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RELATIONSHIPS BETWEEN READING STRATEGIES AND READING ACTIVITIES IN EFL CLASSROOM IN HIGHER EDUCATION ENVIRONMENT

The study explores the university undergraduate biotechnology students' perceived use of foreign language reading strategies, their perception of EFL classroom reading activities, and their potential relationships. For this purpose, a total of 91 university biotechnology students, learning English as a foreign language at the Faculty of Agronomy, University of Kragujevac, participated in this quantitative research. Two instruments were used in the study - the Inventory of Reading Strategies in a Foreign Language and Students' Foreign Language Reading Activities Evaluation Scale. The measures of internal consistency, descriptive statistics, and Pearson correlation analysis were used for data processing. The obtained data were analyzed using SPSS 20.0 statistical software. The study demonstrates that the students used EFL reading strategies at a moderate level when reading texts in English and that their attitude toward EFL classroom reading activities was positive. The perceived use of reading strategies showed positive correlations with the students' perceptions of EFL classroom reading activities. The students considered EFL classroom reading activities and reading comprehension testing as effective practices in developing foreign language reading skills.

Keywords: English as a foreign language, evaluation, reading strategies, reading activities

1. INTRODUCTION

For most foreign language (FL) students in higher education setting reading is a basic academic competency and a crucial segment of foreign language learning, according to Engineering Competency Model 2015 (Laslie 2016). It is a complex activity which is not easy to define. Various definitions, both in the fields of mother tongue acquisition and foreign language learning, exist: reading is considered as a psycholinguistic process as it uses language to get to the meaning (Goodman 1973: 3-14), as extracting the information from the text (Gibson, Levin 1975: 5), or as receiving and interpreting information encoded in language form via the medium of print (Urquhart, Weir 1998: 22). Reading is a complex process of understanding the meaning of a written text, employing various cognitive skills such as letter and word recognition, knowledge of syntax, and recognition of text types and text structure (Richards, Schmidt 2010: 483).

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The ultimate purpose of reading is text comprehension, the identification of the intended meaning of written communication (Richards, Schmidt 2010: 108). To understand the main ideas, purpose, and details in the text, and to be able to critically analyze and integrate information, the foreign language readers need to consolidate the grammar knowledge, expand vocabulary, and develop reading strategies. Reading in a foreign language involves readers' interaction with the text to gain information and reduce uncertainty (Hudson 1989: 143-170). This interaction involves the activities the FL readers are to perform and their reading strategies.

This paper starts with a theoretical discussion on relevant issues to FL reading strategies and FL reading activities, then presents and discusses the results and implications of the present study.

2. THEORETICAL BACKGROUND

This section mainly focuses on defining language learning strategies with a particular emphasis on FL reading strategies and reading activities. Additionally, related studies on these topics are presented.

2.1. Language learning strategies and FL reading strategies

Strategies are deliberate cognitive steps taken by the learners to aid the acquisition, storage, and retrieval, and use of new information (Ehrman, Oxford 1989; Paris et al. 1983). As one of the earliest researchers in the field of foreign language learning, Rubin provided a very broad definition of FL learning strategies as “techniques or devices that learners apply in order to acquire knowledge of a foreign language” (Rubin 1975: 43). Language learning strategies are also referred to as learning techniques, behaviors, or actions which can lead learners to proficiency in a foreign language (Oxford, Crookall 1989). Strategies may be used consciously, but they can also become habitual and automatic with practice. Language learning strategies are purposeful, situated (in a real setting) mental actions, used for learners to meet learning needs; they are sometimes observable helping learners in developing self-regulation, completing tasks in a foreign/second language, and moving forward foreign/second language proficiency; language learning strategies are dynamic, complex, and fluid (they are not part of rigid categories or used only for certain functions) used consciously or at least partially consciously; they can be discussed in terms of functions (metastrategic, cognitive, emotional/affective, motivational, and social), and they can be taught, assessed, and researched (Oxford 2017).

Two approaches to categorizing strategies involve: 1) categorization according to their psychological functions into memory, cognitive, compensation, metacognitive, affective, and social strategies (Oxford

1990), or cognitive, metacognitive, affective or social (Cohen 2010); and 2) categorization according to the skill area to which they relate into listening and reading strategies (receptive skills), speaking and writing strategies (productive skills), vocabulary learning, and translation strategies (Cohen 2001, 2010), grammar learning strategies (Oxford 2017; Pawlak 2018), strategies for learning pragmatics (speech acts) (Cohen 2005). In the latter approach, strategies are viewed in terms of their role in listening, reading, speaking, and writing. When performing language tasks in and out of the language classroom, FL learners can use language-learning strategies across language skills.

FL reading strategies include those for: a) building reading habits in the target language – e.g. making a real effort to find reading material that is at one's level or within the zone of proximal development; b) developing basic reading skills – e.g. planning how to read a text, monitoring to see how the reading is going, checking to see how much of it is understood, and making summaries in one's mind or in the margins of the text; and c) determining what to do when encountering unknown words and structures – e.g. guessing the approximate meaning by using clues from the surrounding context, using a dictionary to get detailed information of individual words meaning (Cohen 2010: 168). Many of these reading strategies are accepted in the Survey of Reading Strategies (SORS), an instrument designed to measure adolescent and adult EFL students' perceived use of reading strategies (Mokhtari, Sheorey 2002; Sheorey, Mokhtari 2001). The SORS measures three broad categories of reading strategies: 1) metacognitive (intentional and carefully planned techniques used by learners to monitor and manage their own reading, e.g. using tables and figures), 2) cognitive (the procedures readers use while working directly on the text and handling problems that occur in understanding textual information, e.g. guessing the meaning of unknown words), and 3) support strategies (the mechanisms intended to help the reader comprehend the text, e.g. taking notes). In this study, the concept of reading strategies is based on the combination of language learning strategies, particularly on Oxford's language learning strategies (1990), and skill area strategies (speaking strategies in particular).

2.2. FL reading activities

The reading activities are important in authentic FL reading in that they direct the points of instruction to language and rhetorical structures, vocabulary or reading skills and strategies. Thus, instruction is more attentive to the processes and strategies the students should learn than to mastery of individual language products such as a particular

grammar structure (Hudson 1989: 145). A recent study (Bojović 2018) revealed that the frequency of testing students' EFL reading comprehension affects the students' perception of the overall EFL classroom reading activities. Reading tasks and activities in the FL classroom can be grouped as pre-reading activities (e.g. previewing, text surveys, predicting, introducing key vocabulary), while reading activities (e.g. reading for the main idea, reading for details, questioning the text, monitoring one's own comprehension), and post-reading activities (e.g. review of the contents through word roots or discourse markers, consolidation of what has been read through discussion, debate, role-plays, project work). The goals of these three stages of reading are (Dubin, Bycina 1991: 202-205): a) pre-reading activities are to activate or build the students' knowledge of the subject, to provide language preparation possibly needed for coping with the text, and to motivate the students to read the text; b) while-reading tasks are aimed at understanding the specific content, at perceiving the structure of the text, and at promoting active engagement with the text and developing reading skills; and c) post-reading activities are intended to review the content, to work on bottom-up concerns such as grammar, vocabulary, and discourse features, and to consolidate what has been read by linking the newly obtained information with the students' prior knowledge.

Although many studies are focused on FL reading (Block 1986, 1992; Carrell, Eisterhold 1983; Grabe 1991), the evaluation of FL teacher education programs (Peacock 2009: 259-278) and programs of FL learning/teaching (Llosa, Slayton 2009: 35-54; Norris 2009: 7-13), there is a paucity of research that considers students' evaluation of FL classroom reading activities (Ekaningrum, Prabandari 2015). However, a recent study deals with students' evaluation of EFL classroom reading practices (Bojović 2018) suggesting that a higher testing frequency raises the students' self-confidence in performing reading tasks adequately and gives rise to students' affirmative perception of classroom reading practices.

The current study is based on the SORS reading strategies (Mokhtari, Sheorey 2002; Sheorey, Mokhtari 2001). The FL reading strategies selected for examination in the current research are: 1) motivation for and purpose of FL reading; 2) confirming the purpose of reading; 3) choosing autonomously which text to read; 4) reading quickly; 5) silent reading; 6) using background knowledge; 7) predicting; 8) confirming predictions; 9) finding main ideas in the text; 10) using context clues for reading comprehension; 11) taking notes while reading; 12) re-reading the text; 13) summarizing for better understanding; 14) re-reading the text; 15) searching for details; 16) using text features (tables, charts); 17) asking others (teachers, peers, colleagues) for help when discovering the meaning of unfamiliar

words to understand the text better; 18) discussing what is read with others; and 19) visualizing information read in the text. This study also points out the importance of students' perception of FL reading activities in an instructional setting at the level of higher education. The factors which are particularly in focus are: 1) how often students practice FL reading activities and testing reading at different education levels, 2) the potential impact of reading activities and testing reading comprehension in the classroom context on the students' FL reading skills, 3) the level of their self-confidence in performing FL reading tasks in an instructional context, and 4) how difficult these tasks are.

3. RESEARCH METHODOLOGY

This section focuses on the purpose and hypotheses of the study, the sample, instruments, and procedures and data analysis applied in the study.

The aim of the study is to determine what FL reading strategies students in biotechnology engineering use, how they perceive EFL classroom reading activities, and the potential relationships between these two variables.

Corresponding to the aim of the study, three hypotheses are formulated:

- 1) The students' perceived use of FL reading strategies is high;
- 2) The students' attitudes toward EFL classroom reading activities are positive; and
- 3) The main hypothesis is that there is a positive correlation between the use of FL reading strategies the students' perception of the EFL classroom reading activities.

3.1. Participants

The participants in the study were 91 undergraduate students (juniors and seniors) of biotechnology engineering (59 females and 32 males) in a four-year biotechnology bachelor program at the Faculty of Agronomy in Čačak, University of Kragujevac. All junior and senior students were exposed to compulsory courses in English for Specific Purposes (ESP).

The instruments used for collecting the data were administered to biotechnology engineering students by their English language teacher in the last week of the semester in the 2018-2019 academic year during their regular EFL classes.

3.2. Instruments

Two research instruments were used in the collection of data: *the Inventory of reading strategies in a foreign language* (IRSFL) and *Students' foreign language reading activities evaluation scale* (SFLRAES).

The IRSFL was used to measure the perceived use of reading strategies by non-native English readers. This self-report scale comprises 20 Likert-scale

items with choices ranging from “always or almost always true of me” (1) to “never or almost never true of me” (5) for 19 items. In order to make the results obtained easier to compare with other variables, the scales were reversed; the choices thus ranged from “never or almost never true of me” (1) to “always or almost always true of me” (5) for 19 of the items. The exception is the item considering the purpose of EFL reading; the answer options include “for my university studies” (1), “for my future job” (2), “for educational purposes” (3), “for searching for and gathering information through different media” (4), and “reading in EFL is not important to me” (5). The IRSFL instrument was adapted from the original SORS (Mokhtari, Sheorey 2002; Sheorey, Mokhtari 2001) which consists of 28 items, measuring three broad categories of reading strategies – metacognitive, cognitive, and support strategies. The items that had low rotating factor loadings (below 0.3) or did not seem to provide useful information were excluded from this study. An item referring to the specific purposes of reading was added. The IRSFL instrument was found to be reliable and internally consistent based on a Cronbach’s alpha coefficient of $\alpha = 0.80$. This result is within the coefficient values found in the literature for the SORS, which forms the basis for the IRSFL, ranging from 0.74 to 0.93 (Mokhtari, Reichard 2002; Park 2010; Sheorey, Mokhtari 2001). For the Likert-scale strategy-use items of the IRSFL, the following key helped to interpret the means: mean values from 3.5 to 5.0 indicate high use, 2.5 to 3.49 indicate medium use, and 1.0 to 2.49 low use (Oxford 1990).

The SFLRAES is a tool created for measuring students’ perception of reading activities in the EFL classroom (Bojović 2018). This self-report scale comprises eight items which measure the following: 1) the frequency of reading activities in the university education; 2) whether reading exercises help students understand the texts better; 3) whether testing reading comprehension helps students understand the texts better; 4) the difficulty of reading exercises; 5) the difficulty of reading comprehension test tasks; 6) the frequency of reading activities at the levels of primary and secondary education; 7) the frequency of testing reading at the levels of primary and secondary education; and, 8) the degree of students’ self-confidence in their successful reading performance. It is a five-point Likert scale with item choices ranging from “never or almost never true of me” (1) to “always or almost always true of me” (5). The exceptions are two items regarding the difficulty of reading exercises and the difficulty of reading comprehension test tasks; the response options for these two items range from “very difficult” (1) to “very easy” (5). The index of reliability and internal consistency for the SFLRAES instrument (Cronbach’s alpha) is $\alpha = 0.72$, which is considered adequate (Deković et al. 1991; Holden et al. 1991). It is not uncommon for contemporary researchers to characterize reliabilities in the 0.60s and 0.70s as good or adequate. For the Likert-scaled items of the SFLRAES, the following key may help to interpret the means: mean values from 3.51 to 5.0 indicate a high frequency of EFL reading activities or testing reading comprehension, a high degree of the effectiveness of reading activities and testing reading comprehension on the development of

students' EFL reading skills, low level of difficulty of EFL reading tasks, and high level of students' self-confidence in EFL reading skills; mean values from 2.51 to 3.50 indicate all these factors being at a medium level; finally, mean values from 1.0 to 2.5 indicate high levels of difficulty of EFL reading/testing tasks and low levels of other previously mentioned factors. The interpretation key is based on the interpretation of means of the Likert-type scales such as Oxford's SILL instrument, Version 7.0 (ESL/EFL), for measuring the frequency of the use of EFL learning strategies (Oxford 1990).

3.3. Method and data analysis

The present study adopts a quantitative research design in order to answer the following research question: Are there relationships between the students' perceived use of FL reading strategies and their perception of the classroom EFL reading activities?

The measures of internal consistency, descriptive statistics (the mean and standard deviation), and Pearson correlation analysis were used for data processing. In order to determine whether the instruments in the study (IRSFL and SFLRAES) were reliable, Cronbach's alpha as the measure of internal consistency and reliability was applied to both instruments. Calculating the mean and standard deviation with descriptive statistics would enhance the understanding of the tendency of the students' use of reading strategies and their perception of classroom reading activities. In order to investigate the potential relations between students' perceived use of EFL reading strategies and their perception of EFL reading activities, the correlation analysis was carried out - the correlation coefficient was calculated with a Pearson product-moment correlation. The data obtained were analyzed using the *SPSS 20.0 Package for Windows*.

4. RESULTS

This section presents the obtained results concerning the frequency of the perceived use of EFL reading strategies, the students' perception of EFL classroom reading activities, and the relationships between these two factors.

4.1. The students' perceived use of reading strategies in EFL

Descriptive statistics (mean value and standard deviation) showed that the mean value of the perceived overall use of reading strategies is $M=3.31$ (Table 1), which indicates the participants' moderate reading strategy use.

Table 1. The use of reading strategies in biotechnology

EFL reading strategies	Possible scores	M	SD
Motivation for reading in EFL	1-5	3.52*	1.196
Setting purpose for reading in EFL	1-5	2.68	.842
Choosing autonomously what to read	1-5	3.01	1.234
Interest in reading as much as possible	1-5	3.16	1.176
Reading quickly	1-5	2.76	1.186
Reading a text silently	1-5	3.41	1.316
Using background knowledge	1-5	3.91*	1.050
Predicting	1-5	3.04	1.144
Confirming predictions	1-5	3.04	1.144
Finding main ideas	1-5	3.65*	1.058
Taking notes while reading	1-5	2.48	1.149
Using context clues	1-5	3.58*	.944
Asking others for help for better understanding	1-5	3.60*	1.124
Re-reading for better understanding	1-5	4.22*	1.009
Using text features (tables, graphs, pictures)	1-5	3.79*	1.121
Summarizing for better understanding	1-5	2.47	.970
Discussing what is read with others	1-5	2.73	1.096
Re-reading for details	1-5	4.05*	1.037
Visualizing information read	1-5	3.46	1.401
Confirming the purpose of reading	1-5	3.35	1.259
Overall reading strategies	1-5	3.31	0.527
N=91			

*=frequent use where means >3.50; M=mean value; SD=standard deviation

Eight reading strategies were reported as high usage strategies. Re-reading for better understanding (“I re-read the text to increase my understanding”) and re-reading for details (“I re-read to find the details when reading in English”) are the two most frequently used reading strategies (M= 4.22 and M= 4.05, respectively). The other reading strategies at the high level of usage involve: 1) using background knowledge (“When reading a text in English, I think about what I already know on the topic”) (M= 3.91), 2) using text features such as pictures, tables, and graphs (“I use pictures, graphs, and charts to help me understand confusing/difficult parts”) (M= 3.79), 3) finding main ideas (“I look for the main idea when reading a text in English”) (M = 3.65), 4) asking others for help for better understanding (“I discover the meaning of unfamiliar words when reading by asking teacher/fellow student/colleague”) (M = 3.60), 5) using context clues (“I discover the meaning of unfamiliar words when reading by using context clues”) (M= 3.58), 6) eagerness to read in English (“I am interested to read in English as a foreign language”) (M = 3.52). Ten reading strategies were reported as medium usage strategies (2.5 < M< 3.49), as shown in Table 1. The least frequently used reading strategies are summarizing for better understanding (“I summarize the text to myself after I have read it”) (M = 2.47) and taking notes while reading (“I take notes when

reading in English”) ($M = 2.48$), for both the mean value being $M < 2.50$, which indicates low strategy use.

4.2. The students’ perception of EFL reading activities

Descriptive statistics (mean values and standard deviation) show that the students had a positive perception of EFL classroom reading activities since the mean value for the overall perceived EFL reading activities was $M=3.55$ (Table 2).

Table 2. Students’ perception of EFL classroom reading activities

EFL classroom reading activities	Possible scores	M	SD
Frequency of EFL reading activities	1-5	3.71	1.167
How helpful classroom reading practice is for better text understanding	1-5	3.96	1.064
Difficulty of EFL reading exercises	1-5	3.05	.584
Frequency of EFL reading practice - former experience	1-5	3.43	1.240
How helpful testing reading comprehension is for better text understanding	1-5	3.92	1.046
Difficulty of reading comprehension test tasks	1-5	3.04	.536
Frequency of testing EFL reading - former experience	1-5	2.99	1.260
Self-confidence in successful EFL reading performance	1-5	3.27	.978
Overall EFL classroom reading activities	1-5	3.42	.591
N = 91			

EFL – English as a foreign language, M – mean value, SD – standard deviation, N – number of participants

The study reports that (Table 2): 1) the perceived frequency of EFL classroom reading activities in a higher education setting was high ($M=3.71$); 2) the practice of reading in the EFL classroom had highly positive effects on students’ reading comprehension in EFL ($M=3.96$); 3) the difficulty of reading exercises in English language classes was moderate ($M=3.05$); 4) the students perceived the practice of reading in EFL to be less frequent ($M=3.43$) at the primary and secondary education levels compared to the tertiary level of education ($M=3.71$); 5) the practice of testing students’ reading comprehension had positive effects on EFL students’ reading comprehension ($M=3.92$); 6) the participants perceived the difficulty of reading comprehension test tasks as moderate ($M=3.04$); 7) in primary and secondary education, the frequency of testing reading comprehension was perceived to be at a moderate level ($M=2.99$); and 8) the students perceived themselves as moderately self-confident in successful EFL reading performance in the classroom context ($M=3.27$).

4.3. The perceived use of reading strategies and evaluation of classroom reading activities: the relationships

A correlation analysis was conducted to determine relations between the students’ use of reading strategies and their perception of reading activities.

Positive correlations mean that higher scores on the IRSFL scale mean higher scores of students' evaluation of reading activities and vice versa. The results are presented in Table 3.

The overall students' perceived use of EFL reading strategies shows a very significant correlation with overall students' perception of EFL classroom reading activities ($r=0.59$, $p<0.01$, $p=0.000$). Three factors of students' perception of EFL classroom reading activities are correlated with the perceived use of most EFL reading strategies: how helpful classroom reading practice is for better text understanding, how helpful testing reading comprehension is for better text understanding, and students' self-confidence in successful EFL reading performance.

Table 3. Relationships – reading strategies use and perception of reading activities

EFL reading strategies	EFL classroom reading activities			Overall	
	Helpfulness/ activities	Helpfulness/ tests	Students' self-confidence		
Motivation for reading in EFL	0.22*	0.48**	0.57**	0.59**	
Choosing autonomously what to read	0.29**	0.35**	0.48**		
Interest in reading as much as possible	0.31**	0.43**	0.56**		
Reading quickly	0.19	0.23*	0.45**		
Using background knowledge	0.30**	0.33**	0.35**		
Predicting	0.29**	0.36**	0.28**		
Finding main ideas	0.42**	0.47**	0.30**		
Using context clues	0.37**	0.39**	0.30**		
Re-reading for better understanding	0.32**	0.27*	0.27*		
Using text features (tables, graphs, pictures)	0.33**	0.24*	0.22		
Re-reading for details	0.46**	0.41**	0.39**		
Visualizing information read	0.36**	0.43**	0.27**		
Confirming the purpose of reading	0.37**	0.44**	0.31**		
Overall reading strategies					0.59**
N=91 p<0.05* p<0.01**					

EFL – English as a foreign language, N – number of participants, p – statistical significance

Efficiency of classroom reading practice shows a positive correlation with the students' perceived use of the following individual reading strategies (Table 3). It shows a positive mild correlation with students' eagerness to read in English ($r=0.22$, $p<0.05$, $p=0.037$). It also shows positive significant correlations with: 1) their inclination to choose the text for reading autonomously ($r=0.29$, $p<0.01$, $p=0.006$), 2) their interest in reading in English as much as possible ($r=0.31$, $p<0.01$, $p=0.003$), 3) using background knowledge ($r=0.30$, $p<0.01$, $p=0.005$), 4) predicting what the text is about ($r=0.29$, $p<0.01$, $p=0.006$), 5) using context clues ($r=0.37$, $p<0.01$, $p=0.000$), 6) re-reading for better understanding ($r=0.32$, $p<0.01$, $p=0.002$), 7) using text features such as tables, graphs ($r=0.33$, $p<0.01$, $p=0.002$), 8) visualizing information read in the text ($r=0.36$, $p<0.01$, $p=0.000$), 9) confirming the purpose of reading ($r=0.37$, $p<0.01$, $p=0.000$). And finally, it shows positive strong correlations

with students' finding main ideas in the text ($r=0.42$, $p<0.01$, $p=0.000$) and re-reading to find details in the text ($r=0.46$, $p<0.01$, $p=0.000$).

Efficiency of classroom reading comprehension testing practice is positively correlated with the students' perceived use of the following individual reading strategies (Table 3). It shows positive and mild correlation with the students' inclination to read quickly ($r=0.23$, $p<0.05$, $p=0.031$), with re-reading the text for better understanding ($r=0.27$, $p<0.05$, $p=0.010$) and with using text features such as tables and graphs ($r=0.24$, $p<0.05$, $p=0.021$). It shows positive and significant correlations with autonomous text selection ($r=0.35$, $p<0.01$, $p=0.001$), using background knowledge ($r=0.33$, $p<0.01$, $p=0.002$), predicting ($r=0.36$, $p<0.01$, $p=0.001$), and using context clues ($r=0.39$, $p<0.01$, $p=0.000$). It also shows positive and strong correlations with students' motivation for reading in EFL ($r=0.48$, $p<0.01$, $p=0.000$), interest in reading in English as much as possible ($r=0.43$, $p<0.01$, $p=0.000$), finding main ideas in the text ($r=0.47$, $p<0.01$, $p=0.000$), re-reading for details ($r=0.41$, $p<0.01$, $p=0.000$), visualizing information read in the text ($r=0.43$, $p<0.01$, $p=0.000$), and confirming the purpose of reading ($r=0.44$, $p<0.01$, $p=0.000$).

The students' self-confidence in successful EFL reading performance is correlated with the perceived use of the following strategies of reading in EFL (Table 3). It shows positive very weak correlation with using text features such as tables or graphs ($r=0.22$, $p>0.05$, $p=0.832$), and mild correlation with re-reading the text for better understanding ($r=0.27$, $p<0.05$, $p=0.011$). It also shows positive significant correlations with using background knowledge ($r=0.35$, $p<0.01$, $p=0.001$), predicting ($r=0.28$, $p<0.01$, $p=0.008$), finding main ideas in the text ($r=0.30$, $p<0.01$, $p=0.004$), using context clues ($r=0.30$, $p<0.01$, $p=0.005$), re-reading for details ($r=0.39$, $p<0.01$, $p=0.000$), visualizing information read in the text ($r=0.27$, $p<0.01$, $p=0.009$), and confirming purpose of reading ($r=0.31$, $p<0.01$, $p=0.003$). It shows positive strong correlations with the students' motivation to read in English ($r=0.57$, $p<0.01$, $p=0.000$), autonomous text selection ($r=0.48$, $p<0.01$, $p=0.000$), interest in reading in English as much as possible ($r=0.56$, $p<0.01$, $p=0.000$), and reading as quickly as possible ($r=0.45$, $p<0.01$, $p=0.000$).

The difficulty of reading comprehension test tasks is correlated with two individual EFL reading strategies. It shows a positive mild correlation with the students' frequency of discussing what is read with others ($r=0.25$, $p<0.05$, $p=0.018$) and a negative, mild correlation with taking notes while reading ($r=-0.22$, $p<0.05$, $p=0.040$).

5. DISCUSSION

The findings reveal that the most prominent EFL reading strategies used as reported by biotechnology undergraduate students are re-reading for better understanding and details, using background knowledge to relate it with the text being read, using text features (pictures, tables, charts), which is in line with the findings of Park (2010) and Sheorey and Mokhtari (2001). Background knowledge has a significant effect on student performance,

explaining up to 81% of the variance in posttest scores (Dochy et al. 1999). Finding main ideas, asking others for help to understand the text better, or using contextual clues are also frequently used reading strategies in biotechnology engineering. The participants are also motivated to read in English, which is in the line with the finding that motivation is a significant facilitative factor in foreign language vocabulary and terminology learning (Gardner, McIntyre 1991). The reading strategies used moderately include the following ones: 1) visualizing information read in the text (with the tendency toward frequent use), 2) interest in reading as much as possible, 3) selecting the text autonomously, reading a text silently, 4) predicting information to be read in the text, 5) confirming prediction, 6) discussing what is read with others (students/colleagues), 7) speed reading, 8) setting a purpose for reading in EFL, and 9) confirming the purpose of reading. Moderate usage concerning visualizing information read in the text differs from Sheorey, Mokhtari (2001), who reported frequent use of the strategy.

The biotechnology engineering students had a positive overall perception of EFL classroom reading activities in a higher education setting. In the students' opinion, the EFL classroom reading activities and exercises, and reading comprehension testing are highly influential in their EFL reading abilities. This finding is consistent with the results obtained in another research studying the EFL students' perceptions of pre-reading activities in an academic context (Ekaningrum, Prabandari 2015). Furthermore, the reading activities in EFL are seen as more frequent in the academic learning context than in the primary or secondary education setting. The reading tasks in university EFL classrooms are more demanding than the ones in primary/secondary schools, the selected texts are longer and more complex, and their vocabulary is less familiar. Hence, it seems wise to increase the frequency of reading activities and the length of reading instruction. Thusly, the increased intensity of EFL reading activities allows students to receive targeted instruction and increased opportunities to practice reading skills (Waughn et al. 2012). In the classroom setting where the students' regular reading exercises are in the focus, the students may become more self-confident in their reading skills. This finding is in the line with an earlier study (Bojović 2018) suggesting that the higher frequency of EFL testing reading activities may increase students' self-confidence in their EFL reading skills. In addition, the students think that reading exercises and reading test tasks are not difficult. This finding may be ascribed to the students' exposure to diverse reading materials in the field of biotechnology, thus having enough content knowledge to understand the texts with no particular difficulty (Nguyen 2007).

Those participants who consider classroom reading and testing activities frequent and helpful for better text understanding use almost all reading strategies frequently (except taking notes, summarizing, or discussing what is read with others), which is in line with findings of Aarnoutse and Leeuwe (1998) and Kirmizi (2010). Furthermore, those students who are self-confident in successful EFL reading performance use almost all reading strategies

frequently (except taking notes, asking others for help to understand the text better, using text features such as tables, graphs, pictures, or discussing what is read with others). This finding is in line with the results obtained in a study on the effects of EFL reading strategy instruction (Medina 2012) which suggests that the increased use of reading strategies facilitates the students' self-confidence in performing reading tasks. Finally, those students who find the reading text difficult frequently take notes while reading. This result is consistent with the findings of several studies (Graham, Hebert 2010; Chang et al. 2002) which identify note-taking as a highly facilitative reading strategy for better understanding complex, abstract reading materials with plenty of new concepts and information. The present study is one of the first studies in which relationships between the students' perceived use of EFL reading strategies and evaluation of EFL classroom reading activities are established. It is a further step in validating both the use of reading strategies and students' evaluation practices considering reading activities in EFL.

6. CONCLUSION

The study reported in this article is one step towards a better understanding of the undergraduate biotechnology students' perceived use of FL reading strategies, their perception of EFL classroom reading activities, and potential relations between these two factors. It reveals that the students use reading strategies moderately while reading texts in English and that their attitude toward EFL classroom reading activities is positive. In this study, it was hypothesized that the students' perceived use of reading strategies is high, their attitudes toward reading activities are positive, and that there is a positive correlation between these two variables. Based on the results of the study, we can conclude that the first hypothesis is not confirmed, the second one is confirmed, and the main hypothesis is confirmed as the students who had affirmative views of the classroom reading activities and considered them helpful practices for better text understanding used a large repertoire of reading strategies frequently.

Evaluation of the classroom procedures by the students is a valuable post-reading activity (Nuttall 1996: 167, 188-9) as it gives students the opportunity to become aware of the FL classroom procedures. Evaluation can generate effective remedial action and contribute to critical decisions on language policy and educational practice (Harris 2009: 55-76). FL teachers should attempt to make the students practice and produce knowledge. It is during reading in a foreign language that the FL reading techniques and strategies are activated; this leads to acquiring reading skills. The FL teachers can offer various reading tasks so that the students could be enabled to put the foreign language into actual use.

The study has several limitations that could be addressed in further research. The results of the study were based on the use of FL reading strategies and the perception of EFL classroom reading activities by a limited number of students in a very complex and specific engineering domain; hence these

results cannot be generalized to the entire student population. In addition, the instruments used in the research are self-reporting tools – it means that the participants' responses depend on their sincerity and willingness to cooperate in the research as well as on their awareness of the reading strategies they use and evaluation of EFL classroom reading practices.

Further research could investigate how the examined strategies and the studied parameters of the students' perception of classroom reading activities correlate with the students' levels of reading comprehension their reading habits and styles, particularly when reading a printed text and when reading online. Future studies could also search for other potential factors which can affect the students' evaluation of foreign language reading activities in instructional settings.

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ОДНОС СТРАТЕГИЈА ЧИТАЊА И АКТИВНОСТИ ЧИТАЊА НА ЕНГЛЕСКОМ ЈЕЗИКУ У ВИСОКОШКОЛСКОЈ НАСТАВИ

Резиме

У овом раду представљени су резултати истраживања које је имало за циљ да испита да ли и у којој мери студенти у високошколској настави у области биотехнолошких наука користе стратегије читања на енглеском као страном језику, какав је њихов доживљај активности читања у наставном окружењу, и постојање односа ове две варијабле. У ту сврху, у квантитативном истраживању учествовао је укупно 91 студент биотехнолошких наука на Агрономском факултету Универзитета у Крагујевцу, где су похађали наставу енглеског језика струке као обавезног предмета. Инструменти коришћени у истраживању су Скала самопроцене ученикових стратегија читања на страном језику и Скала пороцене наставних активности читања на енглеском језику. За обраду података коришћене су мере унутрашње конзистентности, дескриптивне анализе и Пирсонове корелационе анализе. Добијени подаци су анализирани помоћу статистичког софтвера SPSS20.0. Добијени резултати показују да студенти – будући инжењери биотехнологије умерено користе стратегије читања на енглеском језику и да наставне активности читања на енглеском језику доживљавају као позитивне. Резултати такође показују да постоји позитивна корелација између примене стратегија читања на страном језику и перципирања и процене активности читања у високошколском наставном окружењу. Према процени испитаника, активности читања и тистрања разумевања прочитаног текста на часовима енглеског језика су ефикасне процедуре за развој вештина читања на том језику.

Кључне речи: енглески језик као страни језик, евалуација, стратегије читања, наставне активности читања

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