert, J. K. & Steacy, L. M. (2013).What can be learned about the reading comprehension of poor readers through the use of advanced statistical modeling techniques? In B. Miller, L. E. Cutting & P. McCardle (Eds.), *Unraveling the behavioral, neurobiological, & genetic components of reading comprehension* (pp. 135–147). Brookes.

Cunningham, A. E., & Stanovich, K. E. (2001). What reading does for the mind. *Journal of Direct Instruction*, *1*(2), 137–149.

Danielson, K. (2010). Learning Chemistry: Text Use and Text Talk in a Finland - Swedish Chemistry Classroom. *IARTEM e-Journal*, *3*(2), 1-28.

DeWalt, D. & Pignone, M. (2005). Reading Is Fundamental: The Relationship Between Literacy and Health. *Archives of internal medicine, 165*(17), 1943–1944. https://doi.org/10.1001/archinte.165.17.1943

Dole, J. A., Duffy, G. G., Roehler, L. R., & Pearson, P. D. (1991). Moving From the Old to the New: Research on Reading Comprehension Instruction. *Review of Educational Research*, *61*(2), 239-264. https://doi.org/10.3102/00346543061002239

Dore, R. A., Amendum, S. J., Golinkoff, R. M., & Hirsh-Pasek, K. (2018). Theory of mind: A hidden factor in reading comprehension? *Educational Psychology Review, 30*(3), 1067–1089. https://doi.org/10.1007/s10648-018-9443-9

Duke, N. K., & Roberts, K. L. (2010). The genre-specific nature of reading comprehension. In D. Wyse, R. Andrews & J. Hoffman (Eds). *The Routledge International Handbook of English, language and literacy teaching* (pp. 74-83). Routledge.

Duke, N., & Cartwright, K. (2019). The drive model of reading: deploying reading in varied environments. In D. Alvermann, N.Unrau, M. Sailors, and R. Ruddell (Eds.), *Theoretical Models And Processes Of Literacy* (pp. 118-136). Routledge.

Dutke, S., Grefe, A.C. & Leopold, C. (2016). Learning from scientific texts: personalizing the text increases transfer performance and task involvement. *European Journal of Psychology of Education*, *31*(4), 499–513. https://doi.org/10.1007/s10212-015-0281-6

Eivers, E. (2010). PISA: Issues in implementation and interpretation. *The Irish Journal of Education, 38*, 94–118.

Firth, J., Torous, J., Stubbs, B., Firth, J. A., Steiner, G. Z., Smith, L., Alvarez-Jimenez, M., Gleeson, J., Vancampfort, D., Armitage, C. J., & Sarris, J. (2019). The "online brain": how the Internet may be changing our cognition. *World psychiatry: official journal of the World Psychiatric Association (WPA)*, *18*(2), 119–129. https://doi.org/10.1002/wps.20617

Gee, J. P. (1999). Critical Issues: Reading and the new literacy studies: reframing the national academy of sciences report on reading. *Journal of Literacy Research*, *31*(3), 355-374. https://doi.org/10.1080/10862969909548052

Gee J. (2000). Discourse and sociocultural studies in reading. In M. Kamil, P. Mosenthal, P.D. Pearson & R. Barr (Eds.), *Handbook of Reading Research, 3*, 195-209. LEA.

Golke, S., Hagen, R., & Wittwer, J. (2019). Lost in narrative? The effect of informative narratives on text comprehension and metacomprehension accuracy. *Learning and Instruction, 60,* 1–19. https://doi.org/10.1016/j.learninstruc.2018.11.003

Graesser, A. (2007). An introduction to strategic reading comprehension. In D. McNammara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 3-27). LEA.

Greene Brabham, E., & Lynch-Brown, C. (2002). Effects of teachers' reading-aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades. *Journal of Educational Psychology, 94*(3), 465–473. https://doi.org/10.1037/0022-0663.94.3.465

Gurung, R. A. R. (2004). Pedagogical aids: Learning enhancers or dangerous detours? *Teaching of Psychology, 31*(3), 164–166. https://doi.org/10.1207/s15328023top3103_1

Hunn, L., Teague, B. & Fisher, P. (2023). Literacy and mental health across the globe: a systematic review. *Mental Health and Social Inclusion*, *27*(4), 392-406. https://doi.org/10.1108/MHSI-09-2022-0064

Ivić, I. Pešikan, A. i Antić, S. (2003). *Aktivno učenje 2*. Institut za psihologiju.

Ivić, I., Pešikan, A., & Antić, S. (2013). *Textbook quality: A Guide to textbook standards*. V&R unipress.

Ivić, I. (2019). Printed and digital media: Printed and digital textbooks. *Center for Educational Policy Studies Journal, 9*(3), 25–49. https://doi.org/10.26529/cepsj.694

Ivić, I., Pešikan, A. i Kostić, A. (2021). *Ključni podaci o obrazovanju u Srbiji*. SANU.

Johnsen, E. B. (1993). *Textbooks in the kaleidoscope. A critical survey of literature and research on educational texts* (pp. 165-166). Scandinavian University Press.

Joshi, R. M. (2005). Vocabulary: A Critical Component of Comprehension. *Reading & Writing Quarterly: Overcoming Learning Difficulties, 21*(3), 209–219. https://doi.org/10.1080/10573560590949278

Jovanović, V. i Baucal, A. (2016). Razvoj PISA čitalačke kompetencije u srednjem obrazovanju. *Psihološka istraživanja, 19*(1), 63–82. https://doi.org/10.5937/PsIstra1601063J

Katzir, T., & Lipka. O. (2017). *An island of understanding - Teacher's manual*. University of Haifa.

Katzir, T., Kim, Y.S., & Dotan, S. (2018). Reading self-concept and reading anxiety in second grade children: The roles of word reading, emergent literacy skills, working memory and gender. *Frontiers in Psychology*, *9*, 1180.

Katzir, T. (2022). The Feeling of reading in a changing world: from neurons to narratives. In M. Suárez-Orozco & C. Suárez-Orozco (Ed.), *Education: A Global Compact for a Time of Crisis* (pp. 301-312). Columbia University Press. https://doi.org/10.7312/suar20434-020

Lalović, D. (2012). *Čitanje: od slova do teksta*. Univerzitet u Beogradu, Filozofski fakultet.

Li, J.-T., Tong, F., Irby, B. J., Lara-Alecio, R., & Rivera, H. (2024). The effects of four instructional strategies on English learners' English reading comprehension: A meta-analysis. *Language Teaching Research*, *28*(1), 231-252. https://doi.org/10.1177/1362168821994133

Liessmann, K. P. (2008). *Teorija neobrazovanosti: Zablude društva znanja*. Naklada Jesenski i Turk.

Lincoln, A. K., Adams, W., Eyllon, M., Garverich, S., Prener, C. G., Griffith, J., Paasche-Orlow, M. K., & Hopper, K. (2017). The Double Stigma of Limited Literacy and Mental Illness: Examining Barriers to Recovery and Participation among Public Mental Health Service Users. *Society and Mental Health*, *7*(3), 121-141. https://doi.org/10.1177/2156869317707001

Liyan, Y., Jie Yu, J., & Tong X. (2023). Social–emotional skills correlate with reading ability among typically developing readers: a meta-analysis. *Education Sciences, 13*(2) 220. https://doi.org/10.3390/educsci13020220

Maughan, B., & Carroll, J. (2006). Literacy and mental disorders. *Current opinion in psychiatry*, *19*(4), 350–354. https://doi.org/10.1097/01.yco.0000228752.79990.41

Mayer, R. E. (2008). *Learning and instruction*. (2nd ed)Pearson.

McNamara, D. S., Kintsch, E., Songer, N. B., & Kintsch, W. (1996). Are good texts always better? Interactions of text coherence, background knowledge, and levels of understanding in learning from text. *Cognition and Instruction, 14*(1), 1–43. https://doi.org/10.1207/s1532690xci1401_1

McNamara, D., Ozuru, Y.,Best, R. & O'Reilly, T. (2007). The 4-Pronged Comprehension Strategy Framework. In D. McNammara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 465- 497). LEA

Meer, Y., Breznitz, Z., & Katzir, T. (2016). Calibration of Self-Reports of Anxiety and Physiological Measures of Anxiety While Reading in Adults With and Without Reading Disability. *Dyslexia, 22*(3), 267–284. https://doi.org/10.1002/dys.1532

Mullis, I. V. S., Von Davier, M., Foy, P., Fishbein, B., Reynolds, K. A., & Wry, E. (2023). *PIRLS 2021 International Results in Reading.* Boston College, TIMSS & PIRLS International Study Center. https://doi.org/10.6017/lse.tpisc.tr2103.kb5342

Muždeka, V. (2005). Periodni sistem elemenata. U S. Antić, R. Jankov i A. Pešikan. (ur), *Kako približiti deci prirodne nauke kroz aktivno učenje: zbirka scenarija* (str. 36-37). Institut za psihologiju Filozofskog fakulteta Univerziteta u Beogradu.

Nagy, W. E., & Scott, J. A. (2000). Vocabulary processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of Reading Research, 3*, 269-284. LEA.

National Reading Panel (U.S.) & National Institute of Child Health and Human Development (U.S.). (2000). *Report of the National Reading Panel: Teaching children to read: an evidence-based assessment of the scientific research literature on reading and its implications for reading instruction.* U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development.

New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, *66*(1), 60–93. https://doi.org/10.17763/haer.66.1.17370n67v22j160u

OECD (2019), PISA 2018 Results (Vol. I): *What Students Know and Can Do*, PISA, OECD Publishing. https://doi.org/10.1787/5f07c754-en

Otero, J. (2002). Noticing and Fixing Difficulties While Undrestanding Science text. In J. Otero, J. León, & A. Graesser (Eds), *The Psychology of Science Text Comprehension* (pp.281-309). Erlbaum.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, *1*(2), 117–175.

Palincsar, A. S., & Magnusson, S. J. (2001). The interplay of first-hand and second-hand investigations to model and support the development of scientific knowledge and reasoning. In S. M. Carver & D. Klahr (Eds.), *Cognition and Instruction: Twenty-five Years of Progress* (pp. 151-193). LEA.

Pressley, M. (2000). What should comprehension instruction be the instruction of? In M. Kamil, P. Mosenthal, P. Pearson, & R. Barr (Eds.), *Handbook of Reading Research* (Vol. 3, pp. 545-561). LEA.

Purcell-Gates, V., Duke, N. K., & Martineau, J. A. (2007). Learning to read and write genre-specific text: roles of authentic experience and explicit teaching. *Reading Research Quarterly*, *42*(1), 8–45.

Reynolds, D., & Fisher, W. (2022). What happens when adolescents meet complex texts? Describing moments of scaffolding textual encounters. *Literacy*, *56*(4), 277–287. https://doi.org/10.1111/lit.12258

Sabag-Shushan, T., & Katzir, T. (2023). Emotional understanding in reading comprehension at the text, task, and reader levels: a comparison of diverse struggling readers. *Reading and Writing,* 1-25. https://doi.org/10.1007/s11145-023-10447-x

Segal, A., Dotan, S. & Katzir, T., (2023). Development over time of the reading self-concept in fourth- and fifth-grade students. *Current Psychology, 42*(32), 1-12. http://dx.doi.org/10.1007/s12144-022-03871-9

Sentell, T. L. & Shumway, M. A. (2003). Low literacy and mental illness in a nationally representative sample. *The Journal of Nervous and Mental Disease*, *191*(8), 549-552. https://doi.org/10.1097/01.nmd.0000082185.26868.dc

Slavin, R. E., & Madden, N. A. (2001). *One million children: Success for All.* Corwin Press.

Smagorinsky, P., & Smith, M. W. (1992). The nature of knowledge in composition and literary understanding: The question of specificity. *Review of Educational Research*, 62, 279–305.

Smagorinsky, P., & Mayer, R. E. (2018). Learning to be literate. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 605–626). Cambridge University Press. https://doi.org/10.1017/CBO9781139519526.036

Snow, C. (2002). *Reading for understanding: toward a research and development program in reading comprehension*. RAND

Terkl, Š. (2011). *Sami zajedno: zašto očekujemo više od tehnologije nego jedni od drugih.* Clio.

Thomas, H. (2010). Learning spaces, learning environments and the dis'placement' of learning. *British Journal of Educational Technology 41*(3), 502–511. https://doi.org/10.1111/j.1467-8535.2009.00974.x

Tvengi, Dž. (2019). *Internet generacija: Dezorijentisanost dece u digitalnom dobu*. Psihopolis.

Uljens, M. (2007). The hidden curriculum of PISA – the promotion of neo-liberal policy by educational assessment. In S. Hopman, G. Brinek, & M. Retzl (Eds.), *PISA according to PISA: Does PISA keep what it promises?* (pp. 265-294). LIT.

Vaidhyanathan, S. (2011). *The Googlization of everything: (And why we should worry)*. University of California Press.

Videnović, M. i Čaprić, G. (2020). *PISA izveštaj za Republiku Srbiju, 2018*. Ministarstvo prosvete, nauke i tehnološkog razvoja.

Vigotski, L. (1983). *Jezik i mišljenje*. Nolit.

Vitale, M. & Romance, N. (2007). A knowledge-based framework for unifying content-area reading comprehension and reading comprehension strategies. In D. McNammara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies.* (pp. 73-104). LEA.

Yussof, Y. M., Jamian, A. R., Hamzah, Z. A. Z., & Roslan, S. (2013). Students' Reading Comprehension Performance with Emotional Literacy-Based Strategy Intervention. *International Journal of Education and Literacy Studies*, *1*(1), 82-88.

Zaccoletti, S., Raccanello, D., Burro, R., & Mason, L. (2023). Reading with induced worry: The role of physiological self-regulation and working memory updating in text comprehension. *British Journal of Educational Psychology*, *93*, 26–47. https://doi.org/10.1111/bjep.12491.

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How to Improve Reading Comprehension: Mapping Critical Areas for Pedagogical Interventions

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Abstract *Literacy, in contemporary understanding, is a situational, complex competency embedded in various social practices. It is therefore conceptualized as a multidimensional literacy encompassing numerous dimensions—linguistic, mathematical, scientific, political, economic, media, and others. However, the development of multiple literacies is achievable only through the advancement of linguistic literacy, which serves as both a mediator and a moderator for all other forms of literacy. The most extensively researched aspect of linguistic literacy is reading comprehension, which underpins all meaningful learning. The aim of this paper is to present, describe, and analyze the critical components that must be included in educational interventions focused on developing reading comprehension. When the criterion of focus is applied, empirical findings, support programs, and practical efforts to foster reading comprehension cluster around several key factors: modification of the text itself from which reading and learning occur; support for developing students' cognitive competencies associated with reading; support for students' personal and affective competencies; and effective reading activities within teaching, instructional situations, and teaching/learning methods. Each of these aspects of effective pedagogical intervention is described, analyzed, and exemplified in this paper, with the conclusion that a synergistic approach is the most efficient way to develop literacy among children and youth.*

Keywords: *language literacy, literacy development, reading comprehension, pedagogical interventions, functional literacy.*

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Introduction

The importance of literacy in education and overall individual development is widely recognized and remains a top priority on the policy agendas of all stakeholders involved in education. Educational policies in many countries are undergoing continuous reform, re-evaluating approaches, methods, and interventions that can foster the development of functional literacy within both formal and informal learning contexts. Functional literacy denotes a threshold below which an individual's literacy is insufficient to comprehend, utilize, and reflect upon text, to acquire knowledge needed to achieve personal goals, and to engage meaningfully in society (OECD, 2019).

Linguistic literacy plays a pivotal role in both individual growth and societal advancement. It is closely linked to students' academic success as well as to the length and quality of their education (Bussiere et al., 2009). Beyond academics, an individual's literacy is positively correlated with physical health (DeWalt & Pignone, 2005) and mental health (Hunn et al., 2023; Lincoln et al., 2017; Maughan & Carroll, 2006; Sentell & Shumway, 2003). Literacy is negatively correlated with social problems experienced by the individual during development. In classrooms where children "struggle" with reading, there is a higher incidence of conflicts, aggression, even delinquency, early school dropout, and similar issues (Slavin & Madden, 2001). When students' reading skills are improved, their mental, social, and physical well-being also see a positive impact.

In addition to studies highlighting the importance of literacy for individual development, valuable insights are also provided by international assessments such as PISA and PIRLS. The advantage of these assessments lies in their cyclical implementation with representative samples, allowing findings to be generalized across entire student populations within an educational system. Moreover, these assessments facilitate the tracking of achievement trends and provide cross-national comparisons of youth competencies (Ivić et al., 2021; Mullis et al., 2023; Videnović & Čaprić, 2020;). Critics of these studies, however, argue that national curricula and teaching methods do not equally prepare students for these assessments, potentially disadvantaging some groups. Additionally, it has been suggested that PISA promotes a "hidden curriculum" (Uljens, 2007) aligned with neoliberal economic principles, lacks sensitivity to cultural differences (Eivers, 2010), and diverges from humanistic educational ideals (Liessmann, 2008). Nonetheless, the tasks in these assessments are based on contemporary definitions of literacy and can serve as valuable tools for planning educational policy reforms.

Moreover, teaching reading skills in today's era faces perhaps its greatest challenge with the rise of digital media, which profoundly shapes the development of young people. While brain plasticity may, over time, allow for adaptation to screen-based learning—requiring a different functional organization—current research increasingly points to reading difficulties associated with growing up in a digital environment. These include information overload, a 'scattered mind,' reduced attention span, frequent distractions, fragmented knowledge, limited capacity for deep reflection, difficulty tracking main ideas in longer texts, and challenges in retaining information in long-term memory (Firth et al., 2019; Ivić, 2019; Vaidhyanathan, 2011). Additionally, the socio-emotional characteristics of new generations, along with their interests and motivations, reflect shifts such

as heightened individualism, reduced empathy, decreased belief in the effectiveness of perseverance and hard work, and a diminished faith in the power of collective action to bring about change (Terkl, 2011; Tvengi, 2019).

A characteristic of modern culture, in which today's youth are growing up, is the exponential increase in all types of printed documents—an expansion unimaginable to previous generations. Since the 1960s, it is likely that more books, newspapers, journals, and other written documents have been printed and published than in all previous centuries since Gutenberg's time (Brockmeier & Olson, 2009). Now, any text that can be reproduced or is stored in numerous virtual, public, and private libraries is quickly and easily accessible to all.

As the sociocultural context changes, so does the theoretical and research approach to literacy. Multiple theoretical models and empirical research paradigms of literacy have emerged, as well as approaches to teaching students spoken and written language. The concept of literacy has been assimilated across various scientific disciplines and social movements. New understandings suggest that literacy is no longer just about the alphabet; it is increasingly viewed as a fusion of numerous systems of signs, symbols, media, communication methods, and corresponding practices within a symbolic space that encompasses both society and the mind (Brockmeier, 2000).

In other words, today, literacy is not seen as an individual, cognitive, alphanumeric skill but rather as a situational, complex competency integrated into various social practices (Antić & Stevanović, 2023; Gee, 2000; New London Group, 1996; OECD, 2019). In a complex world, literacy manifests itself in its various dimensions: linguistic, mathematical, media, scientific, digital, economic, political, and so on. However, multiliteracy can only be achieved through the development of linguistic literacy, which serves as a mediator and moderator of all other literacies (Antić, 2022; Antić & Stevanović, 2023). Linguistic literacy is primarily expressed as reading literacy and reading comprehension, forming the foundation of all meaningful learning of verbal content.

With new perspectives on literacy, a critical question arises in educating students: should we teach them a single, general transferable skill, or specific literacies tailored to various professions (Brockmeier & Olson, 2009)? How should literacy be developed across different subjects and educational levels? What types of pedagogical interventions would best support continued development, and which aspects should be addressed? In other words, what are the critical areas that effective pedagogical intervention should cover?

For the purposes of this paper, we define *pedagogical interventions* as all intentional, planned actions within a formal learning context, encompassing teaching materials, the learning environment, instructional methods, and the involvement of a "more competent other". Thus, it refers broadly to any structured educational experience—not limited to classroom instruction in specific subjects but also including extracurricular, school-based, and out-of-school experiences organized at any educational level. The term "intervention" is intended to highlight the focused nature of pedagogical activities. Similar to its usage in other fields—such as medicine, psychology, and special education—the term here underscores that these efforts are pedagogically targeted and strategically directed toward the development of linguistic literacy.

For nearly half a century, science and educational practice have been accumulating knowledge on what is essential for teaching reading comprehension. Some empirical studies in this field provide clear practical implications and direct recommendations for instructional practice; others require further "translation" from theory to practice, and still others involve well-developed and tested practical methods. Diverse support programs for developing reading and linguistic literacy have been implemented across various learning contexts, subjects, and educational levels. However, when these efforts are examined through the lens of their focal points, several critical areas essential for effective pedagogical intervention become apparent.

It is important to note that the research mentioned here has emerged from various disciplines, including linguistics, psycholinguistics, cognitive psychology, and educational psychology, leading to diverse theoretical foundations. These theoretical models of cognition and language comprehension attribute varying degrees of importance to the cognitive, social, and cultural aspects of reading. Two dominant theoretical approaches can be identified.

Cognitive theories view literacy as a cognitive skill that develops through direct instruction. Reading is seen as a sequence of cognitive steps, including decoding, word recognition, and the creation of mental representations to comprehend the text. This process moves from understanding the surface structure of the text and its microstructure to processes in working memory, where microstructures are integrated into a macrostructure of the text (Lalović, 2012). This process occurs through the interaction between the reader's cognitive abilities and the text itself.

The socioconstructivist perspective on literacy suggests that the development of linguistic literacy takes place through situated social practices (Purcell-Gates et al., 2007). These practices are shaped by the cultural values, knowledge, and expectations of the community, meaning that the reader constructs meaning within that context. Depending on social and cultural experiences, the understanding of the same text can vary (Gee, 2000).

This paper aims to offer an overview by identifying and mapping the key elements that pedagogical interventions should encompass to effectively foster linguistic literacy and reading comprehension. In other words, it does not advocate for a specific approach or a particular pedagogical intervention but rather highlights the areas that effective support for the development of reading literacy should encompass.

The complex and holistic nature of this phenomenon necessitates an eclectic approach to theoretical frameworks, which offer valuable insights. Therefore, the theoretical framework of this paper is the heuristic model for reading comprehension research, the RRSG model (Snow, 2002). In this model, four factors are equally important: the reader (including cognitive, affective, and motivational aspects), the text being read (not only its content but also various linguistic aspects of the text), the reading activities (including the nature of the tasks, purposes, and the context in which reading occurs), and the sociocultural context in which these factors operate. The boundaries between these elements are permeable, indicating the dynamic nature of the reading comprehension process (Snow, 2002).

Thus, the goal of this paper is to map and describe the critical areas for intervention to create an effective approach to developing reading comprehension within formal learning contexts. Reading, in this context, is necessarily linked to meaningful learning activities, and the focus is therefore on reading in the service of learning. It is important to note that this paper does not address initial literacy acquisition but rather the further development of reading competence in students who have already attained basic literacy. Similarly, specific interventions designed for students with dyslexia and other specific learning difficulties are beyond the scope of this paper.

Towards Effective Pedagogical Intervention for Developing Reading Comprehension

In the following sections, we will clarify the importance of each of the key factors contributing to effective reading, provide practical examples, and highlight areas requiring further research. The focus will be on: modifying *texts* used for reading/learning; supporting the development of *students' cognitive skills* related to reading; supporting the development of *affective aspects of students' personalities* linked to reading comprehension; and implementing effective reading comprehension activities within *teaching, teaching/learning contexts, and teaching/learning methods*. It is important to note that, although each factor will be discussed separately, in actual practice, they interact dynamically. Therefore, effective pedagogical intervention must take all these factors into account simultaneously.

Text Modifications for Reading and Learning

Since the earliest textbooks, authors have aimed to support the learning process through didactic structuring of scientific content. Beyond content selection and organization, authors of educational texts should carefully consider the linguistic features of the text itself. Specifically, this includes:

a. Microstructure of the Text: This refers to stylistic and linguistic parameters of the text (e.g., sentence length and complexity, the presence of subordinate clauses, and the familiarity of vocabulary for students of a particular age). Research in cognitive psychology has identified numerous microstructural text variables associated with successful learning of text content (Cunningham & Stanovich, 2001; McNamara et al., 1996; 2007; Otero , 2002; Snow, 2002). An example of this research with practical recommendations is the study by Danielle McNamara and colleagues titled *"Are good texts always better?"* (McNamara et al., 1996). It was experimentally established that students who are proficient readers with adequate prior knowledge learn more effectively when not all syntactic elements are explicitly presented. When readers encounter overlapping words or concepts, it becomes evident that a single idea is being discussed. Likewise, when the author employs adverbs such as "because" and "therefore", prepositions like "due to" and "owing to", or conjunctions such as "so" and "also", along with discourse markers like "thus", "besides", and "however", the reader is provided with cues about the relationships between ideas in

the text. When certain syntactic elements are omitted, students are prompted to engage more actively with the text, as they must infer missing information and reconstruct the overall message. This process activates self-regulation, metacognitive monitoring, and sentence "repair", leading to improved learning outcomes. However, this principle applies primarily to proficient readers, while less skilled readers require more extensive linguistic support to construct meaning. These findings suggest that textbook authors and teachers must carefully consider and adjust texts based on these linguistic features to better support students.

b. Macrostructure of the Text: Philosophical, sociological, and psychological analyses of the relationship between language and thought (Bernstein, Foucault, Derrida, Bakhtin, Vygotsky, Gee) have highlighted additional aspects of text that can be crucial for comprehension, such as text genre and discourse features. Numerous studies indicate that learning from different text types—particularly narrative, expository, and descriptive—varies in effectiveness (Graesser, 2007; Otero , 2002; Purcell-Gates et al., 2007). The findings generally show that using a narrative structure in texts has positive effects on learning: it increases motivation and interest, helps students activate prior knowledge more easily, and improves recall quality (Duke & Roberts, 2010; Duke & Cartwright, 2019). However, contrasting findings (Golke et al., 2019) indicate that only through engagement with expository texts can students develop scientific concepts and higher-order thinking skills (Golke et al., 2019; Graesser, 2007; Ivić et al., 2013; Otero et al., 2002).

In addition to text types and genres, content analysis and discourse analysis underscore the need to examine the interpretative and value-laden dimensions within texts, which are often implicit (Antić, 2022; 2024; Gee, 1999; 2000). These studies are based on a socioconstructivist understanding of language, which is intrinsically linked to social practice (Bakhtin, 2008; Gee, 2000; Vygotsky, 1983). Discourse analysis (and particularly critical discourse analysis), when applied to educational texts, enables the identification of worldviews and value systems that students subconsciously internalize (Antić, 2024). An example is the discourse analysis of a history lesson (Antić et al., 2008). Almost every history textbook presenting content related to World War I includes a lesson on the *Sarajevo assassination*. This event is well-documented, with no ambiguity about "when, who, how, where, and what." The study analyzed twenty history textbooks from nine countries using the "story grammar" approach and demonstrated how subtle manipulation of story elements (context, plot, role of protagonists, resolution), can shape a value judgment about the event and its protagonists, which goes beyond historical interpretation and aligns with the political platform of a particular country. Learning history necessarily involves adopting these implicit value messages.

Textbooks in all subjects can convey explicit value stances (see Gee, 2000). For this reason, it is essential to address the implicit values, worldviews, and ideologies presented in textbooks. In other words, deep reading—as a prerequisite for deep learning—should incorporate elements of discourse analysis. Teachers play a vital role in shaping instructional environments where students, through purposeful activities, dialogue, and negotiated understanding, explore the interpretative layers of a text (Antić, 2024; Gee, 2000).

c. Didactic Adaptation of Texts: Although listed last, these represent the most extensive group of studies and practical applications. They are part of a conscious effort to introduce a variety of supports, aids, and tools into the textbook to facilitate the comprehension process (Ivić et al., 2013). In a comprehensive systematization of textbook quality standards, Ivić and colleagues identified 42 quality standards, thirteen of which address the didactic structuring of content and three the standards for language quality (Ivić et al., 2013). These standards outline numerous potential structural components designed to reflect a "student-centered, learning-oriented" approach. Based on students' developmental, linguistic, and cultural characteristics, these components aim to facilitate students' engagement with the organized system of knowledge of a particular academic discipline. Examples include questions and tasks, graphs and tables, glossaries of less familiar terms, and more.

However, research suggests that simply providing students with a textbook designed to meet quality standards is not sufficient (Antić, 2015; Gurung, 2004). In an experimental study, students with matched prior knowledge and reading skills learned a lesson on the Law of Conservation of Mass from two types of texts: the first text presented the content in a traditional linear format, while the second incorporated multiple structural elements specifically designed to enhance comprehension. The latter text employed various interactive features to engage students as fully as possible within the limitations of the printed medium. Results showed no significant difference in learning outcomes between the two groups. Moreover, interviews with students indicated that they often perceived these structural components as obstacles to accessing the main text, which they viewed as a linear sequence of information to be memorized (Antić, 2015). Another study found that students' attitudes toward didactic aids in the text did not change regardless of their success on knowledge assessments (Gurung, 2004). This finding suggests that, in practice, it is essential not only to provide students with textbooks designed to support learning but also to integrate textbook use into instruction actively. Students should learn how to use the textbook effectively, and teachers should evaluate understanding rather than mere reproduction. The method of evaluating the learning performance of students is the most critical factor shaping their learning behaviors.

Supporting the Development of Students' Cognitive Skills Related to Reading

An effective pedagogical intervention must undoubtedly target students' cognitive skills. Significant insights have emerged from cognitive psychology research on the nature of reading, highlighting its complexity, the essential skills involved, and how these skills are organized. There is general consensus that reading involves a hierarchically organized set of skills and abilities. This means that without proficient decoding of letters and words—fundamental cognitive skills—it is impossible to develop higher-level cognitive skills, such as understanding genre and discourse. The direction for pedagogical interventions is clear: begin with practicing lower-order subskills, advance through building prior knowledge and vocabulary enrichment, and finally foster metacognitive regulation and

self-management of cognitive processes (McNamara et al., 2007; Pressley, 2000). Smagorinsky and Mayer identified three key focuses: (a) support for general and basic cognitive skills, (b) development of task-specific knowledge (reading a novel vs. reading a recipe requires different declarative and procedural knowledge), and (c) development of students' understanding of the discursive and interpretive nature of texts (Smagorinsky & Mayer, 2018). Below are strategies for enhancing specific reading comprehension sub-processes.

a. Developing Word Decoding Skills: To comprehend a text, students must be able to recognize, read, and understand the individual words that form each sentence. Mayer identifies four components of the cognitive skill of decoding: phoneme recognition, word decoding, fluent word decoding, and word comprehension (Mayer, 2008). Research shows that it is not enough for students simply to read and understand each word; they must also achieve automaticity and fluency, freeing up limited cognitive resources in working memory for more complex processes. There is substantial evidence that systematic reading practice, both in school and in out-of-school contexts, contributes to fluent decoding (Cunningham & Stanovich, 2001; Mayer, 2008; Pressley, 2000; Smagorinsky & Smit, 1992; Smagorinsky & Mayer, 2018;). For this reason, these authors, in addition to their research, are actively involved in promoting reading among young people.

b. Vocabulary Development: Once efficient word reading is mastered, other processes become significant for comprehension (Lalović, 2012). Regular reading practice is essential also for developing this subskill, as it actively enriches vocabulary. It is expected that students, with instructional support, should expand their vocabulary by 1,000-2,000 words per year (Smagorinsky & Smit, 1992). Merely exposing students to new words is not sufficient (although new words can be learned this way); it is more effective when vocabulary development is a structured part of the curriculum (Joshi, 2005; Nagy & Scott, 2000). For example, elementary school students learn more new words when teachers engage them in discussions before, during, and after reading a book aloud, rather than simply reading without class discussion (Greene Brabham & Lynch-Brown, 2002).

c. Acquiring General, Content-Specific, and Linguistic Knowledge: Research confirms that the content of long-term memory (what a person already knows) has a decisive impact on reading comprehension (Lalović, 2012). Consequently, quality instruction and effective learning of all school subjects (and beyond) simultaneously is a part of effective interventions to enhance reading competence.

An important category of knowledge includes metalinguistic knowledge about the author's position, decisions, and intentions, as well as the structure and discursive nature of the text itself. Although these skills are rarely an explicit part of formal instruction, they not only improve text comprehension but also foster decentration and other general cognitive abilities (Danielson, 2010; Palincsar & Magnusson, 2001). Along these lines is the "Ask the Author" program, which aims to encourage students, through discussion, to recognize that every text has an author who made numerous decisions that shaped the final text (Reichenberg & Axelsson, 2006, as cited in Danielson, 2010).

d. This category includes **knowledge of comprehension strategies and students' metacognitive knowledge.** These skills, along with students' epistemological beliefs and the development of the language of thought, contribute to self-regulated engagement

with the text (Snow, 2002). Skilled readers know how to use all of this knowledge to construct a mental model of the text. Beyond acquiring knowledge, students must also be equipped for the active application of self-regulation strategies. Among various cognitive processes (such as identifying key information, making inferences, etc.), many authors highlight the importance of the ability to monitor comprehension and actively adjust strategies when understanding falters (McNamara, 1996; McNamara et al., 2007; Otero, 2002). The development of active strategy use can be encouraged by gradually increasing the difficulty level of texts that students work on (Cunningham & Stanovich, 2001; McNamara et al., 1996; Pressley, 2000). Efforts to understand a challenging text do not necessarily signify a problem; however, it is clear that the attentive presence of the teacher is essential for assessing and supporting these skills within the students' zone of proximal development.

Supporting the Development of Affective Aspects of Students' Personalities Related to Reading Comprehension

Traditionally, reading has been viewed as a purely cognitive activity, but this perspective has been challenged by neuropsychological evidence demonstrating a link between the cognitive and affective domains. However, two rich but often separate fields of research and practice persist, with one focused on linguistic and the other on affective components of reading comprehension (Katzir & Lipka, 2017). New theoretical models of reading also emphasize the role of various emotions (Beck et al., 2012; Katzir et al., 2018; Liyan et al., 2023; Meer et al., 2016;). Despite this, most reading support programs still focus on the technical aspects of reading skills, with far less attention given to fostering interest and excitement, managing anxiety and worry (Zaccoletti et al., 2023), and reducing boredom (National Reading Panel & National Institute of Child Health and Human Development, 2000). Beyond prior knowledge and experience, every reader brings their attitudes, values, worldview, socio-emotional skills, and a specific affective response to the text, ranging from boredom to concern and anxiety (Katzir & Lipka, 2017). Depending on interest, purpose, and emotional engagement with the text, the same person may employ different reading strategies and respond differently to textual and social support.

In one study where a combination of affective and cognitive strategies was part of reading comprehension training (ELBRCS), students in the experimental group performed significantly better on reading comprehension tests, particularly at higher levels of understanding (such as inference and evaluation) (Yussof et al., 2013). Another study showed that students' comprehension improved significantly when neutral terms in a text, such as "eye," were personalized, for example, as "your eye." This personalization increased transfer, boosted motivation, and led to longer reading engagement (Dutke et al., 2016).

Empirical findings suggest that it is essential for students to develop a *mental model of themselves as readers.* Students who identify as successful readers will employ different comprehension strategies and engage in different discussions about the text compared to students who perceive themselves as poor readers, regardless of their actual

reading ability. The development of a successful reader identity or "reading self-concept" is an important factor that can contribute to reading success. This connection is reciprocal: as students experience success in reading, they also experience a growing sense of mental well-being—feeling a sense of meaning, purpose in their activities, and a sense of community and solidarity (Katzir et al., 2018; 2022; Sabag-Shushan & Katzir, 2023; Segal et al., 2023;).

Furthermore, some researchers suggest that, in addition to the mental model or reading self-concept, students' *theory of mind* is also crucial. Theory of mind is defined as the capacity to understand that other people have mental states that drive their actions, which may differ from our own. Without an understanding of theory of mind and the ability to adopt different perspectives, children may struggle to read and comprehend narrative texts. Researchers present *theory of mind as a hidden factor essential for reading comprehension* (Dore et al., 2018).

Reading Comprehension Activities in Teaching, Teaching/Learning Contexts, and Teaching/Learning Methods

The previously discussed insights on supporting students at an individual level must be incorporated into classroom instruction, where approximately thirty students with varying backgrounds and reading abilities are present. Little is known about how texts and textbooks are used in instructional settings (Johnsen, 1993). Most of our knowledge comes from practitioners' reports and intervention programs rather than research. The long-standing tradition of content-focused teaching makes it challenging to recognize the potential of various subjects and educational levels for supporting the development of reading competence.

Numerous studies have found that some instructional situations, beyond their primary educational goals, hold potential for developing linguistic competencies, particularly reading comprehension (Block et al., 2009; Dole et al., 1991; Li et al., 2024; Palincsar & Brown, 1984; Reynolds & Fisher, 2022). Examples include: individual and group work in workbooks; silent individual reading monitored by the teacher; silent individual reading with specific instructions on practicing particular skills or strategies; conceptual learning (co-construction, where two students read two selected expository texts on the same topic, read to each other, and discuss); silent reading followed by classroom discussion; scaffolding (where the teacher provides timely, personalized support and gradually increases the complexity of texts and tasks); use of graphic organizers; asking questions before reading; interactive read-alouds (where a teacher or student reads a text aloud followed by a discussion about the text's general significance and relevance to students); activities that involve summarizing, creating outlines, or synthesizing information from various sources; literature circles (where students read the same book or text and discuss it); and instructional situations where the teacher "thinks aloud," verbalizing their thoughts while reading, etc. One noteworthy example is *reciprocal teaching*, a model developed by Palinscar and Brown (Brown & Palincsar, 1984). In this approach, students learn how to work with a text to achieve comprehension. Through interaction with the teacher and peers,

they acquire strategies such as questioning, clarifying, predicting, and more. Over time, the teacher's assistance decreases, allowing students to independently apply these strategies to new texts.

What do these various instructional situations have in common? They all share one characteristic—dialogue: some situations involve "silent" or deep reading, where there is an opportunity for the reader to engage in an internal dialogue with the text. Other situations place interaction, negotiation of meaning, and sense-making between students and between students and teachers in a meaningful context. Empirical evidence supports Bakhtin's idea of *dialogism* as a crucial means through which meaning and understanding are created for the reader (Bakhtin, 2008).

Sometimes, instructional situations may include texts beyond the standard textbook, crafted intentionally by the teacher. For example, these could be "laboratory notebooks" (Palincsar & Magnusson, 2001) or private letters between scientists (Muždeka, 2005). The benefits of these examples are multifaceted—not only for acquiring knowledge and enhancing reading comprehension but also for increasing motivation and fostering a positive appreciation of science (which gains a personal, relatable dimension).

Various science texts (such as popular science, scientific journals, and reports) can be excellent resources for learning. The structure and language of these texts reflect the nature of the scientific discipline itself, making it essential for students to learn the language of each science as a disciplinary language or genre. Danielson considers students' acquisition of scientific genre as a form of *acculturation into the discourse of a scientific discipline*, where children learn and adopt scientific language, eventually using it beyond the school context (Danielson, 2010). Thus, she emphasizes the need for a supportive school environment for this acculturation. It is not enough to focus solely on textbooks; the learning environment itself should be crafted thoughtfully. All semiotic resources of a discipline—those present in the student's surroundings, on the blackboard, on posters, in notebooks, in the teacher's language, and throughout the school's hallways, whether verbal or non-verbal—are significant. It is also crucial for students to access a variety of texts within a discipline (reports, biographies, autobiographies, monographs, popular science texts, etc.).

As support programs have shown, when children are immersed in diverse texts and engaged in relevant activities over an extended period (at least one year), educational effects are significantly enhanced. Not only do they acquire knowledge in a scientific field, but their functional literacy also improves (Danielson, 2010; Vitale & Romance, 2007). Consequently, Danielson suggests that teachers periodically reflect on their instructional practices using questions such as: How and to what extent are texts used in instruction? What types/genres of texts are used? How much explicit text-related work is there, and how many meta-textual discussions (on structure, genre, disciplinary vocabulary, etc.) take place? How are these text activities conducted? Who initiates them? How are they evaluated? (Danielson, 2010).

The culture of the school itself is also significant (Bruner, 2000). Schools are sociocultural institutions, and learning occurs both explicitly and implicitly through students' presence in the school environment. Among the various factors that shape school culture,

the significance of physical school spaces is often overlooked. Do these spaces primarily serve as "lecture halls" or "classrooms" (Ivić et al., 2003; Thomas, 2010;)? Spaces dominated by lecture-based settings can demotivate students and deter them from engaging in practices essential for developing functional literacy, and vice versa.

Finally, we recognize other specific areas crucial for effective literacy support that have not been thoroughly explored in research thus far. Although the importance of socio-emotional factors in reading and learning is increasingly acknowledged, they remain under-researched compared to specific teaching techniques or cognitive strategies. Additionally, research and interventions targeted at specific student groups, such as minority social groups, students with low family socioeconomic status, or students with developmental challenges, are limited. Although student diversity is increasingly recognized (at least in educational policy documents), studies focusing on the impact of various linguistic and cultural contexts on reading are relatively scarce.

Conclusion

Literacy impacts not only individuals but also society and humanity as a whole. Reading should remain a central human experience, connecting knowledge, emotions, and values, and, as such, should be embedded in the teaching of all subjects across all educational levels as an explicit and continuous objective.

Every pedagogical intervention—essentially an action research effort from a methodological perspective—must begin with a problem analysis. In our educational system, fifteen-year-olds consistently score below the average of participating countries in PISA assessments. Reading literacy performance fluctuates slightly across cycles, but around 40% of fifteen-year-olds remain functionally illiterate (Ivić et al., 2021; Videnović & Čaprić, 2020). In other words, our students lag behind their European peers by the equivalent of one and a half years of schooling, affecting their competitiveness. In one of the rare studies conducted on large samples, retesting students using the PISA reading literacy test after two years of secondary school showed an average gain of only 26 points. In OECD countries, students improve by an average of 38 points per year, indicating that schooling in Serbia has limited impact on students' reading progress (Jovanović & Baucal, 2016). Individually, this translates to weak preparation for future learning (including higher education) and other forms of literacy, such as media literacy, which requires critical reading, or health, mental, and political literacy. At the societal level, this reflects a lack of citizens equipped to participate in essential decisions for themselves and their communities, as well as greater susceptibility to political and media manipulation.

This paper outlines essential, interconnected aspects of effective pedagogical interventions focused on developing linguistic literacy. The previously discussed components of successful intervention reveal the deep interdependence among the text, student characteristics, and the nature of the reading task (as shaped by the teacher) in fostering comprehension. Many of the cited studies were conducted in school settings, integrating teacher involvement and the school's sociocultural context into the findings. Moreover, comprehension was frequently assessed through varying levels of content mastery, from

data recall to inference and prediction. Thus, while we have temporarily separated these components for the purposes of this study, it is evident that isolating the contribution of each individual factor is nearly impossible.

In practice, this list of essential factors for developing reading comprehension can inspire both short- and long-term actions implemented in every subject, at the school level, and in extracurricular activities. Three key conclusions emerge. First, language comprehension is a lifelong process that does not end with basic literacy acquisition. Second, there is no ideal solution or guaranteed pedagogical intervention. Instead, each teacher must make decisions based on the characteristics of their students and the specific conditions of their classroom. Consequently, designing pedagogical interventions is not only a professional task but also a creative process—finding ways to cognitively and affectively engage students in meaningful learning activities that foster literacy development. Like a skilled conductor, the teacher may prioritize different factors depending on the educational goals: focusing on text or exercises that enhance cognitive or socio-affective skills.

Beyond teachers, the responsibility for effective pedagogical intervention is shared by a range of stakeholders, each potentially assuming a leadership role within a collaborative team. This team should encompass textbook authors, publishers, quality assurance experts, teachers, educational researchers from fields such as pedagogy, psychology, and linguistics, as well as teacher-training institutions. In our context, creating a favorable environment for change primarily requires that educational policies decentralize and depoliticize the functioning of schools and educators.

References

Antić, S., Pešikan, A. i Pešić, J. (2008). Kako se kreira tumačenje istorije: primena gramatike priče u analizi udžbenika istorije. XIV naučni skup *Empirijska istraživanja u psihologiji* (34-35), 7-8. februar 2008. Beograd: Filozofski fakultet. http://empirijskaistrazivanja.org/wp-content/uploads/2016/06/Knjiga-Rezimea-EIP-2008.pdf

Antić, S. (2015). The potentials od textbooks to scaffold construction of student's knowledge. In M.H. Martinho and M.do Céu de Melo (Eds.), *LiDEs – A literacia das disciplinas escolares: desafios nas aulas de História e Matemática*. (pp 9-33). Universidade do Minho. Instituto de Educação. Centro de Investigação em Educação (CIEd).

Antić, S. (2022). Language in the classroom: how to support the development of functional literacy. In J. Stevanović, D. Gundogan & B. Ranđelović (Eds.), *The State, Problems, and Needs of the Modern Education Community* (str. 29-35). Institute for Educational Research.

Antić, S. i Stevanović, J. (2023). Problemi pismenosti: danas i ovde. U A. Kostić i A. Pešikan (ur.), *Obrazovanje: stanje, perspektive i uloga u razvoju Srbije* (str. 177-194). Srpska akademija nauka i umetnosti.

Antić, S. (2024). Makrostruktura teksta u nastavi: podrška ili prepreka smislenom učenju? *Psihološka istraživanja 27*(1),109-129. https://doi.org/10.5937/PSISTRA0-45268

Bakhtin, M. M. (2008). *Speech genres and other late essays*. University of Texas Press.

Beck, L., Kumschick, I. R., Eid, M., & Klann-Delius, G. (2012). Relationships between language competence and emotional competence in middle childhood. *Emotion, 12*(3), 503–514. https://doi.org/10.1037/a0026320

Block, C. C., Parris, S. R., Reed, K. L., Whiteley, C. S., & Cleveland, M. D. (2009). Instructional approaches that significantly increase reading comprehension. *Journal of Educational Psychology, 101*(2), 262–281. https://doi.org/10.1037/a0014319

Brockmeier, J. (2000). Literacy as symbolic space. In J. W. Astington (Ed.), *Minds in the making: Essays in honor of David R. Olson* (pp. 43–61). Blackwell Publishing.

Brockmeier, J. & Olson, D. (2009). The literacy episteme. In D. R.Olson & N. Torrance (Eds.), *Cambridge handbook of literacy*(pp. 3-22). New York: Cambridge University Press.

Bruner, Dž. (2000). *Kultura obrazovanja*. Educa.

Bussiere, P., Hebert, R., & Knighton, T. (2009). Educational outcomes at age 21 associated with reading ability at age 15. Ottawa, ON: Statistics Canada, *Catalogue No. 81-004-X Vol. 6 No. 2*. Preuzeto septembra 2022. sa: http://www.statcan.gc.ca/pub/81-004-x/2009002/article/10896-eng.htm

Compton, D. L., Miller, A. C., Gilbert, J. K. & Steacy, L. M. (2013).What can be learned about the reading comprehension of poor readers through the use of advanced statistical modeling techniques? In B. Miller, L. E. Cutting & P. McCardle (Eds.), *Unraveling the behavioral, neurobiological, & genetic components of reading comprehension* (pp. 135–147). Brookes.

Cunningham, A. E. & Stanovich, K. E. (2001). What reading does for the mind. *Journal of Direct Instruction*, *1*(2), 137–149.

Danielson, K. (2010). Learning Chemistry: Text Use and Text Talk in a Finland - Swedish Chemistry Classroom. *IARTEM e-Journal*, *3*(2), 1 – 28.

DeWalt, D. & Pignone, M. (2005). Reading Is Fundamental: The Relationship Between Literacy and Health. *Archives of internal medicine, 165*(17), 1943–1944. https://doi.org/10.1001/archinte.165.17.1943

Dole, J. A., Duffy, G. G., Roehler, L. R., & Pearson, P. D. (1991). Moving From the Old to the New: Research on Reading Comprehension Instruction. *Review of Educational Research*, *61*(2), 239-264. https://doi.org/10.3102/00346543061002239

Dore, R. A., Amendum, S. J., Golinkoff, R. M., & Hirsh-Pasek, K. (2018). Theory of mind: A hidden factor in reading comprehension? *Educational Psychology Review, 30*(3), 1067–1089. https://doi.org/10.1007/s10648-018-9443-9

Duke, N. K., & Roberts, K. L. (2010). The genre-specific nature of reading comprehension. In D. Wyse, R. Andrews & J. Hoffman (Eds). *The Routledge International Handbook of English, language and literacy teaching* (pp. 74-83). Routledge.

Duke, N. & Cartwright, K. (2019). The drive model of reading: deploying reading in varied environments. In D. Alvermann, N.Unrau, M. Sailors, and R. Ruddell (Eds.), *Theoretical Models And Processes Of Literacy* (pp. 118-136). Routledge.

Dutke, S., Grefe, A.C. & Leopold, C. (2016). Learning from scientific texts: personalizing the text increases transfer performance and task involvement. *European Journal of Psychology of Education, 31*(4), 499–513. https://doi.org/10.1007/s10212-015-0281-6

Eivers, E. (2010). PISA: Issues in implementation and interpretation. *The Irish Journal of Education, 38*, 94–118.

Firth, J., Torous, J., Stubbs, B., Firth, J. A., Steiner, G. Z., Smith, L., Alvarez-Jimenez, M., Gleeson, J., Vancampfort, D., Armitage, C. J., & Sarris, J. (2019). The "online brain": how the Internet may be changing our cognition. *World psychiatry: official journal of the World Psychiatric Association (WPA)*, *18*(2), 119–129. https://doi.org/10.1002/wps.20617

Gee, J. P. (1999). Critical Issues: Reading and the new literacy studies: reframing the national academy of sciences report on reading. *Journal of Literacy Research*, *31*(3), 355-374. https://doi.org/10.1080/10862969909548052

Gee J. (2000). Discourse and sociocultural studies in reading. In M. Kamil, P. Mosenthal, P.D. Pearson & R. Barr (Eds.), *Handbook of Reading Research:Vol 3.* (pp. 195-209). LEA.

Golke, S., Hagen, R., & Wittwer, J. (2019). Lost in narrative? The effect of informative narratives on text comprehension and metacomprehension accuracy. *Learning and Instruction, 60,* 1–19. https://doi.org/10.1016/j.learninstruc.2018.11.003

Graesser, A. (2007). An introduction to strategic reading comprehension. In D. McNammara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 3-27). LEA.

Greene Brabham, E., & Lynch-Brown, C. (2002). Effects of teachers' reading-aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades. *Journal of Educational Psychology, 94*(3), 465–473. https://doi.org/10.1037/0022-0663.94.3.465

Gurung, R. A. R. (2004). Pedagogical aids: Learning enhancers or dangerous detours? *Teaching of Psychology, 31*(3), 164–166. https://doi.org/10.1207/s15328023top3103_1

Hunn, L., Teague, B. & Fisher, P. (2023). Literacy and mental health across the globe: a systematic review. *Mental Health and Social Inclusion*, *27*(4), 392-406. https://doi.org/10.1108/MHSI-09-2022-0064

Ivić, I., Pešikan, A. i Antić, S. (2003). *Aktivno učenje 2*. Institut za psihologiju.

Ivić, I., Pešikan, A. & Antić, S. (2013). Textbook quality: A Guide to textbook standards. V&R unipress

Ivić, I. (2019). Printed and digital media: Printed and digital textbooks. *Center for Educational Policy Studies Journal, 9*(3), 25–49. https://doi.org/10.26529/cepsj.694

Ivić, I., Pešikan, A. i Kostić, A. (2021). Ključni podaci o obrazovanju u Srbiji. SANU.

Johnsen, E. B. (1993). *Textbooks in the kaleidoscope. A critical survey of literature and research on educational texts* (pp. 165-166). Scandinavian University Press.

Joshi, R. M. (2005). Vocabulary: A Critical Component of Comprehension. *Reading & Writing Quarterly: Overcoming Learning Difficulties, 21*(3), 209–219. https://doi.org/10.1080/10573560590949278

Jovanović, V. i Baucal, A. (2016). Razvoj PISA čitalačke kompetencije u srednjem obrazovanju. *Psihološka istraživanja, 19*(1), 63–82. https://doi.org/10.5937/PsIstra1601063J

Katzir, T. (2022). The Feeling of reading in a changing world: from neurons to narratives. In M. Suárez-Orozco & C. Suárez-Orozco (Eds.), *Education: A Global Compact for a Time of Crisis* (pp. 301-312). Columbia University Press. https://doi.org/10.7312/suar20434-020

Katzir, T., & Lipka. O. (2017). *An island of understanding - Teacher's manual*. University of Haifa.

Katzir, T., Kim, Y.S., & Dotan, S. (2018). Reading self-concept and reading anxiety in second grade children: The roles of word reading, emergent literacy skills, working memory and gender. *Frontiers in Psychology*, *9*, 1180.

Lalović, D. (2012). *Čitanje: od slova do teksta*. Univerzitet u Beogradu, Filozofski fakultet.

Li, J.-T., Tong, F., Irby, B. J., Lara-Alecio, R., & Rivera, H. (2024). The effects of four instructional strategies on English learners' English reading comprehension: A meta-analysis. *Language Teaching Research*, *28*(1), 231-252. https://doi.org/10.1177/1362168821994133

Liessmann, K. P. (2008). *Teorija neobrazovanosti: Zablude društva znanja*. Naklada Jesenski i Turk.

Lincoln, A. K., Adams, W., Eyllon, M., Garverich, S., Prener, C. G., Griffith, J., Paasche-Orlow, M. K., & Hopper, K. (2017). The Double Stigma of Limited Literacy and Mental Illness: Examining Barriers to Recovery and Participation among Public Mental Health Service Users. *Society and Mental Health*, *7*(3), 121-141. https://doi.org/10.1177/2156869317707001

Liyan, Y., Jie Yu, J., & Tong X. (2023). Social–emotional skills correlate with reading ability among typically developing readers: a meta-analysis. *Education Sciences, 13*(2) 220. https://doi.org/10.3390/educsci13020220

Maughan, B., & Carroll, J. (2006). Literacy and mental disorders. *Current opinion in psychiatry*, *19*(4), 350–354. https://doi.org/10.1097/01.yco.0000228752.79990.41

Mayer, R. E. (2008). *Learning and instruction* (2nd ed). Pearson.

McNamara, D. S., Kintsch, E., Songer, N. B., & Kintsch, W. (1996). Are good texts always better? Interactions of text coherence, background knowledge, and levels of understanding in learning from text. *Cognition and Instruction, 14*(1), 1–43. https://doi.org/10.1207/s1532690xci1401_1

McNamara, D., Ozuru, Y.,Best, R. & O'Reilly, T. (2007). The 4-Pronged Comprehension Strategy Framework. In D. McNammara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 465- 497). LEA

Meer, Y., Breznitz, Z., & Katzir, T. (2016). Calibration of Self-Reports of Anxiety and Physiological Measures of Anxiety While Reading in Adults With and Without Reading Disability. *Dyslexia, 22*(3), 267–284. https://doi.org/10.1002/dys.1532

Mullis, I. V. S., Von Davier, M., Foy, P., Fishbein, B., Reynolds, K. A., & Wry, E. (2023). *PIRLS 2021 International Results in Reading.* Boston College, TIMSS & PIRLS International Study Center. https://doi.org/10.6017/lse.tpisc.tr2103.kb5342

Muždeka, V. (2005). Periodni sistem elemenata. U S. Antić, R. Jankov i A. Pešikan. (ur). *Kako približiti deci prirodne nauke kroz aktivno učenje: zbirka scenarija* (str.36-37). Institut za psihologiju, Filozofski fakultet.

Nagy, W. E., & Scott, J. A. (2000). Vocabulary processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of Reading Research*, (Vol. 3, pp. 269–284). LEA.

National Reading Panel (U.S.) & National Institute of Child Health and Human Development (U.S.). (2000). *Report of the National Reading Panel: Teaching children to read: an evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development.

New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, *66*(1), 60–93. https://doi.org/10.17763/haer.66.1.17370n67v22j160u

OECD (2019).PISA 2018 Results (Vol. I): What Students Know and Can Do, PISA, OECD Publishing. https://doi.org/10.1787/5f07c754-en

Otero, J. (2002). Noticing and Fixing Difficulties While Undrestanding Science text. In J. Otero, J. León, & A. Graesser (Eds.), *The Psychology of Science Text Comprehension* (pp.281-309). Erlbaum.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, *1*(2), 117–175.

Palincsar, A. S., & Magnusson, S. J. (2001). The interplay of first-hand and second-hand investigations to model and support the development of scientific knowledge and reasoning. In S. M. Carver & D. Klahr (Eds.), *Cognition and Instruction: Twenty-five Years of Progress* (pp. 151-193). LEA.

Pressley, M. (2000). What should comprehension instruction be the instruction of? In M. Kamil, P. Mosenthal, P. Pearson, & R. Barr (Eds.), *Handbook of Reading Research* (Vol. 3, pp. 545-561). LEA.

Purcell-Gates, V., Duke, N. K., & Martineau, J. A. (2007). Learning to read and write genre-specific text: roles of authentic experience and explicit teaching. *Reading Research Quarterly*, *42*(1), 8–45.

Reynolds, D., & Fisher, W. (2022). What happens when adolescents meet complex texts? Describing moments of scaffolding textual encounters. *Literacy*, *56*(4), 277–287. https://doi.org/10.1111/lit.12258

Sabag-Shushan, T. & Katzir, T. (2023). Emotional understanding in reading comprehension at the text, task, and reader levels: a comparison of diverse struggling readers. *Reading and Writing,* 1-25. https://doi.org/10.1007/s11145-023-10447-x

Segal, A., Dotan, S. & Katzir, T., (2023). Development over time of the reading self-concept in fourth- and fifth-grade students. *Current Psychology, 42*(32), 1-12. http://dx.doi.org/10.1007/s12144-022-03871-9

Sentell, T. L. & Shumway, M. A. (2003). Low literacy and mental illness in a nationally representative sample. *The Journal of Nervous and Mental Disease*, *191*(8), 549-552. https://doi.org/10.1097/01.nmd.0000082185.26868.dc

Slavin, R. E., & Madden, N. A. (2001). *One million children: Success for All.* Corwin Press.

Smagorinsky, P., & Smith, M. W. (1992). The nature of knowledge in composition and literary understanding: The question of specificity. *Review of Educational Research*, 62, 279–305.

Smagorinsky, P., & Mayer, R. E. (2018). Learning to be literate. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 605–626). Cambridge University Press. https://doi.org/10.1017/CBO9781139519526.036

Snow, C. (2002). *Reading for understanding: toward a research and development program in reading comprehension.* RAND

Terkl, Š. (2011). *Sami zajedno: zašto očekujemo više od tehnologije nego jedni od drugih.* Clio.

Thomas, H. (2010). Learning spaces, learning environments and the dis'placement' of learning. *British Journal of Educational Technology 41* (3), 502–511. https://doi.org/10.1111/j.1467-8535.2009.00974.x

Tvengi, Dž. (2019). *Internet generacija: Dezorijentisanost dece u digitalnom dobu*. Psihopolis.

Uljens, M. (2007). The hidden curriculum of PISA – the promotion of neo-liberal policy by educational assessment. In S. Hopman, G. Brinek, & M. Retzl (Eds.), *PISA according to PISA: Does PISA keep what it promises?* (pp. 265-294). Wien: LIT.

Vaidhyanathan, S. (2011). *The Googlization of everything: (And why we should worry)*. University of California Press.

Videnović, M. i Čaprić, G. (2020). *PISA izveštaj za Republiku Srbiju, 2018*. Ministarstvo prosvete, nauke i tehnološkog razvoja.

Vigotski, L. (1983). *Jezik i mišljenje*. Nolit.

Vitale, M. & Romance, N. (2007). A knowledge-based framework for unifying content-area reading comprehension and reading comprehension strategies. In D. McNammara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies.* (pp. 73-104). LEA.

Yussof, Y. M., Jamian, A. R., Hamzah, Z. A. Z., & Roslan, S. (2013). Students' Reading Comprehension Performance with Emotional Literacy-Based Strategy Intervention. *International Journal of Education and Literacy Studies*, *1*(1), 82-88.

Zaccoletti, S., Raccanello, D., Burro, R., & Mason, L. (2023). Reading with induced worry: The role of physiological self-regulation and working memory updating in text comprehension. *British Journal of Educational Psychology*, *93*, 26–47. https://doi.org/10.1111/bjep.12491

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