

Percepcije nastavnika mentora o izazovima u radu sa nastavnicima pripravnici¹

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Apstrakt

Profesionalni razvoj nastavnika, posebno na početku njihove karijere, često je praćen brojnim nesigurnostima i izazovima. Cilj programa uvođenja u posao nastavnika i samog perioda pripravnništva jeste osposobljavanje nastavnika početnika za samostalan obrazovno-vaspitni i stručni rad. Uloga nastavnika mentora u ovom za pripravnika osjetljivom periodu je veoma važna. Kompetentnost mentora može značajno odrediti kvalitet profesionalnog iskustva nastavnika pripravnika. Kako je kvalitet budućih nastavnika zajednički interes svih aktera u obrazovnom sistemu, cilj istraživanja bio je sticanje uvida u percepcije nastavnika mentora o izazovima i problemima sa kojim se susreću u radu sa pripravnici. U istraživanju je učestvovalo 98 nastavnika biologije iz osnovnih i srednjih škola u Srbiji, koji poseduju mentorsko iskustvo. Za prikupljanje podataka korišćena je tehnika anketiranja. U radu su analizirane percepcije nastavnika mentora o karakteristikama nastavnika pripravnika, najčešćim problemima sa kojim se susreću nastavnici pripravnici i izvorima stresa u radu sa nastavnicima pripravnici. Sagledani su i stavovi ispitanika po pitanju značaja i oblasti dodatne obuke za uspešan rad samih mentora. Rezultati ukazuju da nastavnicima pripravnici često nedostaju znanja i kompetencije iz različitih oblasti kako bi uspešno obavljali ulogu nastavnika. Problemi nastaju prilikom planiranja, pripreme i realizacije časa, pedagoškog vođenja nastave, komunikacije, ocenjivanja učenika. Jačanje kompetencija potrebno je i nastavnicima mentorima. Prema nalazima istraživanja, 85% ispitanika je iskazalo potrebu za dodatnom podrškom u radu sa pripravnici. Praktične implikacije istraživanja pronalazimo u rezultatima koji se mogu iskoristiti kao smernice u planiranju programa obuke nastavnika, kako tokom inicijalnog obrazovanja tako i tokom stalnog stručnog usavršavanja.

Ključne reči: nastavnik biologije, mentorstvo, profesionalni razvoj, kompetencije.

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Uvod

Jedna od najvažnijih oblasti modernizacije obrazovanja svakako je stručno usavršavanje nastavnika kao faktor unapređenja kvaliteta obrazovanja (Shibankova et al., 2019). Profesionalni razvoj je kontinuiran napor u cilju nastanka profesionalca i odnosi se na sistem vrednosti, etički kodeks, znanje, veštine i odgovornost koje usmeravaju razmišljanja i delovanje. Inicijalno obrazovanje nije ni prva ni poslednja tačka profesionalnog razvoja učitelja i nastavnika (Vujisić Živković i Vranješević, 2019). Svaka promena u obrazovnom sistemu zahteva da nastavnici i učitelji naprave značajan iskorak iz dotadašnje prakse, nadograde i prošire svoja profesionalna znanja, veštine, stavove i vrednosti kako bi efikasno izašli u susret obrazovnim reformama (Radulović et al., 2019). Period pripravnništva i program uvođenja u posao nastavnika imaju za cilj osposobljavanje nastavnika početnika za samostalan obrazovno-vaspitni i stručni rad i, kao takvi, najčešće predstavljaju prvi iskorak u profesionalnu praksu nakon sticanja formalnog obrazovanja. Mladim nastavnicima je ovo prilika za upoznavanje sa školom kao radnom sredinom i sagledavanje brojnih uloga nastavnika kroz praksu. Ovaj period može biti veoma dinamičan za još uvek neiskusne nastavnike i mogu ga pratiti brojne nesigurnosti u lična znanja i veštine. Za snalaženje u širokoj lepezi novih uloga i odnosa potrebne su kompetencije iz različitih oblasti, koje pripravniku mogu nedostajati na početku. Nesnalaženje u novim zadacima ili neuklapanje u novu sredinu i kolektiv mogu biti razlozi razočaranja i frustracije, pa čak i napuštanje profesije. Zbog toga je u ovom periodu, osetljivom za pripravnika, uloga mentora izuzetno važna. U ovoj fazi, mentorske strategije utiču na uverenja početnika o nastavnim praksama i posledično na njihove postupke (Achinstein & Barrett, 2004). Tradicionalne forme mentorstva obično se fokusiraju na jedan od najčešćih, ustaljenih i najrasprostranjenijih načina razumevanja mentorstva – oblik profesionalnog razvoja u kojem osoba sa više iskustva i znanja pomaže i osobi sa manje znanja ili iskustva i predvodi je. Ovakav odnos svodi mentorstvo na jednosmernu razmenu iz pravca iskusnijeg (mentor), ka manje iskusnom (pripravnik), iako to vrlo često nije slučaj, budući da odnosi između ljudi uvek imaju dvosmerni karakter (Miškeljin, 2016).

Tokom poslednjih decenija razvili su se modeli mentorstva koji su mnogo više usmereni na kolaboraciju nego na hijerarhiju odnosa. Međusobna saradnja, kolaborativno ponašanje, grupno učenje – sve to čini kontekst koji se polako izdvaja u obrazovnoj praksi kao promena tradicionalnog uređenja mentorstva (Mullen, 2005). Higin i Kram (Higgins & Kram, 2001) kao odgovor na pitanje alternative tradicionalnom konceptu mentorstva, jedan mentor jedan pripravnik, razmatraju koncept individualne razvojne mreže u oblasti mentorstva, u kom se mentorstvo prepoznaje kao višestruko razvojni fenomen koji prirodno podrazumeva uključivanje većeg broja različitih aktera. Prema istraživanju Vilegema i saradnika (Willegems et al., 2017), uključivanje više aktera (edukatora, nastavnika, socijalnih radnika) na nehijerarhijskom nivou jeste jedan od najperspektivnijih modela za učenje nastavnika početnika. U takvom partnerstvu je ponovna konceptualizacija uloge mentora od posebnog značaja. Autori Pitera i Vandenbruka (Peeters, 2008; Peeters & Vandenbroeck, 2011) koncept mentorstva kao refleksivnog i kolaborativnog profesionalizma razmatraju u okvirima kompetentnosti da se traže rešenja u kontekstu „neslaganja“.

Novi koncept mentorstva podrazumeva uzajamni odnos pojedinaca (ne samo početnika i iskusnih pojedinaca), grupa, institucija i šireg socio-političkog konteksta, kompetentnost tima u zajedničkom procesu učenja i refleksivnog preispitivanja sopstvene prakse, saradnju sa drugim institucijama, ustanovama, stručnjacima i porodicama dece obuhvaćene sistemom i van njega, umrežavanje sa istraživačima i institucijama inicijalnog obrazovanja, kao i koherentan sistem podrške (Pavlović Breneselović, 2009).

Često se postavlja pitanje da li tokom mentorske prakse treba dati prednost predmetnim znanjima ili pak znanjima iz oblasti pedagogije, psihologije, metodike rada. Svakako je potrebno naći balans između ovih oblasti. Programi po kojima se odvija mentorska praksa treba da budu orijentisani razvojno. Hargrivs i Fulan (Hargreaves & Fullan, 2000) identifikovali su tri odrednice mentorskih programa koji imaju potencijal da utiču na dugoročne promene u školi i na profesionalni razvoj zaposlenih. Na prvom mestu je koncepcija obrazovanja koja prepoznaje nastavnike kao glavne nosioce promena, a ne samo ponavljače isprobanih obrazaca ponašanja. Da bi mentorstvo moglo da pomera profesionalnu praksu ka željenoj viziji, ono mora biti povezano sa drugim komponentama transformisanja nastavničke profesije. Nije dovoljno da su samo mentorski programi razvojno orjentisani, nego je potrebno da se i inicijalno obrazovanje i postojeći sistemi usavršavanja razvijaju i napreduju. Pored toga, neophodno je i da svi akteri uključeni u mentorski program u njemu prepoznaju mogućnosti za unapređivanje profesije.

Period mentorskog rada nastavnika sa pripravnikom takođe predstavlja i značajan period u profesionalnom razvoju nastavnika mentora. Ovakav vid rada nosi sa sobom drugačije izazove i od nastavnika zahteva drugačiji set kompetencija od onih potrebnih za obrazovno-vaspiti rad sa učenicima, zbog čega se nastavnici različito snalaze u ovoj ulozi. Prema istraživanju određenih autora (D'Abate & Eddy, 2008) i na osnovu analize relevantne literature, autori zaključuju da se u najvećem broju stručnih radova pojavljuje nekoliko zajedničkih preduslova uspešnog mentorstva: odgovarajući izbor mentora i pripravnika, priprema mentora i pripravnika i kvalitet ostvarene interakcije između mentora i pripravnika. Abel i saradnici (Abell et al., 1995) navode da je mentorstvo uspešnije kada se karakteristike pripravnika uzimaju u obzir prilikom odluke o izboru mentora. Prema nalazima Hobsona i saradnici (Hobson et al., 2009), osim što je ustanovljeno da nisu svi dobri nastavnici nužno i dobri mentori, ističe se da ni svi uspešni mentori ne ostvaruju jednako povoljne rezultate u radu sa svakim pripravnikom. Autori Li i Feng (Lee & Feng, 2007) ukazuju na to da je mentorstvo uspešnije kada u školama postoji saradnička klima, kao i kultura učenja u kojoj mentori pronalaze podršku u drugim nastavnicima u školi. Koliko je pitanje podrške za mentorski rad značajno i potrebno ističu i Gordon i Brobekova (Gordon & Brobeck, 2010), koji u svom istraživanju navode da je mentorima, pored početne pripreme i obuke, potrebna kontinuirana podrška tokom čitavog perioda rada sa pripravnikom.

S obzirom na poziciju na kojoj se trenutno nalazi mentorska praksa u Srbiji, savremeni zahtevi mentorstva čine se previše avangardnim. Potencijal kolaborativnog istraživanja nastavnika, kao načina učenja i razvoja škole, stoga ne dobija uporište u većini škola. Iako se profesionalni razvoj nastavnika smatra jednim od ključeva za poboljšanje kvaliteta ob-

razovanja, malo je empirijski validnih istraživanja na ovu temu. Prema istraživanju koje je sprovedla Šijaković (Šijaković, 2018), u čijem fokusu je bila refleksija mentora i pripravnika o praksi koju zajedno realizuju, došlo se do tri modela mentorskog rada u našem obrazovanju. Mentorstvo u hodu (ad hoc mentorstvo) jeste model koji, najkraće rečeno, podrazumeva reprodukciju mentorove prakse koja se posmatra kao uzor. U ovakvom pristupu često izostaju brojne zajedničke aktivnosti, poput pripreme, planiranja i evaluacije nastave, što se negativno odražava na mogućnost obostranog razvoja. Forma mentorstvo je drugi model u kom, takođe, često potpuno izostaje složeniji rad i saradnja mentora i pripravnika, budući da mentor prvenstveno vodi računa o formalnim zahtevima i svojim obavezama. Ovakav pristup često proističe iz nesigurnosti mentora. Treći model okarakterisan je kao razvojno mentorstvo, i odlikuje ga motivisan mentor, koji je spreman za rad, saradnju i pružanje pune podrške profesionalnom usavršavanju i razvoju pripravnika, kao i spremnost za preispitivanje sopstvene prakse i lični razvoj. Ovaj model je svakako najpoželjniji i koristan i za pripravnika i za mentora.

U obrazovnom sistemu Srbije, procedura za izbor mentora bliže je regulisana Pravilnikom o dozvoli za rad nastavnika, vaspitača i stručnih saradnika (2022). Prema pravilniku, za mentora se bira istaknuti nastavnik sa najmanje pet godina radnog iskustva u oblasti obrazovanja i vaspitanja. Mentora određuje direktor ustanove, uz prethodno obezbeđeno mišljenje stručnog organa, u slučaju predmetnog nastavnika - mišljenje stručnog veća za oblast predmeta. Kada govorimo o formalnim i sistemskim obukama za pripremu mentora, u našoj zemlji, predviđena je obuka za mentore u trajanju od 40 sati. U praksi je, međutim, često jedini kriterijum za izbor mentora obavezni minimum od pet godina radnog iskustva, a kvalitet mentorskog rada se svodi na pretpostavku da će uspešan nastavnik biti i dobar mentor. Rezultat takve situacije može biti neuspešan, čineći proces mentorstva suviše formalizovanim. Kada je nastavnik u situaciji da bude mentor odrasloj osobi, znanja i veštine koje praktikuje u radu sa učenicima moraju se dopuniti novim kompetencijama, te je neophodna dodatna obuka za mentorski rad (Ušćumlić, 2012). Iako se neretko veruje da svaki iskusan nastavnik može usmeravati i voditi neiskusnog nastavnika, praksa to ne dokazuje uvek. Radulović i saradnici (Radulović et al., 2022a) ukazuju na to da problem neadekvatne obuke nastavnika za ulogu mentora ne postoji samo u našoj zemlji, već i u zemljama poput Slovačke, Češke i Mađarske. Da bi postali dobri mentori, nastavnicima koje interesuje ovaj posao treba posebna podrška, kao i smernice koje često izostaju. Prema važećoj zakonskoj regulativi nije predviđeno ni praćenje ni ocenjivanje rada mentora. Kako bi se ovaj problem prevazišao, OECD predlaže da se prosvetni savetnici uključe u evaluaciju savladanosti programa uvođenja u posao pripravnika kako bi se obezbedila pravična i objektivna procena prakse nastavnika.

Nastavnička profesija sigurno je jedna od najlepših i najznačajnijih profesija u društvu. Uprkos tome, profesionalni razvoj nastavnika često je praćen brojnim izazovima. U ovom radu predstavljene su prepreke i izazovi u radu nastavnika mentora i pripravnika u Republici Srbiji, do kojih se došlo analizom podataka dobijenih u empirijskom istraživanju.

Metodologija istraživanja

Jedna od oblasti profesionalnog razvoja nastavnika kojoj se poklanja sve više pažnje jeste mentorski rad iskusnih nastavnika sa nastavnicima početnicima. U našoj zemlji se tokom perioda pripravnništva oni uvode u posao nastavnika i pripremaju za polaganje ispita za licencu. Uspešnost ovog procesa u velikoj meri zavisi upravo od kvaliteta međuljudskih odnosa i komunikacije između nastavnika mentora i pripravnika. Na razvoj ovog odnosa veliki uticaj imaju nastavnikove percepcije ličnosti i potencijala pripravnika, kao i njihov pristup radu. Značaj ove teme prepoznat je i u našem obrazovnom sistemu, zbog čega je predmet ovog istraživanja sagledavanje izazova na polju mentorskog rada sa nastavnicima pripravnici- ma u školama u Srbiji. Opšti cilj istraživanja je sticanje uvida u percepcije nastavnika mentora o izazovima i problemima sa kojim se susreću u radu sa pripravnici- ma. U fokusu istraživanja bile su kompetencije koje nedostaju nastavnicima pripravnici- ma na početku profesionalnog rada, kao i u kojim oblastima je potrebno pružiti podršku i osnažiti nastavnike mentore. Cilj istraživanja operacionalizovan je kroz sledeće istraživač- ke zadatke:

1. ispitati percepcije nastavnika mentora o karakteristikama nastavnika pripravnika,
2. sagledati sa kojim se problemima u radu, prema mišljenju nastavnika mentora, susreću pripravnici,
3. identifikovati stresore i problematične odnose koji remete uspešno odvijanje procesa mentorstva iz ugla nastavnika mentora,
4. analizirati samoprocenu nastavnika mentora o kompetencijama za mentorski rad,
5. analizirati percepcije mentora o oblastima dodatne obuke potrebne za osnaživa- nje kompetencija za uspešno mentorsko vođenje pripravnika,
6. ispitati da li postoji statistički značajna razlika u odgovorima nastavnika mentora s obzirom na, s jedne strane, godine radnog iskustva i, s druge strane, njihove percepcije karakteristika pripravnika, izvora stresa i značaja različitih oblasti obu- ke za rad.

U istraživanju je učestvovalo 98 nastavnika biologije iz osnovnih i srednjih škola i gimnazija iz čitave Srbije. Kriterijum pri izboru ispitanika bio je iskustvo u mentorskom radu sa nastavnicima pripravnici- ma. Većina ispitanika je upitnik popunila u štampanom formatu tokom održavanja Republičkog takmičenja iz biologije za učenike srednjih škola. Deo ispitanika je upitnik popunio onlajn (korišćena je Google aplikacija Upitnik, a nastav- nici su upitniku pristupali preko sajta Bioblog). Prema polnoj strukturi uzorak je činilo 84 ispitanika ženskog pola (85.7%) i 14 ispitanika muškog pola (14.3%). Nejednak odnos po- lova u uzorku odraz je realne polne strukture zaposlenih nastavnika biologije u školama u Republici Srbiji. Prema podacima Republičkog zavoda za statistiku iz 2019. godine više od dve trećine nastavnika u osnovnim i srednjim školama su žene. U pogledu strukture

uzorka prema instituciji u kojoj su zaposleni najviše ispitanika radi u gimnaziji (72.4%), zatim u srednjoj školi (14.3%), a najmanje ispitanika radi u osnovnoj školi (13.3%). Struktura uzorka u pogledu radnog staža ispitanika je takva da najveći broj ispitanika (64.3%) ima preko 10 godina radnog iskustva, zatim od 6 do 10 godina staža (14.3%) i preko 31 godine (13.3%). Najmanje ispitanika ima do 5 godina radnog iskustva (8.1%). U analizi podataka su uvaženi odgovori svih ispitanika, jer su nastavnici koji imaju do 5 godina radnog staža imali određeni vid iskustva u mentorskom radu.

Za prikupljanje podataka u istraživanju je korišćena tehnika anketiranja. Instrument istraživanja, upitnik, kreiran je kao deo aktivnosti tokom realizacije međunarodnog projekta Mentor Training (akronim projekta MENTRA), finansiranog uz podršku programa Erasmus +, KA2. Na projektu je učestvovalo šest visokoškolskih ustanova iz četiri zemlje, uključujući i Srbiju. Prvi deo upitnika čine stavke koje se odnose na socio-demografski profil ispitanika. Drugi deo upitnika je nakon revidiranja za potrebe ovog istraživanja obuhvatio osam pitanja, od čega tri pitanja po modelu petostepene Likertove skale, dva pitanja otvorenog tipa i tri pitanja zatvorenog tipa sa ponuđenim odgovorima. Za odgovore na pitanja po modelu petostepene Likertove skale korišćene su dve skale. Prva sa odgovorima: 1-uopšte se ne slažem, 2- ne slažem se, 3-neutralno, 4-slažem se, 5-potpuno se slažem. Druga sa odgovorima: 1-potpuno nevažno, 2-nevažno, 3-ne mogu da se odlučim, 4-važno, 5-veoma važno. Na pitanja otvorenog tipa se od ispitanika tražilo da daju sažete i konkretne odgovore. Tekstualni podaci analizirani su posredstvom identifikovanja određenih tema ili obrazaca i razvrstavanjem odgovora u kategorije (proces kodiranja). Za procenu pouzdanosti korišćenog instrumenta izračunata je Kronbah alfa vrednost i ona iznosi .72. Imajući u vidu da se koeficijenti pouzdanosti veći od .7 smatraju zadovoljavajućim, korišćeni upitnik ima prihvatljivu pouzdanost (Mišćević-Kadijević, 2009). Ispitanici su obavesteni o opštoj svrsi studije i da je učešće anonimno i dobrovoljno. Anketa je sprovedena tokom 2022. godine.

Podaci iz upitnika statistički su obrađeni u programu SPSS. U obradi su korišćeni srednja vrednost, frekvencija odgovora, procentualna zastupljenost i Hi-kvadrat test. Osnovni razlog izbora neparametarske analize bio je odstupanje pojedinih ajtema od normalne raspodele (vrednosti skjunisa i kurtosisa su prelazile +/- 1), takođe, vrednosti za svaki ajtem u okviru primenjene Likertove skale su posmatrane kao diskretne vrednosti, dok su godine radnog staža grupisane u četiri celine kako bi se mogle posmatrati diskretno.

Rezultati i diskusija

Rezultati analize percepcija ispitanika o karakteristikama nastavnika pripravnika (Tabela 1) pokazali su da su u najvećoj meri saglasni sa tim da se pripravnici temeljno pripremaju za časove nastave ($M = 4.25$). Ispitanici su visoko ocenili i stavke koje se odnose na rad pripravnika sa mentorom: prihvataju kritiku konstruktivno ($M = 4.17$), traže i i cene pomoć mentora u svom radu ($M = 4.17$). Ovakav nalaz ukazuje na ozbiljnost i posvećenost

pripravnika, kao i na njihovu spremnost za saradnju sa mentorom. Najniže vrednovana karakteristika je da nastavnici pripravnici tokom konsultacija sa mentorima vode beleške ($M = 3.47$). Osvrnuli bismo se i na percepciju ispitanika o samorefleksiji nastavnika pripravnika. Ova stavka se našla u tri najniže ocenjene karakteristike ($M = 3.65$). Značajno je naglasiti da je uloga mentora iz perspektive refleksivne prakse da stvara uslove u kojima će pripravnik moći da preispituje svoj način rada i svoje poglede na praksu. Zbog toga je važno istaći da će od uspešnosti mentora u stvaranju ovakvih uslova zavisi i stepen razvoja sposobnosti samorefleksije pripravnika u ovom periodu. Prema Brukfildu (Brookfield, 1995) bez navike da promišljaju sopstvenu praksu, kontekst u kome se odvija, nastavnici su u stalnom riziku da donose loše odluke i pogrešne procene.

Hi-kvadrat test nije pokazao statistički značajnu razliku između percepcije ispitanika o karakteristikama nastavnika pripravnika i iskustva ispitanika ($r > .05$). Nastavnici biologije su bez obzira na dužinu radnog iskustva visoko ocenili karakteristike i odnos prema radu budućih nastavnika biologije.

Tabela 1

Percepcije nastavnika mentora o karakteristikama nastavnika pripravnika

Iskazi	<i>M</i>
1. Zainteresovani su za karijeru nastavnika.	4.08
2. Temeljno se pripremaju za časove nastave.	4.25
3. Imaju realističnu samorefleksiju.	3.65
4. Zainteresovani su za evaluaciju njihovog rada od strane mentora.	4.05
5. Prihvataju kritiku konstruktivno.	4.17
6. Traže i cene pomoć mentora u svom radu.	4.17
7. Žele da se konsultuju sa mentorom pri izradi priprema za časove.	4.13
8. Zainteresovani su za dešavanja u školi.	3.80
9. Imaju poteškoće pri didaktičkoj transformaciji kurikuluma.	3.60
10. Tokom konsultacija sa mentorima vode beleške.	3.47

Tabela 2

Percepcije nastavnika mentora o najčešćim problemima u radu nastavnika pripravnika

Oblast	Odgovor ispitanika	Frekvencija odgovora	n (%)
I	- pisanje pripreme za čas	14	47.8%
	- organizacija časa	4	
	- realizacija časa	4	
	- didaktička transformacija kurikulumu	3	
	- prilagođavanje nivoa znanja i količine gradiva	3	
	- koordinacija vremena na času	3	
	- nastavni programi, godišnji i operativni planovi rada	2	
	- nedostatak samopouzdanja	2	
	- preterana samouverenost	1	
	- uključivanje učenika u diskusiju	1	
	- uspostavljanje vertikalne korelacije	1	
	- razvijanje kritičkog stava	1	
	- realizacija vannastavnih aktivnosti	1	
	- unošenje sopstvenih ideja u kreiranje časa	1	
	- organizovanje aktivnosti van klasičnog tipa nastave	1	
	- okrenuti su ka onome šta oni rade, a ne koliko učenici rade i uče na času	1	
II	- administrativne obaveze i poslovi	3	5.5%
	- vođenje pedagoške dokumentacije	2	
III	- održavanje discipline na času i u odeljenju	6	15.6%
	- održavanje pažnje učenika na času	3	
	- komunikacija sa učenicima	3	
	- nedostatak distance prema učenicima	1	
	- problem autoriteta	1	
IV	- ocenjivanje učenika	7	8.9%
	- ostvarivanje ishoda i standarda postignuća	1	
V	- znanja iz oblasti genetike	6	18.9%
	- poznavanje metodike i didaktike	4	
	- znanja iz oblasti molekularne biologije	3	
	- znanja iz oblasti evolucije	2	
	- znanja iz oblasti fiziologije biljaka i životinja	2	
VI	- problem u prihvatanju saveta mentora	1	3.3%
	- pripravnici nemaju problema u radu	1	
	- pripravnici sami smatraju da nemaju problema u radu	1	
Ukupno:		90	100%

Na pitanje u kojim oblastima nastavnici pripravnici najčešće imaju problema 90 nastavnika mentora dalo je konkretan odgovor. Ovi odgovori grupisani su u šest oblasti: (I) planiranje, priprema i realizacija časova nastave; (II) administrativni poslovi i vođenje

pedagoške dokumentacije; (III) pedagoško vođenje odeljenja i komunikacija sa učenicima; (IV) ocenjivanje učenika i (V) stručna znanja. U oblast VI svrstani su odgovori koji nisu pripali prethodno navedenim oblastima. Rezultati analize odgovora po oblastima (Tabela 2) izdvojili su oblast planiranja, pripreme i realizacije časova nastave kao izvor najčešćih problema u radu pripravnika ($n = 47.8\%$). Nastavnici pripravnici najčešće imaju problema sa pisanjem pripreme za čas i organizacijom i realizacijom samog časa. Prepoznat je i problem didaktičke transformacije kurikuluma, dimenzioniranja gradiva i koordinacije vremena na čas. S obzirom na to da su u pitanju nastavnici koji imaju veoma malo praktičnog iskustva ili se prvi put susreću sa nastavnom praksom, zbog čega im često nedostaje i samopouzdanja, ovakvi rezultati nisu neočekivani. Ipak, oni ukazuju da je buduće nastavnike potrebno kroz inicijalno obrazovanje dodatno osnažiti kompetencijama za nastavni rad. U prilog tome ide i činjenica da je značajan broj odgovora ($n = 18.9\%$) ukazao i na problem nedovoljnog poznavanja gradiva, odnosno nedostatak stručnog znanja iz oblasti kao što su genetika i molekularna biologija, ali i metodika i didaktika. Kada je reč o pedagoškom vođenju odeljenja i komunikaciji sa učenicima, pripravnici i početnici u ovoj oblasti najčešće imaju problem održavanja discipline na času.

Ovakvi nalazi su u određenoj meri saglasni sa rezultatima do kojih je došla Simić (Simić, 2014) koja je ispitivala koje su to najčešće brige sa kojima se suočavaju nastavnici početnici. Prema nalazima ovog istraživanja najčešće brige nastavnika početnika se odnose na pedagoško vođenje odeljenja (kako održati disciplinu na času, izaći na kraj sa problematičnim ponašanjem učenika), zatim pitanje efikasne realizacije nastave i motivisanja učenika. Kao jednu od najčešćih briga početnici su istakli i pitanje uklapanja u kolektiv i saradnje sa kolegama. Prema nalazima ovog istraživanja ispitanici ne opažaju ovo pitanje kao problem u radu pripravnika.

U Tabeli 3 dati su rezultati analize odgovora o izvorima neprijatnosti i stresa nastavnika mentora u radu sa pripravniciima.

Tabela 3

Percepcije nastavnika mentora o izvorima neprijatnosti i stresa u radu sa nastavnicima pripravniciima

Iskazi	M
1. Neosposobljenost za podučavanje (nepripremljenost za nastavnički poziv).	3.37
2. Visoko samopouzdanje pripravnika po pitanju njihovih kompetencija i profesionalnog rada.	3.75
3. Kada ne prate moje instrukcije.	3.50
4. Kada se ne slažu sa mojim stavovima o analiziranoj situaciji ili problemu.	2.86
5. Kada zastupaju svoje stavove.	2.65
6. Način na koji komuniciraju sa mentorom.	2.93
7. Nesposobnost da se nose sa problematičnim situacijama u učionici.	3.40
8. Nesposobnost komunikacije sa kolegama.	3.54
9. Kada očekuju da dobiju gotove pripreme za čas i nastavne materijale.	3.83
10. Neuspeh u obavljanju administrativnih poslova i ispunjavanju obaveza.	3.32

Najviše ispitanika istaklo je da neprijatna osećanja i stres u radu i komunikaciji sa nastavnicima pripravnici izaziva prvenstveno očekivanje mladih kolega da dobiju gotove pripreme za čas i nastavne materijale ($M = 3.83$). Ispitanici su takođe kao izvor problema u radu i komunikaciji istakli visoko samopouzdanje pripravnika po pitanju njihovih kompetencija i profesionalnog rada ($M = 3.75$), a često i nesposobnost komunikacije sa kolegama ($M = 3.54$). Iako se visoko samopouzdanje može smatrati pozitivnom karakteristikom u konkretnoj situaciji u kojoj je pripravnici period pripravnništva često prvi iskorak u nastavnu praksu i kojima prema rezultatima i ovog istraživanja često nedostaju različite kompetencije koje se i stiču kroz rad i iskustvo, nerealna samorefleksija o sopstvenim kompetencijama može predstavljati problem u radu i komunikaciji sa mentorom. Najslabije ocenjene stavke u vezi sa razlozima neprijatnosti odnose se na zastupanje sopstvenih stavova ($M = 2.65$) i neslaganje sa stavovima mentora o analiziranoj situaciji ili problemu ($M = 2.86$). Dobijeni rezultat pokazuje da nastavnici mentori razumeju potrebu mladih nastavnika da zastupaju sopstvene stavove.

Hi-kvadrat test nije pokazao da postoji statistički značajna razlika u odgovorima mentora različitih godina radnog iskustva kada su u pitanju razlozi za stres i neprijatnosti u radu sa nastavnicima pripravnici ($r > .05$). Nastavnici biologije su bez obzira na dužinu radnog iskustva pokazali slične stavove po pitanju faktora kvalitetne saradnje i izvora stresa u radu sa pripravnici.

Rezultati istraživanja su pokazali da oko 90% ispitanika tokom inicijalnog obrazovanja nije imalo nikakav kurs ili drugi vid obuke vezan za mentorski rad. Preko 80% njih nije pohađalo ni obuku iz ove oblasti u okviru stalnog stručnog usavršavanja. Uprkos tome, ispitanici su veoma visoko ocenili sve oblasti obuke mentora. U Tabeli 4 dati su rezultati analize odgovora. Oblasti obuke mentora koje su ispitanici ocenili kao najvažnije su: komunikacija između mentora i pripravnika ($M = 4.65$), izgradnja pozitivnog odnosa sa pripravnici ($M = 4.54$), poznavanje uloge i obaveza mentora ($M = 4.49$), upravljanje konfliktima i kontrola stresa ($M = 4.44$).

Tabela 4

Percepcije nastavnika mentora o značaju obuke mentora po oblastima

Iskazi	<i>M</i>
1. Poznavanje uloge i obaveza mentora.	4.49
2. Izgradnja pozitivnog odnosa sa pripravnici.	4.54
3. Komunikacija između mentora i pripravnika.	4.65
4. Individualni pristup i savetodavni rad.	4.36
5. Razvoj kompetencija za praćenje i evaluaciju.	4.36
6. Formiranje kritičke samorefleksije i samoevaluacije.	4.36
7. Formiranje svesti o karijernom razvoju.	4.04
8. Upravljanje konfliktima i kontrola stresa.	4.44

Analizom odgovora ispitanika na pitanje iz kojih oblasti smatraju da im je potrebna dodatna obuka za uspešan mentorski rad prepoznato je šest oblasti. Na prvom mestu našle su se metodičke kompetencije. Najfrekventniji odgovori odnosili su se na obuku za realizaciju praktične nastave i terenskog rada i primenu novih metodičkih pristupa radu. Na drugom mestu našle su se kompetencije i znanja iz predmetne oblasti, gde se izdvojila oblast genetike, i oblast poznavanja prava, uloga i obaveza mentora. Na trećem mestu našla se veoma značajna oblast upravljanja konfliktima, kontrola stresa i razvoj veštine komunikacije. Preostale dve oblasti koje je izdvojio manji broj ispitanika su oblast digitalnih kompetencija i oblast kompetencija za obavljanje administrativnih poslova. Ovakav rezultat ukazuje na potrebu preispitivanja obuke budućih nastavnika iz ovih oblasti tokom inicijalnog obrazovanja.

Oko 85% ispitanika smatra da je nastavnicima prirodnih nauka potrebna dodatna podrška u cilju uspešnog ostvarivanja uloge mentora i profesionalnog razvoja. Dobijeni visok procenat ukazuje na potrebu za promenom u pristupu obrazovanja budućih nastavnika, ali i uvođenja dodatnih obuka za usavršavanje nastavnika.

Zaključak

Istraživanje je pokazalo da nastavnici mentori smatraju da nastavnicima pripravnici za uspešno ostvarivanje obrazovno-vaspitne uloge nastavničke profesije nedostaju znanja i kompetencije iz različitih oblasti. Problemi se javljaju pri planiranju, pripremi i realizaciji časova, pedagoškom vođenju odeljenja, komunikaciji, ocenjivanju učenika. Jedna od teorijskih postavki kojom se vode tvorci mentorsko-pripravnčkih programa jeste da se potrebna profesionalna znanja i veštine ne mogu razviti tokom inicijalnog obrazovanja, već je za njihovo uobličavanje i dalje razvijanje neophodna praksa uz učenje i rad. Za razvoj veština koje odlikuju dobrog i uspešnog nastavnika, kao i u svakoj profesiji, potrebno je vreme, ali i posvećenost, motivacija, iskustvo. Profesionalna odgovornost, takođe, ne nastaje sama po sebi i ne dolazi automatski sa sticanjem fakultetske diplome. To je individualni put ličnog i profesionalnog sazrevanja, praćen pozitivnim i negativnim izazovima. Zbog toga je obaveza mentora da pruži pomoć i podršku nastavniku pripravniku u svim ovim situacijama. Ta pomoć može biti usmerena ka bržoj orijentaciji nastavnika pripravnika u njihovoj nastavničkoj profesiji, ka rešavanju problema sa kojima se susreću i postepenom sticanju profesionalnog samopouzdanja, kroz iskustveno znanje (Radulović i sar., 2022).

Istraživanja ukazuju da je stres izrazito prisutan i u nastavničkoj profesiji dok nasuprot tome nastavnici često imaju nedovoljno znanja o prevenciji, prepoznavanju i načinu prevazilaženja stresnih situacija (Telebec, 2014). Nedostatak adekvatnih veština upravljanja stresom može biti izvor frustracija i nezadovoljstva koje se može negativno odraziti na sve aspekte rada i lično blagostanje nastavnika. U prikazanom istraživanju se došlo do nalaza da među izvorima stresa u radu mentora sa pripravnici prednjače očekivanja nastavnika pripravnika za gotovim nastavnim materijalima i visoko samopouzdanje po pitanju profesionalnih kompetencija, koje kako smo ranije istakli često nedostaju nastavnicima na početku karijere. Značajnim smatramo i nalaz da i sami nastavnici prepoznaju potrebu razvijanja veština kontrole stresa u radnom okruženju. Prema mišljenju ispitanika,

u četiri najznačajnije oblasti dodatne obuke mentora našle su se oblasti: komunikacija između mentora i pripravnika, izgradnja pozitivnog odnosa i upravljanje konfliktima i kontrola stresa. Podatak da su sve oblasti obuke visoko i pozitivno ocenjene ukazuju i na to da nastavnici mentori prepoznaju period mentorskog rada kao razvojni period u kom se otvara novi prostor za lični profesionalni razvoj.

Prema dobijenim nalazima, 85% nastavnika biologije iskazalo je potrebu za dodatnom podrškom u radu sa pripravnicima. Jedna od preporuka OECD-a (Maghnouj et al., 2020) jeste uvođenje obavezne obuke za sve postavljene mentore, kao i formiranje mreže nastavnika mentora koji rade u različitim ustanovama. U zemljama u regionu koje su prepoznale značaj kvalitetne obuke mentora institucije visokog obrazovanja se sve više uključuju u pružanje podrške nastavnicima. Jedan od načina su seminari i obuke iz različitih oblasti realizovane kroz projektno finansiranje. Ovakav vid podrške prepoznat je i u našoj zemlji. U prethodnih nekoliko godina na Prirodno matematičkom fakultetu Univerziteta u Novom Sadu realizovana su dva ovakva projekta, namenjena upravo nastavnicima mentorima, Mentor Training i Mentor Vademecum.

Ukoliko nam je u cilju da mentorska praksa postane deo profesionalnog razvoja nastavnika, ona mora obuhvatiti veći broj zaposlenih i biti podržana dobro osmišljenim konceptom mentorstva. Takav koncept zasnivao bi se na iskustvenom, partnerskom i refleksivnom učenju, kao i na programima koji bi podsticali napredovanje škole. To bi omogućilo školi da podrži učenje u kom pripravnik razvija sopstveni stil rada, integrišući znanja i iskustva koje je stekao tokom inicijalnog obrazovanja i nova znanja i stavove koje je stekao tokom rada sa mentorom. Mentor bi bilo omogućeno da kroz ovaj program testira svoj stil rada i sopstvenu praksu.

Praktične implikacije istraživanja pronalazimo u nalazima koji se mogu iskoristiti kao smernice u planiranju programa obuke nastavnika, kako tokom inicijalnog obrazovanja, tako i u okviru stalnog stručnog usavršavanja. Ograničenja ovog istraživanja pronalazimo u načinu uzorkovanja. S obzirom na to da u Srbiji ne postoji evidencija ili baza nastavnika mentora teško je doći do većeg uzorka ciljane grupe ispitanika zbog čega smatramo da aktuelna studija predstavlja značajan doprinos ovoj oblasti i može se smatrati pozivom za dalja istraživanja na ovu temu.

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Mentor Teachers' Perceptions of Challenges in Working with Novice Teachers¹

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Abstract

Professional development of teachers is often accompanied by numerous insecurities and challenges, especially at the beginning of their careers. The teacher induction program and the internship period itself are aimed at training novice teachers for independent educational and professional work. The role of the mentor teacher during this sensitive period for the novice teacher is very important. The competence of the mentor can significantly determine the quality of the professional experience of the novice teacher. Since the quality of future teachers is the common interest of all actors in the education system, the aim of the study was to gain insight into the perceptions of mentor teachers regarding the challenges and problems they encounter while working with novice teachers. The study included 98 biology teachers with mentoring experience from primary and secondary schools in Serbia. A survey technique was used to collect the data. The study analyzed the perceptions of mentor teachers regarding the characteristics of novice teachers, the most common problems novice teachers face and the sources of stress in working with them. It also examined the respondents' views on the importance and areas of additional training necessary for the successful work of mentors themselves. The results indicate that novice teachers often lack knowledge and competencies in various areas necessary for successfully performing their teaching role. Problems arise in planning, preparing and delivering lessons, pedagogical guidance, communication, and student assessment. Strengthening competencies is also necessary for mentor teachers. According to the findings, 85% of respondents expressed the need for additional support in working with novice teachers. The practical implications of the research are found in the results that can be used as guidelines in designing teacher training

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programs, both during initial education and as a part of training programs within the framework of continuous professional development.

Keywords: *biology teacher, mentoring, professional development, competencies.*

Introduction

One of the most important areas of education modernization is professional development of teachers as a factor in improving the quality of education (Shibankova et al., 2019). Professional development is a continuous effort in the emergence of a professional and refers to the value system, code of ethics, knowledge, skills, and responsibility that guide both thinking and action. Initial education is neither the first nor the last stage in the professional development of teachers (Vujisić Živković i Vranješević, 2019). Every change in the education system requires teachers to make a significant step forward from their previous practice, as well as to upgrade and expand their professional knowledge, skills, attitudes, and values in order to meet educational reforms effectively (Radulović et al., 2019). The induction programs and process of mentoring aim at training and preparing novice teachers for independent educational and professional practice. The period of being an intern teacher usually represents the first professional experience upon formal education. For novice teachers this is an opportunity to familiarize themselves with school as their working environment and become aware of various roles of the teacher. For inexperienced individuals, this period is very dynamic and can be accompanied with the feeling of insecurity in personal qualifications. Navigating a wide array of new roles and relationships requires competencies from various fields, which a novice teacher may lack at the beginning. Failure in adapting to the environment and in completing teaching tasks successfully can cause feelings of disappointment and frustration and may lead to dropping the profession. This is why the role of the mentor is crucial during this sensitive period for the novice teachers. At this phase, mentoring strategies influence novices' beliefs about teaching practices and consequently their actions (Achinstein & Barrett, 2004). Traditional models of mentoring usually focus on one of the most common and widely spread ways of perceiving the process of mentoring – a type of professional development in which a more experienced person assists and guides a less experienced colleague. In this concept, mentoring is seen as a one-way relation from the more experienced (mentor) to the less experienced person (novice teacher), which in practice is hardly the case, as relationships between humans always go both ways (Miškeljin, 2016).

New models of mentoring, that focus more on collaboration than hierarchical relations, have been introduced in the last decades. Mutual collaboration, collaborative behavior and learning in group create a context that is gradually being put in practice as a modification to the traditional concept of mentoring (Mullen, 2005). As an alternative to the traditional concept of mentoring, which includes one mentor one mentee, Higgins and Kram (Higgins & Kram 2001) propose the concept of individual developmental net-

work where mentoring is perceived as a developmental phenomenon that naturally includes a number of various participants. As Willegems and associates notice (Willegems et al., 2017), the inclusion of a larger number of professionals (educators, teachers, social workers) in a non-hierarchical relationship represents one of the most effective models of novice teacher training. This partnership concept requires the reconceptualization of the role of the mentor. The concept of mentoring as a reflective and collaborative process has been analyzed by other authors (Peeters, 2008; Peeters & Vandenbroeck, 2011). They propose that solutions should be sought through the context of “disagreement” (discussing in teams and opposing different opinions about changes that need to be implemented in practice). The new concept of mentoring implies the interrelation of individuals (not only those experienced and inexperienced ones), groups, institutions, and wider socio-political context, team competencies in joint learning and reflective self-assessment, cooperation with other institutions, professionals and families of children within and out of the system, professional networking with institutions of initial education and a coherent system of support (Pavlović Breneselović, 2009).

An issue that is often raised in connection with mentoring is whether the emphasis should be on the subject content or on pedagogical, psychological, and methodological aspects. Obviously, the solution is in achieving the optimal balance between these two sides. Mentoring programs should be developmental. Hargreaves and Fullan (2000) identify three key determinants of mentoring programs, aiming at long-term changes within school and professional development of its employees. The first of these is that teachers are recognized as change initiators and not only as those who replicate accepted patterns of behaviour. In achieving this vision of mentoring, the second condition is that mentoring should be connected with other components of transformation of the teaching profession. It is not sufficient that only mentoring programs are developmental, initial education and current systems of professional development should also be transformed and improved. Finally, the third condition is that all those involved in mentoring programs should look at the possibilities for improving the profession.

Mentoring is also an important period in the professional development of the mentor. This engagement implies different challenges and requires a different set of competencies than those needed in working with students, which is the reason why teachers may have difficulties. Based on the relevant literature review, D'Abate and Eddy (D'Abate & Eddy 2008) conclude that successful mentoring depends on several conditions: adequate selection of the mentor and the mentee, adequate preparation of the mentor and the mentee, and the quality of interaction between the mentor and the mentee. Abell and associates (Abell et al., 1995) claim that mentoring will be more effective if the choice of the mentor is made in relation to the mentee's characteristics. According to Hobson and associates (Hobson, et al., 2009) neither successful teachers make good mentors, nor do good mentors perform well with every mentee. Lee and Feng (2007) point out that mentoring will be more successful if there is collaborative climate and learning culture in which mentors get support from other teachers. The importance of support is emphasized by Gordon and Brobeck (Gordon & Brobeck 2010), who claim that, apart from initial training for mentoring, mentors need continuous support throughout the mentoring process.

From the perspective of current mentoring practices in Serbia, modern mentoring ideas seem too much of avant-garde. The potential of collaborative research of teachers as a way of learning and school development is not supported by schools. Although teacher professional development is considered as one of the key factors for improving the quality of education, empirical research on this topic is scarce. Based on her research on the reflection of mentors and novice teachers on their mutual practice, Šijaković (Šijaković, 2018) offers a typology of mentoring in Serbian context. Ad hoc mentoring is a model that, in short, implies the reproduction of the mentor's practice, which is viewed as a role model. In such an approach, numerous joint activities of preparation, planning, and evaluation of teaching are often missing, which negatively affects the possibility of mutual development. Form mentoring is the second model, in which complex work and collaboration between the mentor and the intern teacher are also often completely absent, since the mentor primarily focuses on formal requirements and obligations. This approach frequently stems from the mentor's own insecurity. The third model is characterized as developmental mentoring. Its defining features are a motivated mentor who is ready for work, collaboration, and providing full support for the intern's professional improvement and development, as well as a willingness to reflect on their own practice and personal growth. This model is certainly the most desirable and is beneficial for both the intern teacher and the mentor.

In the Serbian education system, the procedure for selecting mentors is more closely regulated by the Rulebook on the License for Teachers, Educators, and Professional Associates (Official Gazette of the Republic of Serbia, No. 9/2022). According to the rulebook, a prominent licensed teacher needs at least five years of work experience in the field of education in order to be selected as a mentor. The school principle appoints the mentor after obtaining official agreement of a board of professionals, usually the board of subject teachers. In Serbia, officially, formal mentor trainings should be of 40-hour length. In real life, however, it is often the case that the only criterion for becoming a mentor is having at least five years of experience in teaching, while the quality of the mentoring work is limited to an assumption that a successful teacher will make a good mentor. The result of such situation can be unsuccessful, making the mentoring process overly formalized. When the mentor trains an adult, the skills and competencies he/she applies in working with students should be extended and this is done through additional training (Uščumlić, 2012). Although it is sometimes believed that every experienced teacher can guide an inexperienced colleague, everyday practice does not support this view. Radulović and colleagues (Radulović et al., 2022a) point out that the problem of inadequate teacher training for the mentoring role exists not only in our country but also in countries such as Slovakia, the Czech Republic, and Hungary. To become a good mentor, the teacher interested in this activity should be given additional support and guidelines. Official legislations require neither monitoring nor evaluating of the mentor's work. For overcoming this problem, Organisation for Economic Co-operation and Development (OECD) suggests inclusion of educational counselors, so that an objective assessment of the novice's practice is achieved.

The teaching profession is certainly one of the most beautiful and significant professions in society. Despite this, the professional development of teachers is often accompanied by numerous challenges. This paper presents the obstacles and challenges in the work of mentor teachers and intern teachers in the Republic of Serbia, identified through the analysis of data obtained in empirical research.

Research Methodology

One of the areas of professional development for teachers receiving increasing attention is the mentoring of novice teachers by experienced colleagues. In our country, novice teachers are introduced to the teaching profession and prepared for the teaching license exam during their induction period. The success of this process largely depends on the quality of interpersonal relationships and communication between the teacher mentor and the intern teacher. The development of this relationship is heavily influenced by the mentor's perceptions of the novice teacher's personality and potential, as well as their approach to work. The significance of this topic has been recognized within the Serbian educational system, therefore, the objective of this research is to examine the challenges in the field of mentoring novice teachers in Serbian schools. The aim of the research is to gain insight into the perceptions of mentor teachers regarding the challenges and problems which they encounter when working with novice teachers. The research focuses on the competencies that novice teachers lack at the start of their professional careers, as well as the areas where mentor teachers need further support and empowerment. The research objective is operationalized through the following research tasks:

1. Examine the perceptions of mentor teachers regarding the characteristics of novice teachers;
2. Assess the work-related problems that, according to mentor teachers, novice teachers encounter;
3. Identify stressors and problematic relationships that disrupt the success of the mentoring process from the perspective of mentor teachers;
4. Analyze the self-assessment of mentor teachers regarding their own competencies for mentoring work;
5. Analyze mentors' perceptions of the areas of additional training required to empower their competencies for successful mentoring and guidance of novice teachers;
6. Examine whether there is a statistically significant difference in the responses of mentor teachers based on their years of work experience, on one hand, and their perceptions of novice teachers' characteristics and sources of stress, as well as the importance of various training areas, on the other hand.

A total of 98 biology teachers from primary schools, secondary schools, and grammar schools (gimnazije) across Serbia participated in the study. The primary criterion for the participant selection was prior experience in mentoring novice teachers. The major

rity of respondents completed the questionnaire in printed format during the National Biology Competition for secondary school students. A portion of the respondents completed the survey online via Google Forms, accessing the link through the Bioblog website. Regarding the gender distribution, the sample consisted of 84 female respondents (85.7%) and 14 male respondents (14.3%). This gender imbalance reflects the actual professional demographic of biology teachers in Serbian schools. According to 2019 data from the Statistical Office of the Republic of Serbia, more than two-thirds of teachers in primary and secondary education are women. Regarding the distribution of the sample by employer institution, the largest proportion of respondents work in grammar schools (72.4%), followed by secondary schools (14.3%), with the smallest number working in primary schools (13.3%). In terms of work experience, the majority of the sample (64.3%) has more than 10 years of experience, while 14.3% have between 6 and 10 years, and 13.3% have over 31 years. Only 8.1% have up to 5 years of experience. All respondents were included in the final analysis, because all of them possessed relevant mentoring experience, including the respondents in the 'up to 5 years' category.

The survey technique was used for data collection in this study. The research instrument, a questionnaire, was developed as part of the activities within the international project Mentor Training (project acronym: MENTRA), funded with the support of the Erasmus+, KA2 program. Six higher education institutions from four countries, including Serbia, participated in the project. The first part of the questionnaire consists of items relating to the sociodemographic profile of the respondents. After being revised for the purposes of this research, the second part of the questionnaire included eight questions: three questions based on a five-point Likert scale model, two open-ended questions and three closed-ended questions with multiple-choice options.

Two types of five-point Likert scales were used for the responses: the first included the options 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5-strongly agree, while the second consisted of 1-completely unimportant, 2-unimportant, 3-undecided, 4-important, and 5-very important. As for the open-ended questions, respondents were asked to provide concise and specific answers, and the resulting textual data were analyzed by identifying specific themes or patterns and classifying responses into categories through a coding process. To assess the reliability of the instrument used, the Cronbach's alpha value was calculated and found to be .72. Given that reliability coefficients greater than .7 are considered satisfactory, the questionnaire used possesses acceptable reliability (Mišćević-Kadijević, 2009). Participants were informed of the general purpose of the study and that participation was anonymous and voluntary. The survey was conducted during 2022.

The data from the questionnaire were statistically processed using the SPSS software. The analysis included the mean, frequency, percentage distribution, and the chi-square test. The primary reason for selecting non-parametric analysis was the deviation of certain items from a normal distribution (as skewness and kurtosis values exceeded ± 1). Additionally, values for each item within the applied Likert scale were treated as discrete values, while the years of work experience were grouped into four categories to allow for discrete observation.

Results and Discussion

The results of the responders' perceptions of novice teachers' qualities (Table 1) show that the majority of teachers think that novice teachers thoroughly prepare for lessons ($M = 4.25$). High mean values are also recorded for the following aspects of novice teachers' engagement: they accept criticism constructively ($M = 4.17$) and they are ready to ask their mentors for help and appreciate it ($M = 4.17$). Such finding indicates the seriousness and commitment of the novice teachers, as well as their readiness to collaborate with the mentor. The lowest means, on the other hand, are related to taking notes while working with mentors ($M = 3.47$). We would like to briefly address the respondents' perception of self-reflection of novice teachers. This item was ranked among the bottom three characteristics ($M = 3.65$). It is important to emphasize that the role of the mentor, perceived from the perspective of a reflective practice, is to create conditions in which the novice teacher can assess his/her own practice and attitudes towards it. This further implies that the mentor's capability for creating such conditions directly influences the level of self-reflective development of the novice teacher in that period. According to Brookfield (Brookfield, 1995), if lacking self-reflection on personal practice and the context it takes place in, teachers are under continuous risk of making wrong decisions and assessments.

Chi-squared test shows no significant difference between the responders' perceptions and the years of their work experience ($r > .05$). Regardless of the length of their work experience, biology teachers equally express high values of novice teachers' qualities and their attitude towards teaching.

Table 1.
Teacher-mentors' perceptions of novice teachers' characteristics

Items	<i>M</i>
1. Interested in teaching career.	4.08
2. Prepare thoroughly for lessons.	4.25
3. Possess realistic self-reflection.	3.65
4. Interested in mentor's assessment of their work.	4.05
5. Accept criticism constructively.	4.17
6. Ask for mentor's help and appreciate it.	4.17
7. Willing to ask for help in lesson preparation.	4.13
8. Show interest in school activities and events.	3.80
9. Have difficulties with didactic transformation of curriculum.	3.60
10. Take notes during sessions with mentors.	3.47

Regarding the question of which areas novice teachers most frequently encounter problems, 90 teacher-mentors provided specific answers, which were grouped into six categories: (I) planning, preparing, and delivering lessons; (II) administrative tasks and maintenance of pedagogical documentation; (III) classroom management and communication with students; (IV) student assessment and grading; (V) subject area knowledge;

and (VI) other responses that did not fall into the previously mentioned categories. The results (Table 2) indicate that the segment referring to planning, preparing and delivering lessons is the most challenging for novice biology teachers ($n = 47.8\%$).

Table 2

Mentor teachers' perceptions of the most common work-related problems of novice teachers

Groups of responses	Participants' responses	Frequency of responses	n (%)
I	- writing lesson plans	14	47.8%
	- lesson organization	4	
	- lesson delivery	4	
	- didactic transformation of curriculum	3	
	- adjusting to the level and quantity of knowledge	3	
	- time management	3	
	- syllabi, annual and monthly teaching plans	2	
	- lack of confidence	2	
	- overconfidence	1	
	- discussion with students	1	
	- establishing vertical correlation	1	
	- developing critical thinking	1	
	- extracurricular activities	1	
	- integrating personal ideas in lesson design	1	
	- organizing additional activities	1	
	- orientation to their own practice, and not to how much students learn	1	
II	- administrative work	3	5.5%
	- keeping pedagogical records	2	
III	- maintaining class discipline	6	15.6%
	- maintaining students' interest in class	3	
	- communication with students	3	
	- being too close with students	1	
	- the lack of authority	1	
IV	- student assessment	7	8.9%
	- achievement of outcomes and standards	1	
V	- knowledge of genetics	6	18.9%
	- knowledge of didactics and methodology of teaching	4	
	- molecular biology knowledge	3	
	- knowledge of evolution	2	
	- knowledge of plant and animal physiology	2	
VI	- difficulty in accepting mentor advice	1	3.3%
	- novice teachers encounter no difficulties in their work	1	
	- Novice teachers perceive themselves as having no work-related problems	1	
		1	
Total:		90	100%

According to the results, novice teachers most often have problems in writing lesson plans and organizing and delivering lessons. They also have problems with didactic transformation of curriculum, the quantity of teaching content and lesson time management. Bearing in mind that the responses refer to teachers with very little or almost none of teaching experience, who often lack confidence in that period, the results are not surprising. Nevertheless, the findings point out that, during the period of their initial education, future teachers should receive more skills and competencies in this area. This view is additionally supported by the fact that a considerable number of participants ($n = 18.9\%$) emphasize the problem of novice teachers' insufficient knowledge of the subject area, such as genetic and molecular biology topics, as well as those referring to didactics and teaching methodology. When it comes to class management and communication with students, novice teachers are mostly reported to have problems with student discipline.

The above results are mostly in line with the findings reported by Simić (2014) in her study on novice teachers' concerns. According to these findings, the issues that mostly concern novice teachers are class management issues (how to maintain the classroom discipline and deal with problematic behavior of students), effective delivery of lessons and student motivation. Novice teachers' concerns are also related to fitting into the school community and collaborating with other teachers. Compared to this study results, the biology teachers in this survey do not recognize this as a problem for novice teachers.

Table 3 presents the results related to the sources of discomfort and stress that mentors experience while working with novice teachers.

Table 3

Teacher-mentors' perceptions of sources of discomfort and stress in working with novice teachers

Items	<i>M</i>
1. Novice teachers' lack of teaching skills (being unprepared for teaching career).	3.37
2. Novice teachers' overconfidence in their own competencies and professional engagement	3.75
3. Novice teachers do not follow the mentor's instructions.	3.50
4. Novice teachers disagree with the mentor's views of a problem situation.	2.86
5. Novice teachers' insistence on their own attitudes.	2.65
6. Improper communication with the mentor.	2.93
7. Novice teachers' inability to cope with problem situations in the classroom.	3.40
8. Improper communication with colleagues.	3.54
9. Novice teachers expect ready-made lesson plans and materials from the mentor.	3.83
10. Novice teachers' failure in coping with administrative work.	3.32

As can be seen, the greatest value is recorded in relation to novice teachers' expectations of receiving ready-made lesson plans and materials from their mentors ($M = 3.83$). Common sources of discomfort and stress are also related to novice teachers'

overconfidence in their teaching competencies ($M = 3.75$), as well as a frequent incapacity for communication with their colleagues ($M = 3.54$). While high self-confidence can be considered a positive trait, in this specific context, where the induction period is often a novice teacher's first step into teaching practice and where they, as per the results of this study, often lack various competencies acquired through work and experience, any unrealistic self-reflection regarding one's own competencies can pose a problem in professional performance and communication with the mentor. Pursuing their own points of view ($M = 2.65$) and disagreeing with the mentor about a problem situation ($M = 2.86$) appear to be the situations that cause the least of stress for mentors. The obtained result shows that mentor teachers understand the need of young teachers to advocate for their own views.

Chi-squared test shows no statistical difference regarding the effect of years of teaching experience on the sources of stress and discomfort among mentors ($r > .05$). Regardless of the length of their work experience, biology teachers express rather similar views related to the quality of their collaboration with novice teachers.

The survey results indicate that about 90% of responders did not receive any training in mentoring during their initial education. Furthermore, more than 80% of them did not attend any training program as a part of their professional development. Nevertheless, their responses in relation to the importance of various segments of mentoring are qualified with high values. The results are presented in Table 4. According to the collected responses, the most important segments of a mentoring training are: communication between the mentor and the intern teacher ($M = 4.65$), building positive relationship with the intern teacher ($M = 4.54$), familiarity with the mentor's roles and responsibilities ($M = 4.49$) and conflict and stress management ($M = 4.44$).

Table 4
Teacher-mentors' perceptions of the importance of mentor training by areas

Items	<i>M</i>
1. Familiarity with the roles and responsibilities of the mentor.	4.49
2. Establishing positive relationship with intern teachers.	4.54
3. Mentor-intern teacher communication.	4.65
4. Individual approach and counseling.	4.36
5. Development of evaluation competencies.	4.36
6. Development of self-reflection and self-assessment.	4.36
7. Establishment of career awareness and development.	4.04
8. Conflict and stress management.	4.44

The analysis of the respondents' answers, regarding the areas in which they feel additional training is needed for successful mentoring, revealed six key domains. Method-

ological competencies ranked first, with the most frequent responses relating to training for the implementation of practical teaching and field work, as well as the application of new methodological approaches. The second place was taken by subject-matter competencies and knowledge, specifically highlighting the field of genetics, followed by knowledge of the legal rights, roles, and obligations of mentors. The third most significant area identified was conflict management, stress control, and the development of communication skills. The remaining two areas, identified by a smaller number of respondents, were digital competencies and administrative task management. These results suggest a need to re-evaluate the training of future teachers in these specific areas during their initial education.

About 85% of responders believe that teachers of sciences need additional support for successful mentoring and professional development. This high percentage indicates the need for modifying pre-service teacher training courses at university and initiating and implementing more teacher training programs for in-service teachers.

Conclusion

The research results reveal that, according to the opinions of mentor teachers, novice teachers lack knowledge and competencies from various areas. Problems are evident in planning and delivering lessons, class management, communication and assessment. One of the theoretical foundations that creators of mentoring programs are guided with is the idea that professional competences and knowledge cannot be developed during initial education, but by learning through practical experience and work. Like in any other profession, the development of teaching competences requires time, commitment and motivation. Professional responsibility is not gained automatically with a university degree. It is an individual process of personal and professional maturation, in which both positive and negative challenges appear. This is why the novice teacher needs support and assistance of the mentor. This assistance can be directed to faster orientation towards teaching profession, successful solution of problems and gradual acquisition of confidence through practical knowledge (Radulović et al, 2022).

Research indicates that stress is highly prevalent within the teaching profession, yet teachers often possess insufficient knowledge regarding the prevention, identification, and resolution of stressful situations (Telebec, 2014). This lack of adequate stress management skills can become a source of frustration and dissatisfaction, negatively impacting all aspects of work and the personal well-being of the teacher. The present study found that the leading sources of mentors' stress are the novice teachers' expectations for ready-made teaching materials and their high self-confidence regarding professional competencies, which, are often lacking at the start of a career, as previously noted. It is also significant that the teachers themselves recognize the need to develop stress control skills within the work environment. According to the respondents, the four most important areas for additional mentor training include mentor-intern teacher communication, building positive relationships, conflict management, and stress control. The fact that all training areas were highly and positively rated indicates that teacher-mentors

perceive the mentoring period as a developmental phase that opens new avenues for their own personal and professional growth.

The findings show that 85% of biology teachers think that they need additional support in their work with novice teachers. One of the recommendations of OECD is to introduce mandatory trainings for all mentors, as well as to establish network of mentors from different institutions. In regional countries that have recognized the importance of high-quality mentor training, higher education institutions are increasingly involved in providing support to teachers, often through seminars and training sessions across various fields implemented via project funding. This form of support has also been recognized in our country: specifically, the Faculty of Sciences at the University of Novi Sad has implemented two such projects over the past few years, dedicating them specifically to teacher-mentors: *Mentor Training* and *Mentor Vademecum*.

If mentoring practice is to be integrated into professional development of teachers, then it must encompass a larger number of professionals and rest on a well established concept of mentoring. The concept should be based on experiential, partnership and reflexive learning, and it should include programs of school development. This would enable schools to support learning in which novice teachers develop their own teaching styles, by integrating knowledge and skills acquired in initial education with new skills and attitudes which they developed during their work with mentors. Concurrently, mentors would be in position to test their own teaching styles and roles they acquire and perform in their own teaching practices.

Practical implications of the research can be found in findings that may serve as guidelines for planning teacher training programs, both during initial education and within continuous professional development. The limitations of this research lie in the sampling method. Given that there is no official record or database of teacher mentors in Serbia, it is difficult to reach a larger sample of the target group. For this reason, we believe that the current study represents a significant contribution to the field and that it can be considered a call for further research on this topic.

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