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Original research paper

# UNIVERSITY STUDENTS' ATTITUDES TOWARDS THEIR LANGUAGE PRACTICES, LITERACY SELF-EVALUATION, AND READING COMPREHENSION\*

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## ABSTRACT

Functional, multiple, contextual literacy (*new literacy*) constitutes a dominant concept in contemporary theory, research, and education policies. While functional literacy comprises a multitude of dimensions, the greatest significance is attributed to linguistic and reading literacy. To date, research on literacy has mostly focused on students of pre-secondary school age, often neglecting other populations, including the youth and adults. This exploratory study assessed the functional literacy of university students, primarily centering on the domains of linguistic and reading literacy. The aim was to illuminate students' perspectives on their own language practices and obtain their literacy self-evaluations. At the same time, we measured our participants' achievements in reading literacy tasks and examined relations between the above-mentioned variables. A sample of 225 social science students attending the University of Belgrade completed an online composite questionnaire. The results showed that: a) university students' high literacy self-evaluation did not correspond to their achievement in reading literacy tasks; b) language practice proved to be a composite variable within which reading and writing were differently related to achievement in reading literacy tasks. In this paper, we propose a model of relations between these variables and point to pedagogical interventions

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that could contribute to the development and improvement of functional literacy among university students in general.

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**Key words:**

functional literacy, language practices, reading comprehension, reading literacy, university students.

## ■ INTRODUCTION

Over the past several decades, the redefinition of the concept of literacy has become a burning topic in both scientific and expert circles and the domain of education policy. New conceptions of literacy have guided research focusing on modes of exhibiting literacy, measuring individual differences, and evaluating the effects of pedagogical interventions aimed at supporting the development of literacy in formal learning contexts. Not only does literacy decisively affect a person's verbal learning ability, academic success, and the quantity and quality of schooling, but it also significantly contributes to cognitive and socio-emotional development, identity development, attaining a more favorable position in the labor market, and taking an active role in society (Bussiere et al., 2009; Moje, 2002; Van De Wal & Ryan, 2014). Moreover, literacy is a means by which some members of society are empowered, while others are disenfranchised (Freire & Macedo, 1987). Literacy is positively associated with the quality of a person's social relations, including intimate partner relations, as well as mental health, with problems in the domain of literacy being associated with the presence of emotional and behavioral difficulties (Maughan & Carroll, 2006; Reis. et al., 2022).

The 1970s saw the rising prominence of a new perspective on literacy, which arose as a result of an interdisciplinary programmatic endeavor spearheaded by linguists and education policymakers. The driver of these efforts was the need to examine the causes of the failure of formal education in developing literacy in children and the youth. Within the traditional concept, literacy is viewed as an individual, autonomous, isolated, purely cognitive ability, free from values and independent of the wider context and the specific social practice or situation, such as the text, genre, or discourse within which it is practiced. Namely, literacy is understood as the possession of elementary reading, writing, and calculation skills. The new perspective on literacy, most thoroughly expounded in the works of linguists who formed the New London Group (Cazden et al., 1996), represents an elaboration and further development of pre-existing notions of language and literacy found within the theoretical frameworks of sociocultural and social constructivist theories in psychology, sociology, philosophy, linguistics, and other social sciences and humanities (e.g., Vygotsky, Bernstein, Bakhtin, Derrida, and Bourdieu).

The New London Group proposed a novel approach to literacy, defining it as a multi-dimensional competence that is differently exhibited in different contexts (Antić & Stevanović, 2023; Burke & Hardware, 2016; Cazden et al., 1996; Nabhan & Hidayat, 2018; Navehebrahim, 2011; Sang, 2017). Namely, literacy does not constitute a set of individual technical skills that can be effortlessly transferred from one context to another and measured at a certain level of competence (Barton, 2007; Barton et al., 2007; Barton & Hamilton, 1998; Garton & Pratt, 1998; Gee, 2001; Ivanič & Satchwell, 2008; Ivanič et al., 2007; Scollon & Scollon, 2004; Papen, 2005). The crossing of boundaries between two contexts requires the separation and recontextualization of practices (Eraut, 2004; Tuomi-Gröhn & Engeström, 2003). Thus came into existence the concept of *new literacy* or *multiliteracy*, which corresponds to the complex demands of modern living; this is why it is also known as *functional literacy* (Cazden et al., 1996; Levine, 1982; Street & Lefstein, 2007).

Functional literacy or multiliteracy comprises a multitude of dimensions. Nowadays, scholars differentiate between linguistic, information, mathematical, ecological, scientific, financial, political, media, digital, emotional, mental, and health literacy. It is likely that the different contexts in which literacy may be practiced could induce the formulation of new literacy dimensions.

Considering the practices of students and teachers in an academic context, a concept that is particularly relevant is that of *academic literacy*, which denotes the mastery of concepts and strategies necessary for understanding the discourses of different scientific disciplines and participating in the practices of scientific and expert communities (Cartolari et al., 2013; Harklau, 2001; Nabhan & Hidayat, 2018; Paxton & Frith, 2014; Suarez-Brito et al., 2022).

The various dimensions of literacy are not independent, but share clear positive correlations. For instance, a study conducted on a university student population identified a significant positive correlation between information and scientific literacy (Boh Podgornik et al., 2017). Further evidence of such correlations can be found in studies suggesting that intervention programs aimed at the development of one form of literacy simultaneously indirectly affect other literacy dimensions, with reports of a program for the development of scientific literacy also enhancing reading literacy (Romance & Vitale, 1992; Vitale & Romance, 2007) and information literacy training significantly improving both information literacy and scientific literacy (Boh Podgornik et al., 2017).

Still, the development of all literacy dimensions hinges on the development of *linguistic literacy* as a necessary tool (Antić & Stevanović, 2023). It is impossible to conceive supporting the development of dimensions such as digital or scientific literacy without relying on linguistic literacy (Antić & Stevanović, 2023; Stevanović, 2019; Trivić & Stevanović, 2012). Namely, to critically read content (e.g., in the media), it is necessary to properly understand the language used.

Within the complex concept of functional literacy, reading literacy constitutes the most thoroughly researched domain. The entire organization of the PISA study has been based on this assumption, with the 2018 report explicitly stating that “reading was the main subject assessed in PISA 2018” (Videnović & Čaprić, 2020, p. 34).

Hence, the present study explored university students’ functional literacy, with a particular focus on reading literacy or reading comprehension. In the literature, the two concepts are used interchangeably to denote the complex capacity of a person to construct the sense and meaning of verbal content. Since learning in a formal context predominantly entails learning verbal content, it is of paramount importance for students of all ages to be literate in the sense that in-depth reading of course content allows them to acquire permanent and applicable knowledge.

Numerous studies published over the past several decades have aimed to identify all relevant factors affecting an individual’s reading literacy. Multiple models have been proposed, all highlighting the complex, multifactorial nature of this competence, which encompasses cognitive capacities, lower and higher thought sub-processes, metacognitive self-regulation, and the motivation of the reader, along with the characteristics of the text read, its macro- and microstructure, the engagingness of the teaching situation in which reading is practiced, and the sociocultural context within which reading takes place (McNamara & Magliano, 2009; Snow, 2002). All of these factors shape an individual’s *language practice*, that is, routine behavior patterns in relation to language (most often, reading and writing activities). It should be noted that a person’s language practice is always rooted in a belief, a personal conceptualization of literacy, which allows researchers to gain insight into personal beliefs about literacy by observing their participants’ language practices (Harklau, 2001).

The university student population is no longer under the influence of systemic and systematic encouragement of linguistic literacy development (through teaching practices applied in primary and secondary schools). On the other hand, at all universities, especially in the domains of humanities and social sciences, the learning content is predominantly verbal and demanding, both in terms of volume and difficulty and in terms of expected learning outcomes (achieving professional expertise in the given field). Likewise, university students are expected to practice self-regulation in studying texts to a much greater degree, as well as manage their own learning process and plan, monitor, and evaluate the process of understanding the reading material. In other words, the sociocultural milieu and the social practice of studying at a university in our country should make students much more reflective. This justifies researching their perspectives on these matters.

Data on the level and quality of different dimensions of Serbian youth's linguistic literacy are scarce. Apart from information obtained based on the PISA study (pertaining to the literacy of 15-year-olds), there are virtually no data on the university student population. One of the rare studies involving university students was conducted at the Faculty of Pedagogy in Jagodina, where prospective students take a reading comprehension test as a part of the entrance exam. The study aimed to establish the level to which students' reading competences were developed at the beginning of their studies and how they related to their academic achievement in secondary school and academic success during the first two years of their university studies (for the generation of students enrolled in 2013). The obtained results showed that students enrolled in their studies with insufficiently developed reading competences. At the same time, the level of these competences showed a small, although positive and statistically significant, correlation with academic achievement in secondary school and academic success during university studies (Petrović & Simonović, 2016).

A study conducted on a sample of final-year grammar school and vocational school students, as well as non-philology university students, which aimed to assess participants' knowledge in the field of linguistic culture (linguistic literacy), showed that what participants struggled with most was the functional application of the acquired knowledge, especially in the domains of orthography and lexicology/lexical semantics (Stevanović, 2021). Furthermore, the findings of this study revealed no statistically significant difference in achievements of the two student populations, which is a somewhat disquieting indicator that could point to a regressive trend in the acquisition of knowledge and skills in this field.

With previous findings in mind, this study aimed to explore university students' perceptions of their own language practices, obtain their literacy self-evaluations, assess their reading literacy, and determine relations between these variables.

## ■ METHOD

### **Variables, the Instrument, and the Data Processing Method**

The research was conducted using an online questionnaire distributed via the Google Forms platform. The composite questionnaire comprised multiple segments corresponding to different variables. For the purpose of this research, we selected several questions from the questionnaire.

1. *Questions About University Students' Everyday Language Practices.* Language practices were operationalized as routine behavior patterns in relation to written

texts, that is, writing and reading situations. They were explored using two open-ended questions from the questionnaire:

- a. *Number of Informal Writing Situations.* A content analysis of participants' responses to the question regarding *everyday writing situations (Recall the most common everyday situations (not related to your studies) in which you practice writing. List the most common situations and what you write)* yielded 13 main categories of writing practices. Each category was presented as a binary variable (1–presence; 0 –absence). For all students, code 1 was assigned for writing practice categories that they listed in their responses and code 0 for all non-listed categories. Due to the binarization of variables, the summed variable labeled *Number of Informal Writing Situations* was calculated through the simple addition of all values on 13 binary variables. Thus, comparable data were obtained for all participants. A higher score indicated that students recognized (and assumably practiced) writing in a larger number of situations.
  - b. *Time Devoted to Informal Reading.* The second part of our analysis of university students' language practices pertained to the question regarding the distribution of *the time students devoted to reading different materials*. Participants were asked to divide 100% of the time they spent reading (outside examination periods) into percentages corresponding to the amount of time devoted to different categories/genres of printed materials: textbooks and compulsory reading, non-mandatory supplementary course reading, fine literature, informative texts (daily and weekly newspapers), and posts on social networks. Since we were interested in reading practices that were not related to compulsory reading, we created a new variable that represented a simple sum of the time devoted to reading different texts, excluding textbooks and compulsory reading. This variable was labeled *Time Devoted to Informal Reading*. A higher score on this variable indicated that out of the total time devoted to reading, students invested more time in freely initiated and guided reading activities involving informal texts in comparison to situations in which they read compulsory reading materials.
2. *Literacy Self-Evaluation.* Students evaluated their literacy on a scale from 1 to 10 and elaborated their choices (*On a scale from 1 to 10, evaluate your own literacy*).
  3. *Achievement in Reading Literacy Tasks.* To measure our participants' reading achievements, we selected four tasks from the international tests of PISA 2009 and PISA 2018 (Ispitni centar, 2015, 2018). Although the tasks were designed to test the achievements of 15-year-olds, we believed that the selection of several tasks would allow us to determine whether the tasks were still discriminative, whether there were differences in students' success in solving them, and whether we could obtain a relative evaluation of individual differences among students (an ordinal scale of their achievements). We selected tasks that tested cognitive processes of different levels

of complexity, from accessing and locating information, through text integration and interpretation, to contemplation about text content and its evaluation. The types of questions below the text varied from multiple-choice, recognition questions to open-ended questions, where participants independently formulated the entire answer (mostly short answers). The assessment of response accuracy was conducted using the codes specified in the Scoring Guide (Ispitni centar, 2015, 2018).

In addition to the abovementioned questions and tasks, the questionnaire collected data on the type of secondary school attended, place of origin, and achievement in Serbian Language and Literature during secondary education. The data were statistically processed using the SPSS and AMOS software packages. The measures of descriptive statistics are shown for all four variables (Number of Informal Writing Situations, Time Devoted to Informal Reading, Literacy Self-Evaluation, and Achievement in Reading Literacy Tasks). Measures of correlations between the examined variables were established via a path analysis.

### Sample

The research was conducted on a convenience sample comprising 225 first- and second-year social science students of multiple faculties at the University of Belgrade. Study programs in which our participants were enrolled are predominantly oriented towards studying texts. Our participants had graduated from different secondary schools (grammar school 50%, vocational school 50%), in different parts and regions of Serbia. They had good grades in Serbian Language and Literature in secondary school, with 67,7% having 5s (on a grading scale of 1 to 5) and 26,2% having 4s. In other words, over 93% of students had excellent or very good grades in Serbian Language and Literature.

## ■ RESULTS

### Language Practices (Writing and Reading) – Obtained Category Descriptions

University students' language practices were operationalized as the frequency of everyday writing situations and the amount of time spent reading different kinds of texts. The first phase of analysis entailed the categorization of participant answers to open-ended questions pertaining to everyday writing practices. The second phase encompassed the calculation of the frequencies of the obtained categories in the entire sample. Table 1 shows the frequencies of the most common informal writing situations among our participants.



Table 1. Informal Writing Situations

| Informal Writing Situations                                                    | Frequency | % (Participants) |
|--------------------------------------------------------------------------------|-----------|------------------|
| Writing in a planner/to-do lists                                               | 64        | 29.9             |
| Keeping a diary                                                                | 59        | 27.6             |
| Exchanging messages and emails                                                 | 57        | 26.6             |
| Writing reminders/shopping lists                                               | 46        | 21.5             |
| Writing notes and recipes                                                      | 30        | 14.0             |
| Filling out payment forms/handwritten signature/writing down telephone numbers | 21        | 9.8              |
| Notes at work                                                                  | 18        | 8.4              |
| Writing poetry/prose/short stories/essays                                      | 17        | 7.9              |
| Expressing emotions and inspiration                                            | 16        | 7.5              |
| Writing greeting cards                                                         | 8         | 3.7              |
| Helping siblings with their homework                                           | 8         | 3.7              |
| Unspecific                                                                     | 5         | 2.3              |
| Other                                                                          | 18        | 8.4              |
| The number of students who did not list any language practices                 |           | 11               |
| The total number of students who responded to the question                     |           | 203              |

According to the results, the most frequent practices were of pragmatic nature, such as writing in a planner and making to-do lists, writing reminders or shopping lists, and taking notes. However, participants also expressed the need to write down their thoughts by keeping a diary. Another prominent language practice entailed various forms of exchanging messages or emails. Somewhat less common were creative linguistic practices, such as writing poetry, prose, and short stories, along with the need to write when inspired or experiencing intense emotions that require regulation.



Table 2 shows the distribution of time our participants devoted to reading different types of texts.

**Table 2.** The Distribution of Time Devoted to Reading Different Texts

| Language Practices                                         | M(out of 100% of time devoted to reading) | SD   |
|------------------------------------------------------------|-------------------------------------------|------|
| Textbooks and compulsory reading                           | 35                                        | 22.8 |
| Posts on social networks                                   | 23                                        | 15.2 |
| Fine literature                                            | 18                                        | 16.4 |
| Informative texts (daily and weekly newspapers)            | 10                                        | 8.4  |
| Supplementary course reading materials                     | 9                                         | 8.0  |
| Other                                                      | 6                                         | 10.0 |
| The total number of students who responded to the question | 216                                       |      |

Observing the time participants spent reading different kinds of texts, it is clear that they generally spent the largest portion of time reading textbooks and compulsory reading materials. The second most common reading practice was reading posts on social networks, followed by reading fine literature. On the other hand, the smallest amount of time was devoted to reading informative texts (daily and weekly newspapers) and supplementary course reading materials. In the educational context, encouraging students to read different kinds of texts is crucial, since highlighting the importance of reading as a life-long concept should be one of the strategic goals of education in general.

## **Literacy Self-Evaluation and Achievement in Reading**

### **Literacy Tasks: Descriptive Measures**

In terms of literacy self-evaluation, the average score of 8.45 (on a scale from 1 to 10) and the distinctly negatively skewed distribution revealed that participants' evaluations of their own literacy were exceptionally high. Only 15% of participants chose a score between 2 and 7 (none of them chose the lowest score), while most participants believed that their literacy corresponded to the scores of 8 (37%), 9 (31%), and 10 (17%).

Finally, the theoretical range of achievements in reading literacy tasks was between 0 and 20. Among our participants, the average score was 12, while the slightly negatively skewed distribution of results showed that participants' achievement in tasks was narrowly above-average. The analysis of participants' percentile grouping revealed that participants with the lowest achievements (approximately one third of the sample) gave between 0 and 10 correct answers. The group of students with mid-level achievements gave between 11 and 13 correct answers. Finally, students in the most successful group gave between 14 and 18 correct answers. None of them obtained the maximum score. In our sample, there were no differences in reading achievements between grammar school graduates and vocational school graduates.

## **Language Practices, Reading Achievement, and Literacy**

### **Self-Evaluation: Descriptive Measures**

The following segment pertains to the analysis of all four variables: Number of Informal Writing Situations, Time Devoted to Informal Reading (not related to compulsory reading), Literacy Self-Evaluation, and Achievement in Reading Literacy Tasks. Table 3 shows descriptive measures for all variables.

Table 3. Descriptive Measures for All Four Variables

| Variable                                 | M     | SD    | Std.Skew | Std. Ku | Min | Max | 1 | 2    | 3    | 4     |
|------------------------------------------|-------|-------|----------|---------|-----|-----|---|------|------|-------|
| 1. Number of Informal Writing Situations | 1.63  | .98   | 2.06     | -1.27   | 0   | 4   | 1 | .032 | .098 | .24** |
| 2. Time Devoted to Informal Reading      | 65.03 | 22.80 | -2.79    | -1.55   | 0   | 100 |   | 1    | -.04 | .07   |
| 3. Literacy Self-Evaluation              | 8.45  | 1.11  | -6.92    | 14.07   | 2   | 10  |   |      | 1    | .14*  |
| 4. Achievement in Reading Literacy Tasks | 11.87 | 3.02  | -2.80    | 0.52    | 2   | 18  |   |      |      | 1     |

Note: M –Mean; SD –Standard Deviation; Std. Skew –Standardized Skewness; Std. Ku –Standardized Kurtosis; Min –Minimum; Max –Maximum; \*\* p<.01; \* p<.05

The examined variables generally showed small correlations. Achievement in Reading Literacy Tasks significantly positively correlated with Number of Informal Writing Situations ( $r=.24$ ,  $p<.01$ ) and Literacy Self-Evaluation, with which it shared the weakest correlation ( $r=.14$ ,  $p<.05$ ). With the exception of the correlation with Achievement in Reading Literacy Tasks, which was borderline significant, Literacy Self-Evaluation did not correlate with any of the tested variables.

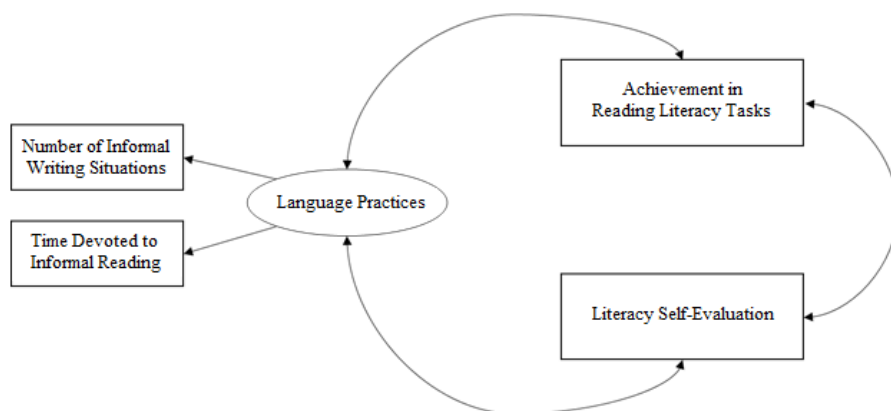
Interestingly, Number of Informal Writing Situations did not correlate with Time Devoted to Informal Reading. Furthermore, Time Devoted to Informal Reading did not correlate with other variables.

While the Number of Informal Writing Situations variable showed a normal distribution, the distribution of Time Devoted to Informal Reading was slightly negatively skewed. Although participants spent more time reading textbooks than any other individual text type, when we combine all dominant text types read in informal situations (social network posts, supplementary course materials, informative texts, and fine literature), we can conclude that participants indeed devoted more time (65%) to these content categories.

### **Analysis of Correlations Between Language Practices, Achievement in Reading Literacy Tasks, and Literacy Self-Evaluation**

To determine the correlations between Language Practices (reading and writing), Achievement in Reading Literacy Tasks, and Literacy Self-Evaluation, we conducted a path analysis. Language Practices constituted a latent variable defined by two manifest variables: Number of Informal Writing Situations and Time Devoted to Informal Reading. Since all variables were analyzed at the same point in time, it was specified that Language Practices correlated with Literacy Self-Evaluation and Achievement in Reading Literacy Tasks and that there was an interrelation between Literacy Self-Evaluation and Achievement in Reading Literacy Tasks. Before testing the model, all variables were standardized to ensure the comparability of scores on the tested variables. The specified model of correlations between the variables is shown in Figure 1.

**Figure 1.** The Specified Model of Correlations Between Language Practices, Achievement in Reading Literacy Tasks, and Literacy Self-Evaluation



The analysis of fit measures indicated that the model was a good fit to the data. The fit measures taken into consideration when establishing the adequacy of the model included the normalized chi-square test, RMSEA, CFI, NFI, and TLI. Since it was expected that the value of the chi-square statistic would be under 3, the value of RMSEA under .05, and the values of CFI, NFI, and TLI equal or greater than .90, we could conclude that the model fit was satisfactory (ratio  $\chi^2/df=1.04$ , RMSEA=.014, CFI=.99, TLI=.96, NFI=.95). Table 4 shows both the coefficients of correlations within the model and regression coefficients.

**Table 4.** Correlation Coefficients and Regression Coefficients Between the Tested Variables

| Variables                                                        | r   | b   | p   |
|------------------------------------------------------------------|-----|-----|-----|
| Number of Informal Writing Situations← Language Practices        | –   | .35 | .05 |
| Time Devoted to Informal Reading← Language Practices             | –   | .10 | .33 |
| Language Practices ↔ Achievement in Reading Literacy Tasks       | .69 | –   | .00 |
| Language Practices ↔ Literacy Self-Evaluation                    | .25 | –   | .19 |
| Literacy Self-Evaluation ↔ Achievement in Reading Literacy Tasks | .14 | –   | .05 |

*Note:* ← The direction of the causal relationship between the two variables; ↔ Interrelation between the two variables

At the variable level, the analysis showed that only Number of Informal Writing Situations was positively saturated on the latent variable of Language Practices, while Time Devoted to Informal Reading was not saturated on this variable.

Likewise, there was a strong positive correlation between Language Practices and Achievement in Reading Literacy Tasks, with higher values on this composite variable predicting higher levels of reading literacy. Finally, Literacy Self-Evaluation shared no significant correlation with Language Practices, while its correlation with Achievement in Reading Literacy Tasks was borderline significant.

## ■ DISCUSSION

The obtained results are in line with certain previous findings, but also open up new questions that need to be addressed in future research. University students who participated in our study differed in achievement in reading literacy tasks. It is interesting to note that not a single student gave the maximum number of correct responses. The discriminativeness of tasks from the PISA study in a university student population indicates that these tasks can also be used in the assessment of the reading literacy of participants above the age of 15. In the absence of systemic and continuous evaluation of student achievement at different education levels in our country (Ivić et al., 2021), we can conclude that tasks that demanded more extensive studying of texts (reading literacy proficiency levels 3, 4, and 5) were difficult for first- and second-year social science students in our country. *Inter alia*, such tasks required making inferences, finding information based on indirect instructions, locating important information embedded in the text, and recognizing relationships between several pieces of information based on multiple criteria and using them to interpret other data. While Serbian youth probably makes progress in the domain of reading literacy over the course of formal education, this progress is insufficiently rapid for Serbian students to draw level with their peers from countries with the highest PISA scores in reading literacy. In line with this conclusion is one of the findings of a study that monitored students' progress in reading literacy two years after PISA 2009. Although students' reading literacy improved, their achievements were still below the OECD average, which indicates that Serbian students make progress at a significantly slower pace (Jovanović & Baucal, 2016). It is likely that this slow progress in reading literacy continues until the first years of university studies.

Based on theoretical assumptions and previous research, reading practices and writing practices equally positively contribute to the complex composite variable of language practices. In our research and the proposed model of correlations between the variables, language practices were only defined by everyday informal writing practices, while time devoted to informal reading did not define this variable.

Furthermore, our results showed that time devoted to reading informal texts did not correlate with everyday informal reading practices and reading achievement. This finding could be linked to the fact that reading and writing initially rely on analogous mental processes and isomorphous knowledge, but over time, with greater mastery of these two skills, the nature of their relationship changes and these skills become largely independent (Fitzgerald & Shanahan, 2000).

According to the results obtained in this research, on average, university students spontaneously named two everyday writing situations. Most students listed pragmatic practices, such as writing in a planner, making to-do lists, or writing reminders, shopping lists, and notes. This could be seen as a good indicator of the adoption of certain planning and organization strategies necessary for self-management in complex everyday life situations. On the other hand, the need for contemplation and reflection is equally characteristic of our participants' age group. Likewise, exchanging messages and emails constituted another dominant language practice.

The finding that should be tested and validated in future research pertains to the correlation between language practices and reading achievement via different everyday writing practices. A greater number of different language practices, particularly everyday writing situations, could be expected to be associated with higher achievement in reading literacy tasks.

On the other hand, informal reading practices were completely independent of everyday writing practices as well as reading literacy. The analysis of time devoted to various forms of informal reading showed that social networks occupied a large portion of participants' time, which is in line with previous findings (Kuzmanović et al., 2019). Existing research has shown that certain characteristics of the internet, such as the overwhelming abundance of information (which hinders the processes of information reception, selection, and processing) and disruption (which contributes to the constant inundation with hyperlinks, video clips, platforms, and webpages), lead to attention scattering and superficial information processing (Ivić, 2019; Jabr, 2013; Kar, 2013). It is reasonable to assume that these texts do not engage the same thought processes as PISA tasks. Although reading textbooks was not encompassed by our analysis of correlations between the tested variables, since we were primarily interested in informal reading, previous findings have indicated that students are most commonly expected to show the mastery of compulsory reading materials corresponding to the basic levels of Bloom's taxonomy (remembering and understanding) (Ivić et al., 2021; Petrović & Simonović, 2016). Hence, it could be assumed that texts in the domain of informal reading are processed at a similar, superficial level, which is not in accordance with the reading literacy requirements defined by PISA tasks.



Furthermore, the writing practices, especially the situations recognized by our participants (organization, planning, self-regulation, and reflection), could indicate that they engage higher thought processes and involve the kind of engagement with a text that is more significantly related to achievement in reading literacy tasks. These interpretations of the obtained results should be validated in future research that would test the thought processes that take place during informal reading and everyday writing practices.

Our participants' high literacy self-evaluations were in discord with other variables, in the sense that they showed no correlations with language practices, while the correlation with achievement in reading literacy tasks was borderline significant. These findings suggest that students generally evaluate their literacy inaccurately and tend to overestimate their knowledge, which is in tentative accord with the results of a series of studies on generational differences (Schwieger & Ladwig, 2018).

## ■ CONCLUSION

Effective education is a strategic goal of every society. Quality education has a long-term impact on the development of functional literacy, given that in the contemporary world, adequate levels of linguistic, reading, mathematical, scientific, digital, media, financial, and other forms of functional literacy constitute a prerequisite to reaching one's full potential (Gelman & Butterworth, 2005; Schleicher 2019), actively participating in society, and taking social responsibility. Higher levels of these skills translate to greater opportunities in the labor market, along with greater success in both formal and informal lifelong learning (OECD, 2016).

The findings of this empirical research open up venues for future quantitative as well as qualitative and action studies to be conducted in different contexts, involving different participant populations. The significance of literacy competences not only pertains to individual development, but to the development of society as a whole. Hence, changes primarily need to be introduced at the levels of research practice and education policy, ensuring the coordination of efforts at the two levels.

The development of functional literacy should be constantly monitored at different ages, including both post-secondary school age and adulthood. Having in mind the obtained results, it is necessary to devise continuous intervention programs aimed at different populations and implemented both within and outside institutions. Moreover, the concept of multiliteracy should not only be associated with social sciences and humanities, as this complex issue belongs to the domain of functioning of all institutions in a contemporary society.

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